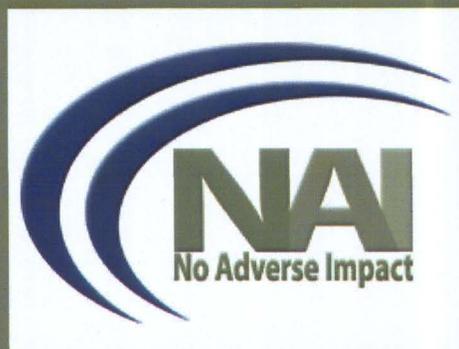


Legal Aspects of No Adverse Impact Floodplain Management



A Special Workshop for Attorneys

November 4, 2005 ● Prescott, Arizona

Presented by :

Arizona Floodplain Management Association
Association of State Floodplain Managers

Michael Baker, Jr., Inc.



Baker





Legal Aspects of No Adverse Impact FPM Workshop Evaluation

Prescott, Arizona, Nov. 4, 2005

PROGRAM EVALUATION

Please help the workshop team evaluate how well the session was produced and what modifications should be made for future presentations. Fill out this form and turn it in to the Instructors at the conclusion of the session. Thank you!

Check all the categories that describe your involvement in floodplain management:

- Local Gov't Official State Gov't Official Federal Gov't Regional Agency
 Attorney Consultant Non-profit Org. Educator
 Other _____

Please rate the following on a scale of **1 to 5**, 1 is poor, 5 is excellent, do not circle if not applicable:

- ❖ Presentation Segments and Instructors
 - What is NAI FPM? 1 2 3 4 5
 - Legal Aspects of NAI FPM, Part I 1 2 3 4 5
 - Legal Aspects of NAI FPM, Part II 1 2 3 4 5
 - Owners Liability 1 2 3 4 5
- ❖ Workshop brochure 1 2 3 4 5
- ❖ Announcement / Notification Process 1 2 3 4 5
- ❖ Registration process 1 2 3 4 5
- ❖ Overall organization 1 2 3 4 5

Comments: _____

Thank you for your input!

An Update On The Taking Issue

A review of the evolving property rights issues as they apply to floodplain and other local regulation, featuring Edward A. Thomas, Esq., former Federal Emergency Management Agency employee now with the Michael Baker Corporation

This activity may qualify for up to 7.0 hours toward your mandatory CLE requirements by the State Bar of Arizona

This seminar will be held on Friday, November 4, 2005 from 8:00 AM to 5:00 PM in Prescott, Arizona. Sponsored by the Arizona Floodplain Management Association and the Michael Baker Corporation.

Seminar Description

When does a regulation become a taking? The Association of State Floodplain Managers (ASFPM) has developed a series of documents that recommend a "No Adverse Impact" (NAI) approach to floodplain management. This approach is extremely important to help sort out legal issues swirling around state and local government regulation of construction in flood hazard areas and avoid serious legal complications.

Since the late 1980's there have been a series of cases from the United States Supreme Court which have confused many people about the point at which land use regulations so restricts the rights of a landowner that a compensable taking of property has occurred under the Fifth Amendment to the U. S. Constitution. These cases are usually referred to as "taking issues" cases.

This year the United States Supreme Court unanimously issued an important ruling, Lingle v. Chevron (no.04-163 decided May 23, 2005) that significantly clarifies "takings jurisprudence." In Lingle, the Court held that there is a four part test for determining if a regulation is a taking: a) physical intrusion; b) denial of "all economically beneficial use"; c) a significant, but not complete, denial of beneficial use; d) a land use exaction which has little or no relationship between the exaction and the articulated government interest. In addition, Justice Kennedy noted in concurring with the unanimous Court that the decision did not foreclose the possibility of litigating a regulation that was "so arbitrary or irrational as to violate due process."

There is a loosely organized coalition of groups in the US often referred to as the "property rights movement." This coalition is comprised of individuals and groups who often have conflicting purposes, philosophies and interests but who unite behind one unifying thought, an almost Jeffersonian belief in the sanctity of an individual's "civil right" to do as she likes with her land. The result of these pressures is serious concern and some uncertainty on the part of regulators as to what extent regulation is Constitutional.



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 Other _____

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- | | |
|---|-----------|
| ❖ Presentation Segments and Instructors | |
| ▪ What is NAI FPM? | 1 2 3 4 5 |
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| ▪ Owners Liability | 1 2 3 4 5 |
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Ed Thomas, in cooperation with the ASFPM has developed and presented a series of pro bono lectures and workshops around the country to:

- *Review the truly ancient legal roots of the “No Adverse Impact” floodplain management concept
- *Demonstrate how using the “No Adverse Impact” standard avoids much, if not all, the uncertainty surrounding the US Supreme Court’s taking issue cases
- *Clearly demonstrate that the taking issue cases overwhelmingly support “No Adverse Impact” based regulation of hazardous areas
- *Challenge regulators to be bold in regulating hazardous locations but at the same time, to be fair and sensitive to the deep and abiding concerns of the “property rights movement”.

This workshop will be presented as a public service of AFMA and the Michael Baker Corporation.

Additional lectures and publications on the topic are planned. For further information see the Association of Floodplain Managers website in the “No Adverse Impact” area at www.floods.org.

This presentation is dedicated by Ed Thomas to his friend Larry Larson PE, CFM the Executive Director of the Association of State Floodplain Managers whose support and thoughtful comments significantly helped in its development.

Seminar Instructor

Ed is an attorney and a frequent lecturer on emergency management issues, especially the Constitutional and legal aspects of floodplain regulations. He has also authored numerous publications and articles on various disaster related issues. Ed is employed by the Michael Baker Engineering Corporation, working to support partnerships to better map natural and man-made hazards in the United States.

Ed retired from the Department of Homeland Security-Federal Emergency Management Agency after nearly thirty-five years of public service. During his time in government, he worked primarily in disaster mitigation, preparedness and response. He also was involved in the construction and management of housing developments for the Department of Housing and Urban Development. Ed worked on over one hundred disasters and emergencies, serving as the President’s on scene representative, the Federal Coordinating Officer, over fifty times. He lives with his wife in the floodplain of beautiful Marina Bay in Quincy, Massachusetts.

The sponsorship of AFMA and Michael Baker Corporation enable us to offer this full-day seminar including lunch at the prices listed below:

\$50.00/attendee for AFMA Members prior to 10/29/05 (\$65.00 at-the-door)

\$65.00/attendees for non-AFMA Members prior to 10/29/05 (\$80.00 at-the-door)

"An Update on the Taking Issue" Seminar Registration FORM

Hassayampa Inn at Prescott, Arizona, November 4, 2005

This activity may qualify for up to 7.0 hours toward your mandatory CLE requirements by the State Bar of Arizona

ATTENDEE INFORMATION (separate registration form for each attendee)

NAME		COMPANY OR ORGANIZATION
ADDRESS		SUITE #
CITY	STATE	ZIP
DAY PHONE	FAX	E-MAIL

ATTENDEE FEES (Includes refreshments for two breaks and lunch, and all workshop materials)

	ADVANCE (BEFORE October 29)	AT-THE-DOOR (ON OR AFTER October 29)
AFMA MEMBER	\$50	\$65
NON-MEMBER	\$65	\$80

2005 AFMA MEMBERSHIP RENEWAL (check appropriate box)

CHECK APPROPRIATE BOX: INDIVIDUAL MEMBERSHIP - \$35.00

CORPORATE MEMBERSHIP* - \$100.00 STUDENT MEMBERSHIP - \$17.50

* INCLUDE THE NAMES AND CONTACT INFORMATION OF FOUR INDIVIDUALS BELOW

NAME, ADDRESS, PHONE, E-MAIL (IF DIFFERENT)	NAME, ADDRESS, PHONE, E-MAIL
NAME, ADDRESS, PHONE, E-MAIL	NAME, ADDRESS, PHONE, E-MAIL

<p>AFMA REFUND POLICY: Conference or training fees are 100% refundable up to 7 days, and 50% refundable 48 hours, prior to the start of the conference or training class. Credit card and AFMA membership fees are non-refundable.</p>	SEMINAR FEE:	COST
<p>Please specify if paying by credit card (use attached form): <input type="checkbox"/></p>	MEMBERSHIP RENEWAL:	COST

TOTAL COST	ENTER THE AMOUNT OF YOUR CHECK IN THE BOX AT RIGHT:	
	MAKE CHECK PAYABLE TO "AFMA"	

ADDITIONAL INFORMATION

YES, I NEED A VEGETARIAN MEAL FOR THE FRIDAY LUNCH

MAILING INFORMATION

SEND COMPLETED REGISTRATION FORM WITH YOUR CHECK PAYABLE TO AFMA, TO:

ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION
Attn: AFMA TREASURER
 P.O. BOX 18102
 PHOENIX, AZ 85005-8102

ARIZONA FLOODPLAIN MANAGEMENT ASSOCIATION
CREDIT CARD PAYMENT FORM

"An Update on the Taking Issue" Seminar at Prescott, Arizona
4-Nov-05

NOTE: All fees payable in U.S. dollars

Mastercard Visa American Express

Card #: _____ Exp. Date: _____

Name as it appears on card: _____

Address and Zip Code of Card Holder: _____

Security Code: Last Three digits that appear above the signature, AFTER card number: _____

NOTE: The following are fees assessed for paying by Credit Card:

Each Seminar Registration: \$3.00

Each Individual Membership Renewal: \$1.00

Each Corporate Membership Renewal: \$3.00

FEE CALCULATION:

Number of Registrations: _____

Registration fees from other form: _____

Membership fees from other form: _____

Credit Card fee - # of Registrations x \$3: _____

Credit Card Fee - # of Indiv. Memberships x \$1: _____

Credit Card Fee - # of Corp. Memberships x \$3: _____

Total fees to be charged to credit card: _____

Signature: _____

AFMA REFUND POLICY:

Conference or training fees are refundable as follows:

Time ¹	Refund Amount
7 days	100%, less credit card and AFMA Membership fees
48 hours	50%, less credit card and AFMA Membership fees

¹ Prior to start of Conference or Training

Please send to: AFMA
Attn. Valerie Swick, Treasurer
P.O. Box 18102
Phoenix, AZ 85005-8102

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

Legal Aspects of No Adverse Impact Floodplain Management



A Special Workshop
for Attorneys

November 4, 2005
Prescott, Arizona

Presented by:

The Association of State Floodplain Managers
Arizona Floodplain Management Association

Michael Baker, Jr., Inc.

NAI Legal Aspects Workshop Agenda

- 8:00-8:30** Welcome, Introduce Instructors
Arizona Floodplain Management Association (TBD)
Self-Introduction of Participants
- 8:30-10:00** What Is No Adverse Impact Floodplain Management?
Doug Plasencia, P.E., CFM
Vice President, Michael Baker Inc., Phoenix AZ
- 10:00-10:20** **BREAK**
- 10:20-12:00** Legal Aspects of No Adverse Impact
Floodplain Management, Part I
Edward A. Thomas, Esq.
Michael Baker Inc., Alexandria VA
- 12:00-1:00** **LUNCH BREAK (on your own)**
- 1:00-2:30** Legal Aspects of No Adverse Impact
Floodplain Management, Part II
Edward A. Thomas, Esq.
Michael Baker Inc., Alexandria VA
- 3:30-4:00** **BREAK**
- 4:00-5:00** Owners Liability for Failure of Flood Control Structures
Julie Lemmon, Esq.
Flood Control District of Maricopa County
Edward A. Thomas, Esq.
Michael Baker Inc., Alexandria VA

Kindly complete the evaluation form to help us improve future presentations.

Workshop PowerPoint Slides



Legal Implications of No Adverse Impact

Edward A. Thomas Esq.
Michael Baker Engineering
"Challenge Us"

Arizona Floodplain Management Association

Special Workshop For Attorneys

November 4, 2005

Prescott, Arizona



Land Use Regulations are Local Within a State and Federal Context

This is a Pro Bono Presentation on Behalf of the Association of State Floodplain Managers and the Maricopa County Flood Control District

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



Legal Aspects of NAI Part I

Review of No Adverse Impact Floodplain Management

Roots of No Adverse Impact

NAI and the Constitution



**Quick Review - No Adverse
Impact
Floodplain Management**

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"



**How To Follow the No Adverse
Impact Principle?**

Identify ALL the Impacts of a
Proposed Development
Determine ALL the Properties
Which Will be Impacted
Notify Impacted Persons of the
Impact of Any Proposed
Development



**How To Follow the No Adverse
Impact Principle?**

Design or Re-Design the Project to
Avoid Adverse Impacts
Require Appropriate Mitigation
Measures Acceptable to the
Community and the Affected
Members of the Community



**What is the Result of Following
the No Adverse Impact
Principle?**

Usual Development Process Does Not
Get Information to Potentially
Impacted Members of the Community.
With NAI, the Persons Who May be
Victimized By Improper Development
Are Made Aware and Can Have their
Concerns Voiced to Community
Officials.



**What is the Result of Following
the No Adverse Impact
Principle?**

**Really Turns the Usual
Development Process
Around !**



**NAI is a Principle that Leads to a
Process**

Legally Acceptable Process
Non-Adversarial (Neither Pro nor Anti
Development Process
Understandable Process
A Process which is Palatable to
Community as a Whole
A Process which is Working Now
Around the Nation



**What is the Result of Following
the No Adverse Impact
Principle?**

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 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 Others available at:

www.floods.org

More Information in ASFPM

*A Toolkit on Common Sense
Floodplain Management* at:

www.floods.org



The Constitution of the United States

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?

Pennsylvania Coal Company vs. Mahon
260 US 293 (1922). But See, Keystone Coal 480 US 470, 1987.



Increase in Cases Involving Land Use

There Has Been a Huge Increase in Taking Issue Cases, and Related Controversies Involving Development
Thousands of Cases Reviewed by Jon Kusler, Me and Others.

Common thread? Courts Have Modified Common Law to Require an **Increased Standard of Care** as the State of the Art of Hazard Management Has Improved.



Taking Lawsuit Results

Hazard Based Regulations Successfully Held to be a Taking - Almost None!

Many, Many Cases where **Communities and Landowners Held Liable for Harming Others**



Examples of Situations where Governments May Be Held Liable

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



In These Examples of Community Legal Liability for Permitting or Undertaking Activity

Is There A Theme?

YOU BET!!!

What is that Theme?



Hints

The Theme Is NOT That They Just Let A Developer Do What She Wanted!

The Theme Is NOT That The Community Followed The Usual Literature In The Field.



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"



Recent Major Federal Court Cases

Lingle v. Chevron, US Supreme Court No. 04-163 Decided May 23, 2005

Kelo v. New London, US Supreme Court, No.04-108, Decided June 23, 2005

San Remo Hotel v. City and County of San Francisco, U.S. Supreme Court No. 04-340 decided June 20, 2005.



In Lingle, the Supreme Court States How to Determine if There Is a Taking I

Physical Intrusion. See, *Loretto v. Teleprompter Manhattan* 458 US 419 (1982);



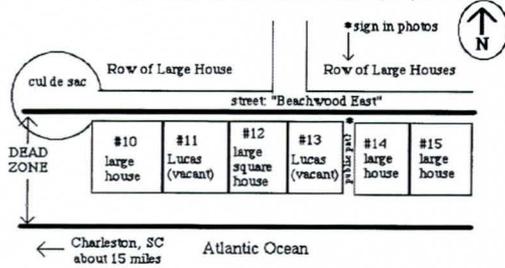
In Lingle, the Supreme Court States How to Determine if There Is a Taking II

Total, or Near Total Regulatory Taking. See, *Lucas v. South Carolina Coastal Council* 505 US 1003 (1992);



Lucas Extinguishing Legitimate Investment Backed Expectations

Part of "Wild Dunes" resort on Isles of Palms, SC, 11/94



William A. Fischel Dartmouth College Department of Economics



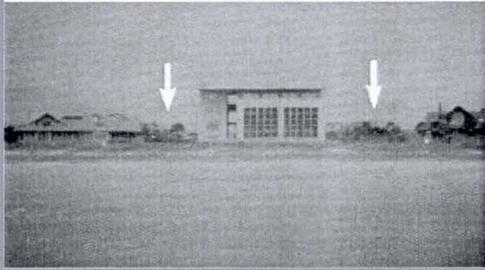
Lucas Sites Pre-Development



William A. Fischel Dartmouth College Department of Economics



Lucas Sites



William A. Fischel Dartmouth College Department of Economics

Lucas Sites from the Beach



William A. Fischel Dartmouth College Department of Economics

Another View of Lucas



William A. Fischel Dartmouth College Department of Economics

Lucas Post Development of One Lot



William A. Fischel Dartmouth College Department of Economics



In Lingle, the Supreme Court States How to Determine if There Is a Taking III

A "Penn Central Taking". See, Penn Central v. City of New York 438 US 104 (1978);



In Lingle, the Supreme Court States How to Determine if There Is a Taking IV

A land use exaction which has little or no relationship between the exaction and the articulated government interest. See, Nollan v California Coastal Commission 483 US 825 (1987); and Dolan v. Tigard 512 US 374 (1994).



In Lingle, the Supreme Court States How to Determine if There Is a Taking

Court Also Says Which Test It Will NOT USE

Will not Use the First Part of the Two Part Test From *Agin v. City of Tiburon* 447 US 255 (1980); Whether the Regulation Substantially Advances a Legitimate State Interest.



In Lingle, the Supreme Court States How to Determine if There Is a Taking

In Addition, in His Concurring Opinion, Justice Kennedy Indicates that the decision left open the possibility of litigating a regulation which was "so arbitrary or irrational as to violate due process."



In Lingle, the Supreme Court States How to Determine if There Is a Taking

The Court went on to say that the Tests articulated "...all aim to identify regulatory actions that are functionally equivalent to a direct appropriation of or ouster from private property"



Legal Aspects of NAI Part II
State Cases
Avoiding a Taking
Property Rights And the
"Constitution in Exile



Recent State Cases I

Gove v. Zoning Board of Appeals, Massachusetts Supreme Judicial Court, decided July 26, 2005.



Recent State Cases II

Smith v. Town of Mendon, 4 No. 177 New York Court of Appeals, decided December 21, 2004.



Recent State Cases III

K&K Construction, Inc. v. Department of Environmental Quality, Mich. Ct. Apps., July 26, 2005.



Recent State Cases IV

Palazzolo v. State, 2005 R.I. Super. LEXIS 108 (R.I. Super. Ct. July 5, 2005).



The Penn Central Balancing Test
Recently Completed

Palazzolo v. Rhode Island 533 US 606 (2001).

Supreme Court Sent This Complicated Case Sent back to Rhode Island Courts to perform a Penn Central Balancing Test.

Court Held That This Case Did Not Present a "Lucas" Total Deprivation.

Look At The Pictures and Say What You Think!



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"



Avoiding a Taking

Avoid Interfering with the Owners Right to Exclude Others. (Loretto and Nollan/Dolan too)



Avoiding a Taking

Avoid Denial of All Economic Use. (Lucas)
Nuisance Like Activity is Not A Valid Economic Use Usually
Although, Texas specifically rejects the concept of "sic utere tuo ut alienum non laedas" with respect to groundwater extraction.



Avoiding a Taking

In Highly Regulated Areas Consider Transferable Development Rights or Similar Residual Right so the Land Has Appropriate Value. (Penn Central).

BUT Consider a Whole Parcel Analysis. See, K&K Construction, Inc. v. Department of Environmental Quality, Mich. Ct. APPS. July 26, 2005.



Avoiding a Taking

Clearly Relate Regulation to Preventing a Hazard.

See, Different results in Gove cited previously and Annicelli v. Town of South Kingston, 463 A.d 133 (1983) and Lopes v. Peabody, 417 Mass. 299 (1994).



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



So, That Means Everything is OK?

Yes, But We Do Need To Talk About Two Other Major Areas Related to the Law that Impact on Floodplain Management and No Adverse Impact Hazards Planning:

“The Constitution in Exile Movement” and
“The Property Rights Movement.”



The Constitution in Exile

Richard Epstein, a Professor of Law at the University of Chicago is the Intellectual Force Behind a Movement that Feels that Many US Supreme Court Cases in the Twentieth Century were Wrongfully Decided.

Examples of Federal Laws Which they Feel are Unconstitutional: Social Security; Minimum Wage Laws; EPA; OSHA



The Constitution in Exile

The Cato Institute Indicates that **Compensation is Not Due** When:

“...the government acts to Secure Rights-when it stops someone from polluting his neighbor...it is acting under its police power...because the use prohibited...was wrong to begin with.”



The Property Rights Movement

“The Property Rights Movement May Well be the Most Significant Land Use and Environmental Movement in the United States in Recent Decades.” (Professor Harvey Jacobs-University of Wisconsin).

Twenty-eight States Have Enacted Property Rights Legislation(1991-2004)



Land Use and Property Rights in America

Oregon Measure 37 Adopted November 2, 2004. Requires State and Local Governments”...must pay owners, or forego enforcement, when certain land use restrictions reduce property value.”

Harris Act in Florida (1995). No Claims Paid to Date, Many Claims Made.

We Must Acknowledge the Very Real Emotional Appeal of Land and Property Rights to the Public.



No Adverse Impact Hazard Regulation Is a Winning Concept

So How Do We Proceed?

Planning

Partnerships

Good Legal Advice

Multi-Use Mapping and Engineering

Fair Regulation to Prevent Harm

Planning



**Partnerships With Other
Hazard Managers**

DHS/FEMA is Embarking on a Five Year Flood Map Modernization Program.

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 :EPA Wetlands, Watershed, USGS, Others?



How Can Your Efforts to Regulate Be Attacked? I

**Bluster and Threats;
and**



How Can Your Efforts to Regulate Be Attacked? II

Allegation that the Regulator has Deprived a Developer of a Constitutional Right “Under the Color of Law”. (42 USC Section 1983/1988);



How Can Your Efforts to Regulate Be Attacked? III

“Class of One” Allegations of Discriminatory Treatment Based on Personal Animus, or Other Inappropriate Factors.



NAI and the Law

Is NAI a Silver Bullet?
Fundamental Principle of Property Law: Saints Win!
Use of NAI Will Significantly Reduce the Probability of a Loss in Court!
Even Better Odds if there is Flexibility in the Regulation and the Community Applies the Principle to their Own Activities.



Floodplain and Wetland Attorneys!

Be Confident!

Be Assertive Protecting the Public and the Landowner!

Partner With Other Hazard Regulators



Floodplain and Wetland Regulators!

Be Fair and Reasonable!

“Recognize that, while it is Highly Unlikely, Your Municipality Could be Sued, Even if it is Extraordinarily Unlikely that Good No Adverse Impact Based Regulation Would be Held to be a “Taking”!”

Consider Various Legal Avenues Available to Your Clients and the Employees of Your Clients Including Insurance Policies, Trusts, and Mutual Assistance



You Have the Law on Your Side!

You Do Not Need to be a Punching Bag!

Be Ready With the NAI Tools, fairly Applied!

There are Serious Sanctions Available for Frivolous Lawsuits!



Legal Aspects: No Adverse Impact Floodplain Management

Edward A. Thomas Esq.
Michael Baker Engineering
Home Office 617-745-0711
Cell Phone 617-515-3849

ethomas@mbakercorp.com

“CHALLENGE US!”

Arizona Floodplain Management Association



Floodplain Management for Poets

What you need to know
before we discuss No
Adverse Impact

Doug Plasencia P.E. CFM
Michael Baker Jr. Inc
Phoenix, AZ



Overview

- Definitions
- Floodplain Management Program
- Floodplain Management Concepts
- What is No Adverse Impact

Definitions for Poets

- These are neither Legal or engineering precise definitions.
- They are however intended to provide a working understanding of these terms
- We will try and focus on 6 definitions

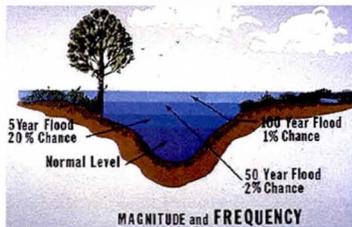
FLOODPLAIN HONOR ROLE

- The next time you see this type of slide-define the listed term, and win a prize.
- (if you're wrong- you have to share your favorite attorney joke!!)

1% Floodplain

- An area of significant flood hazard
- Commonly called the 100-year floodplain
- An area where development is regulated
- Can be riverine, alluvial fan, ponding, local drainage (and in other areas Coastal)
- Better than a 1 in 4 chance that the 1% flood will occur over the life of a 30-year mortgage.

Flood Levels



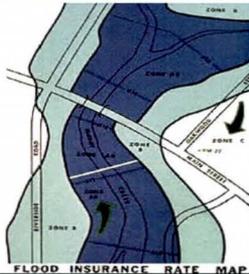
Floodway

- The most hazardous area within the floodplain that is reserved for flood flows
- An area where development is not allowed to cause any increase in flood depth for the 1% flood.
- Is not always mapped on FEMA floodplain maps

Floodplain Fringe

- The area of land that is not within the floodway, but is within the floodplain.
- Generally the area that is developed

Floodplain Vs Floodway



FIRM or DFIRM

- Flood Insurance Rate Map
- Published by FEMA
- Is a regulatory document
- DFIRM is a Digital Flood Insurance Rate Map- Arizona counties and municipalities are being converted to DFIRMs

Other Ways We Describe Floodplains

- SFHA- Special Flood Hazard Area- This is FEMA lingo for the 1% floodplain
- BFE- Base Flood Elevation- This relates to the estimated flood depth for the 1% flood at the time the study was performed

Floodplain Management Program

- Foundation is the FEMA National Flood Insurance Program (NFIP).
- The deal- Flood Insurance will be sold to individuals in a community IF the community has a floodplain management program that regulates development (joins the program)

Floodplain Management Program

- The Fine Print
 - If the Community is not part of the program certain disaster assistance will be withheld
 - Federally backed home loans in the floodplain (includes any institution backed by the Federal Govt.) requires flood insurance.

Floodplain Management Program

- In Arizona 97 communities participate in the National Flood Insurance Program

Floodplain Honor Role

FIRM

Floodplain vs. Drainage vs. Stormwater vs. Watershed

- Floodplain- a land area adjacent to or within a stream, drainage, coastal area that is subject to temporary flooding.

OR

- Floodplain – it's what FEMA says it is on the FIRM

Floodplain vs. Drainage vs. Stormwater vs. Watershed

- Floodplain – it's what FEMA says it is on the FIRM

Programmatically most communities limit their floodplain management activities to those areas FEMA calls floodplain; and then through a drainage program manages areas outside of the 1% floodplain.

***Notable exception is PIMA County that manages 1% flood areas not shown on the FEMA map as part of their floodplain management program.*

Floodplain vs. Drainage vs. Stormwater vs. Watershed

- Watershed- defines the land area that drains towards a specific drainage point, can be as small as your backyard or as large as several States. Watersheds contain floodplains and other drainage areas.

Floodplain vs. Drainage vs. Stormwater vs. Watershed

- Watershed-When standing in your backyard you actually are standing in several watersheds.
 - Colorado River
 - Gila River
 - Salt River
 - Price Drain
 - Linda Lane and Price
 - Linda Lane in Front of My house
 - My backyard
 - My neighbors backyard

Floodplain vs. Drainage vs. Stormwater vs. Watershed

- Drainage – relates to dealing with local surface runoff that is outside of FEMA’s floodplain, similar practices may be applied.
- Stormwater- can include elements of drainage, but is focused on water quality or pollution concerns.

FLOODPLAIN HONOR ROLE

1%
Floodplain

Floodplain Management Concepts

- How is a Floodplain Mapped?
 - Hydrology- how much water can we expect during a 1% flood?
 - Hydraulics- Once we know the hydrology and once the water gets to the floodplain how fast, how deep, and how wide will the floodplain be?

Floodplain Management Concepts

- How is a Floodplain Mapped?
 - Mapping- Once the hydraulics are complete how do we properly show the width of the floodplain, how do we relate the floodplain to local features like streets, community boundary, railroads, local survey features etc.

FLOODPLAIN HONOR ROLE

FLOODWAY

Floodplain Management Concepts

- How is a Floodway Mapped?
 - Hydrology- We use the same hydrology that we used for mapping the floodplain.
 - Mapping- We simply add the floodway to the map.

Floodplain Management Concepts

- How is a Floodway Mapped?
 - Hydraulics- Most of the time hydraulics are facilitated by a computer program that applies engineering equations that estimate flood depth, velocities, and width.
 - When calculating a floodway we simulate squeezing the floodplain from both sides, pushing the water towards the center until we obtain a prescribed increase in flood depth, which by FEMA regulation can be no more than a one foot increase.

Floodplain Management Concepts

- Can I build in a Floodplain?
 - Construction is a permitted use within the floodplain fringe for most communities.
 - Construction within a floodway is allowed only if the development causes no additional increase in the flood depth and in most cases if a variance is obtained.

FLOODPLAIN HONOR ROLE

• BFE

Floodplain Management Concepts

- How do I build within a floodplain?
 - By FEMA Regulations there are various building standards that must be complied but the most critical being the lowest floor must be at or above the BFE.
 - *Arizona Law requires the lowest floor to be one foot above the BFE*

Floodplain Management Concepts

- Why would Arizona require the lowest floor to be one foot above the BFE when FEMA would allow the lowest floor to be at the BFE?
 - Development in the floodplain may result in up to one foot of increase
 - Waves are not accounted for in the BFE
 - Uncertainty
 - Future Development may increase the amount of water getting to the floodplain.

Is Adding One Foot a Wise Thing to Do?

Charlotte-Mecklenburg, North Carolina

Identified the following Average Increases in Flood Depths Based

- +2 feet due to better data and technology
- +2 feet due to future development
- +1.7 feet due to floodway standards and loss of floodplain storage

Is Adverse Impact for Real?

Charlotte-Mecklenburg, North Carolina

Identified the following Average Increases in Flood Depths Based

- +2 feet due to better data and technology
- +2 feet due to future development
- +1.7 feet due to floodway standards and loss of floodplain storage

Floodplain Management Concepts

- What can happen when development occurs in a floodplain
 - Flood Depths get deeper
 - The water may flow faster
 - The floodplain may be wider in some locations or
 - The floodplain may be constrained

Floodplain Management Concepts

- What happens if the depth is deeper?
 - Existing buildings are more flood prone
 - Infrastructure may be overtopped
 - Can lead to more scour

Floodplain Management Concepts

- What happens if the water flows faster?
 - More erosion and scour
 - May threaten the foundations of existing buildings
 - May pose a higher risk to drivers or pedestrians

Floodplain Management Concepts

- What happens if the floodplain is wider?
 - As part of an overall plan it may be a good thing providing that open space is being created.
 - Unfortunately this typically results when the action of one neighbor causes the flood water to be forced out on the other side of the stream.
 - It normally means that flood depths are deeper

Floodplain Management Concepts

- What happens if the floodplain is constrained?
 - Can result in the loss of natural storage and lead to higher flooding rates downstream.
 - Generally results in a higher flood depth

Questions

No Adverse Impact
A Common Sense Strategy
for Floodplain Management

presented by
Doug Plasencia, CFM, PE



Association of Professionals



8,000 members
 - 21 Chapters
 - 9 Several and/or state Associations

ASFPM Mission



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

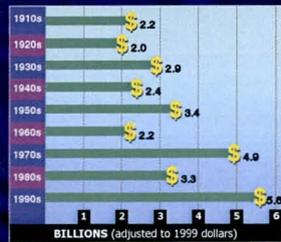
and



Protect the natural and beneficial functions of floodplains.

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:

- Promotes intensification in risk areas
- Ignores changing conditions
- Ignores 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...

Is This Trend Bad???

Investment Bias Cash Flow Bias
VS.

Nation needs to examine (based on current realities) how we measure success, then adjust our policies and programs accordingly.

Sustainability should be the ultimate goal.

Today's Floodplain Is Not Necessarily Tomorrow's Floodplain



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

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

Federal government

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

ASFPM Actions:

- Identify NAI Project Examples
- Provide Information on NAI to locals
- Document the Benefits of Mapping Future Conditions
- Support Local NAI Principles

Community Activities that can Incorporate NAI:

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

Hazard Identification

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

Planning

- Use a comprehensive watershed approach
- Incorporate NAI in all planning activities
- Consider individual and cumulative impacts of current and future development

Infrastructure

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

Emergency Services

- Disaster response should consider cumulative impacts
- Pre-plan flood fighting to avoid adverse impacts
- Emergency actions should not increase flooding on others

Regulations and Standards

- Current standards don't consider all impacts
- Policies and regulations must go beyond the NFIP
- Consequences of no change are drastic

Corrective Actions

- Mitigate while not transferring the problem elsewhere
- Activities include:
 - elevation
 - acquisition
 - Flood proofing

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

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?

No Adverse Impact: A Common Sense Strategy for Floodplain Management

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



The Arreola case: Seven ways to lose levees (and a lot of money)

A presentation for the Arizona Floodplain Managers Association – November 3-4, 2005
Julie M. Lemmon
Attorney At Law
Tempe, Arizona







Project Levees

- Earthen levees
- On both sides of Pajaro River
- Completed in 1949
- Built by US COE under 1944 Act
- Included clearing channel
- Capacity 19,000 cfs plus freeboard to give flood capacity of 23,000 cfs

The Partners:

- Pajaro River is border of two counties
- Four counties were involved in federal project assurances of maintenance
- Area was and still is largely agricultural
- Many small towns
- State Highway 1 runs parallel to coastline

Maintenance program:

- COE provided an O&M manual
- Manual and federal regulations incorporated into manual required maintaining the channel capacity
- Clear "shoals, weed and wild growth"
- From 1949 to 1972 vegetation and sandbars were removed with a tractor and a bulldozer

Flood history:

- 1955 storm flows of over 24,000 cfs reported at one gauge and still freeboard was remaining
- 1958 storm flows of 23,500 also contained, but with "slightly less" freeboard
- Flows measured at the Chittenden gauge on the river east of the project area

It's all downhill from here!

- In early 1970s California G&F moves to protect riparian habitat
- Local environmental interests actively support preservation of habitat
- One of the county partners adopts an ordinance to protect riparian corridors
- Other county officials lobby legislature to support riparian preservation efforts and to regulate public works projects

The results:

- Mechanized clearing stops in 1972
- One county tries to satisfy COE and G&F by using herbicides
- Channel starts clogging with sandbars
- Clearing is now more expensive because of trees and sandbars
- No money allocated for clearing or levee maintenance

Who cared?

- Local farmers were concerned as early as 1977 – wrote in 1985, 1987, and 1988
- By 1988 chief engineer for district concluded that capacity was down 50%
- One county engineer saw risk in 1983
- COE gave one “unacceptable condition” notice and in 1992 temporarily disqualified project for “serious constriction on flow”

“Let’s form a committee”

- Congressman recognized habitat and flood control conflicts
- Task force created management plan with hand clearing of vegetation
- County engineers objected
- Plan adopted in 1991 but not by counties
- Counties get more aggressive and some clearing is started on 20 year buildup

The flood:

- On March 10-11, 1995 river overtopped levee and eroded back of levee
- Levee collapsed and valley was inundated
- Flow likely around 17,500 cfs
- Flood ran down valley to Highway 1 and overwhelmed two 48-inch culverts
- Water left standing for long period
- Huge amounts of sediment deposited

The claims:

- INVERSE CONDEMNATION: When public use results in damage to private property without having been preceded by just compensation, the property owner may proceed against the public to recover that compensation.
- SHODDY MAINTENANCE OF A PUBLIC IMPROVEMENT (needs no definition)

Earlier decision:

- "Where the public agency's design, construction or maintenance of a flood control project is shown to have posed an *unreasonable* risk of harm to the plaintiffs, and such *unreasonable* design, construction or maintenance constituted a substantial cause of the damages, plaintiffs may recover regardless of the fact that the projects purpose is to contain the common enemy of floodwaters." (*Belair v. Riverside Co. FCD, 1988*)

What's reasonable?

- Overall public purpose served by project
- Plaintiff's loss offset by his benefits?
- Feasible alternatives with lower risks?
- Severity of plaintiff's damage v. his risk
- Damage a normal risk of land ownership?
- Were other project beneficiaries similarly damaged, or just the plaintiff?

You know it is unreasonable when:

- "...design, construction or maintenance of a public improvement poses an unreasonable risk of harm to the plaintiff's property, and the unreasonable aspect of the improvement is a substantial cause of damage. In those circumstances, unreasonableness is determined by balancing the factors set forth in Locklin."

Court findings:

- "...the longstanding negligent operation of a flood control project, such as is documented here, serves no legitimate purpose."
- "...feasible alternatives were available"
- "...the damages inflicted on the populace of the valley were enormous."
- "...the flood would not have occurred had the counties maintained the project."

Conclusion:

- It was the counties' long standing policy of allowing the channel to deteriorate that caused the flooding damage.
- Damages against counties - \$51 million

Excuses:

- It wasn't a deliberate plan – just neglect!
- It was regulatory impediments
- We didn't want to make the agencies mad
- It was environmentalists
- It was funding limitations
- The COE let us do it

Arreola v. County of Monterey, 99 Cal. App. 4th 722, 122 Cal. Rptr. 2d 38 (Cal. App. 6th Dist. 2002)

Paterno v. State of California, 113 Cal. App. 4th 998, 6 Cal. Rptr. 3d 854 (Cal. App. 3rd Dist. 2003)

1. Ignore or forget

- What levees, dams, channels do you have responsibility for?
- How do you know?
- How did you get that responsibility?
 - A federal project?
 - A local project?
 - Someone built it and left it?
 - You agreed to be the FEMA “back-up”

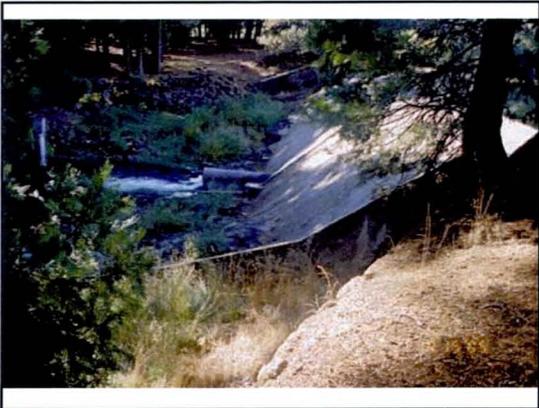


Map Mod members in the library (L-R): Bill Davis, Doug Bellomo, Bill Blanton, Cynthia Croxdale, Brenda Erickson, Ernie Lepore, and David DeHaven.

2. Ignore those pesky engineers!

- In the Paterno case, also recently finally decided against the State of California for a \$464 million, the court ruled that the State accepted the levees from the U.S., the State controlled the levees, and the State should have known of the deficiencies and repaired them
- So what do those O&M manuals say?





3. Skip the O&M and save \$\$

- No one ever has enough money to fix everything that needs to be fixed
- Examine the structures, assess risk, and prioritize any urgent maintenance needs
- Keep asking for funding
- Educate your policymakers

4. Blame the regulators

- “We couldn’t get a 404 permit to cut trees”
- “USFWS said we couldn’t take out the brush because an endangered species was once seen/heard nearby”
- “We unearthed an important cultural resource while grading and had to stop”
- Court said be aggressive and appeal!!!
- If an agency says do something stupid, don’t do it – appeal!



5. Let your Board members join forces with the opposition!

- Once you have identified your maintenance priorities, educate your elected officials so they can lobby for funding, regulatory relief, mapping assistance, or any other legislative changes that are needed

6. Wait for the federal government to give you some money to fix the problem

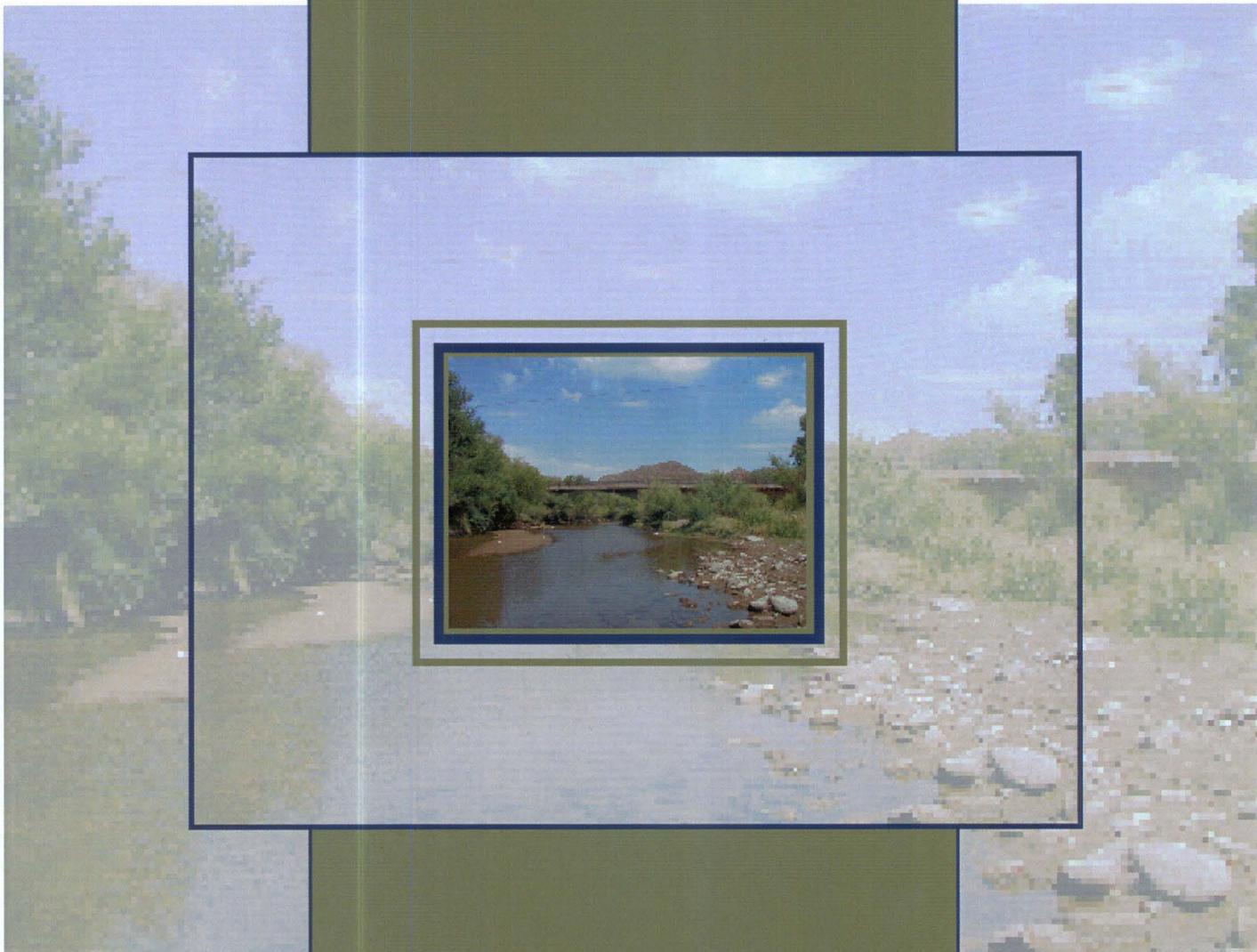
- The U.S. is absolutely immune from liability for flooding
- Immediate need is probably not going to be met
- Might be how it all started – really “free”?

7. Fail to warn

- Farmers and others saw the problems but were ignored
- Better emergency response programs might avoid or mitigate some damages
- Maintenance of levees and other structures protects your mapping investment – and your citizens.







Workshop PowerPoint Slides

**Liability for Water Control Structure Failure
Due to Flooding**



**NO ADVERSE IMPACT
FLOODPLAIN MANAGEMENT
AND
THE COURTS**

November 2005 Edition

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

Prepared for the Association of State Floodplain Managers



PREFACE

The following paper discusses selected legal issues with a “No Adverse Impact” floodplain management approach.

The primary audience for this paper is government lawyers and lawyers who advise government officials such as land planners, legislatures, and natural hazard managers or who defend governments against natural hazard-related common law or constitutional suits. The secondary audience is government officials, regulators, academics, legislators, and others undertaking actions which may impact or reduce flood hazards. Given the primary audience, we have included many case law citations in the paper.

The paper addresses the general law of the nation. Anyone wishing for more specific guidance pertaining to their state should contact a local attorney.

The paper is based, in part, upon a review of floodplain cases in the last sixteen years. Research was carried out by the authors and by Todd Mathes, a law student at the Albany Law School. The paper is also based upon earlier surveys of flood, erosion and other natural hazard cases carried out by the author in preparing a 1993 report, *The Law of Floods and Other Natural Hazards*, which was funded by the National Science Foundation. For other legal publications by the author on related subjects see, e.g., Kusler, J., *Wetland Assessment in the Courts*, Association of State Wetland Managers (2003); Kusler, J., *The Lucas Decision, Avoiding “Taking” Problems With Wetland and Floodplain Regulations*, 4 Md. J. Contemp. Legal Issues 73 (1993); Kusler, J., *Regulating Sensitive Lands*, Ballinger Publishers (1985); Kusler, J., et al., *Our National Wetland Heritage*, The Environmental Law Institute (1985); Kusler, J. and Platt, R., *The Law of Floodplains and Wetlands: Cases and Materials*, American Bar Association, Special Committee on Housing and Urban Development Law (1982); Kusler, J., et. al., *Regulation of Flood Hazard Areas to Reduce Flood Losses*, U.S. Water Resources Council, U.S. Government Printing Office (Vol. 1, 2, 3) (1972, 1973, 1975); Kusler, J., *Open Space Zoning: Valid Regulation or Invalid Taking?*, 57 Minn. L. Rev. 1 (1972); Kusler, J., *Water Quality Protection for Inland Lakes in Wisconsin: A Comprehensive Approach to Water Pollution*, Wis. L. Rev. 35 (1970).

We thank the many who have reviewed drafts of the paper and provided helpful comments. We thank particularly Professor Pat Parenteau, Esq. from the Vermont Law School and Larry Larson and the Staff at ASFPM.

We contemplate that this paper will be continuously updated and improved. Comments, suggestions, and input are always welcome through the Association of State Floodplain Managers.

Jon Kusler and Ed Thomas

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EXECUTIVE SUMMARY

This paper examines the “No Adverse Impact” approach for community floodplain management from several legal perspectives. With such an approach, a community implements a goal to not increase flood peaks, flood stage, flood velocity, erosion, and sedimentation in public works projects, regulatory permitting, and other activities.

The paper first considers the relationship of a No Adverse Impact approach to landowner common law rights and duties pertaining to flooding and erosion. The paper next considers the constitutionality of floodplain regulations incorporating a No Adverse Impact standard.

We conclude that:

A) No Adverse Impact approach is consistent with common law rights and duties;

B) It will reduce the potential for successful suits against communities (e.g., nuisance negligence) by private landowners for increasing flood and erosion hazards on private lands;

From a common law perspective, a No Adverse Impact approach for floodplain management coincides, overall, with traditional, truly ancient common law public and private landowner rights and duties with regard to the use of lands and waters. Courts have followed the maxim “Sic utere tuo ut alienum non laedas,” or “so use your own property that you do not injure another’s property.” See *Keystone Bituminous Coal Association v. DeBenedictis*, 107 S. Ct. 1232 (1987) and many cases cited therein. This maxim characterizes overall landowner rights and duties pursuant to common law nuisance, trespass, strict liability, negligence, riparian rights, surface water law rights and duties (many jurisdictions), and statutory liability. **At common law, no landowner (public or private) has a right to use his or her land in a manner that substantially increases flood or erosion damages on adjacent lands except in a dwindling number of jurisdictions applying the “common enemy” doctrine to diffused surface or flood waters.**

Communities which adhere to a No Adverse Impact approach in community decision-making and activities which affect the floodplains will decrease the potential for successful liability suits from a broad range of activities such as road and bridge building, installation of storm water management facilities, construction of flood control works, grading, construction of public buildings, approving subdivisions and accepting dedications of public works, and issuing permits.

C) Courts will uphold community floodplain regulations which contain a No Adverse Impact standard against “takings” and other Constitutional challenges to regulations.

From a Constitutional law perspective, courts are very likely to uphold community regulations which adopt a No Adverse Impact performance standard against claims of unreasonableness or “taking” of private property without payment of just compensation. This is particularly true if there is some flexibility in the regulations. Courts have broadly and consistently upheld state and local performance-oriented floodplain regulations including many which exceed minimum Federal Emergency Management Agency (FEMA) standards against taking challenges. Recent U.S. Supreme Court and State Court decisions have further emphasized this trend. Courts are likely

to uphold a No Adverse Impact standard not only because of this general support, but because such a standard is consistent with, overall, common law rights and duties. Courts have reasoned that regulations take nothing from landowners when they enforce common law rights and duties. Courts have broadly upheld regulations designed to prevent landowners from creating nuisances or undertaking activities which violate other common law private property concepts as not a "taking", in part, because no landowner has a "right" to make a nuisance of herself or violate the private property rights of others even where this may significantly impact the landowner.

Courts are likely to not only uphold a broad No Adverse Impact performance goal or standard, but more specific implementing regulations which tightly control development in floodways, coastal high hazard areas, and other high risk zones to implement such a standard. They are also likely to uphold very stringent regulations for small strips of land (e.g., set backs) and open space zoning for floodplains where there are economically viable uses such as transferable development rights, forestry, or agriculture. Communities are likely to encounter significant "taking" problems only where floodplain regulations permanently deny all or nearly all economic use of entire floodplain properties.

In summary, NAI is a PRINCIPLE that leads to a PROCESS which is legally acceptable, non-adversarial (neither pro- nor anti-development), understandable, and palatable to the community as a whole. The process clearly establishes that the "victim" in a land use development is not the developer, but rather the other members of the community who would be adversely affected by a proposed development. The developer is liberated to understand what the communities concerns are so they can plan and engineer their way to a successful, beneficial development.

PART 1: INTRODUCTION

INTRODUCTION

Part 1 of the following paper briefly discusses the No Adverse Impact goal.

Part 2 discusses community liability for increasing flood and erosion damages on private lands under common law theories and how a No Adverse Impact goal may help reduce such liability.

In Part 3, the paper considers the constitutionality of community regulations (zoning, building codes, subdivision controls) incorporating a No Adverse Impact standard against “takings” challenges and various types of implementing regulations.

Finally, in Part 4, the paper provides recommendations to help communities avoid common law liability and constitutional problems with No Adverse Impact regulations.

The paper is based upon a general examination of state and federal case law pertaining to flooding and floodplain regulations. For more precise conclusions for a particular jurisdiction, the reader is advised to consult a lawyer or examine the case law from that jurisdiction.

THE NO ADVERSE IMPACT GOAL

In 2000, the Association of State Floodplain Managers (ASFPM) recommended in a white paper a “No Adverse Impact” goal or approach for local government, state, and federal floodplain management. ASFPM recommended that communities adopt this goal to help control the spiral of flood and erosion losses, new development which increases flood risks, and then additional flood losses. The paper stated: **“No Adverse Impact floodplain management is an approach which ensures that the action of one property owner does not adversely impact the properties and rights of other property owners, as measured by increased flood peaks, flood stage, flood velocity, and erosion and sedimentation.”** The following explanation of “No Adverse Impact” is taken from this paper. The entire paper can be found on the ASFPM web site www.floods.org.

According to ASFPM, the “No Adverse Impact” goal is not intended as a rigid rule of conduct for all properties. Rather it has been suggested as a general guide for landowner and community actions (construction of public works, use of public lands, planning, regulations) in the watersheds and the floodplains which may adversely impact flooding and erosion on other properties or communities. A No Adverse Impact goal could also potentially be applied to environmental and other impacts, if a community chooses to do so.

ASFPM notes in the paper that flood damages in the United States continue to escalate. From the early 1900s to the year 2000, flood damages in the United States have increased four fold, approaching \$6 billion annually. Damages in the last two years have been wildly above this already high level. This occurred despite, and apparently, in some cases, because of, billions of dollars spent for structural flood control, and other structural and non-structural measures. Nationally, development within floodplains continues to intensify. Development is occurring in a manner whereby flood prone or marginally protected structures are suddenly prone to damages because of the actions of others in the floodplain. These actions raise flood heights and velocities and erosion potential.

Current FEMA National Flood Insurance Program (NFIP) floodplain management standards do not prohibit diverting floodwaters onto other properties, reduction in channel and overbank conveyance areas; filling of essential valley storage; and changing flood velocities with little regard as to how these changes impact others in the floodplain and watershed.¹ There is no question that the damage potential in the nation's floodplains is intensifying. This current course is one that is not equitable to those whose properties are impacted.

ASFPM recommends that, for local governments, No Adverse Impact floodplain management represents a way to prevent ever worsening flooding and flood damages and potentially increased legal liability. Most local governments have simply assumed that the federal floodplain management approaches embody a satisfactory standard of care, perhaps not realizing that existing approaches induce additional flooding and damage.

According to ASFPM, No Adverse Impact floodplain management offers communities an opportunity to promote *responsible and equitable* as well as legally sound floodplain development through community-based decision-making. Communities with such an approach will be able to better use federal and state programs to enhance their proactive initiatives and utilize those programs to their advantage as communities. A community with a No Adverse Impact floodplain management initiative empowers all the community, including property owners, developers, and citizens to actively participate as stakeholders at the local level. No Adverse Impact floodplain management can be a step towards individual as well as community accountability by not increasing flood damages on other properties and in other communities. A No Adverse Impact floodplain management goal requires communities to be proactive in understanding potential flood development impacts and implementing programs of loss mitigation before impacts occur.

ASFPM recommends that No Adverse Impact floodplain management be the default management standard for community regulations. It can also serve as an overall goal for a community that wishes to develop a comprehensive watershed and floodplain management plan which identifies acceptable levels of impact, specifies appropriate measures to mitigate those adverse impacts, and sets forth a plan of actions for implementation. No Adverse Impact can be extended to entire watersheds to promote the use of retention and detention technologies to mitigate increased runoff from urban areas.

¹ The Minimum Standards of the National Flood Insurance Program require that communities "review all permit applications to determine whether proposed building sites will be reasonably safe from flooding." See 44 CFR 60.3(a)(1). In addition, the regulations on the flood program specifically state that "(a) any community may exceed the minimum criteria (in the regulations) by adopting more comprehensive flood plain management regulations... Therefore, any flood plain management regulations adopted by a State or community which are more restrictive (than the Flood Program Minimum Standards) are encouraged and shall take precedence."

LEGAL ISSUES

The No Adverse Impact goal raises two major sets of legal issues which are examined in this paper:

- > Is the no impact goal consistent with the flood-related common law rights and duties of public and private landowners pertaining to flooding? Will adherence to this approach reduce suits against governments for flood losses (e.g., where new community roads, bridges, storm sewers will result in increased flood damage to private lands)?

- > Is community adoption of a No Adverse Impact regulatory standard consistent with the constitutional prohibitions against taking private property without payment of just compensation? May specific implementing standards include attachment of conditions to permits, tight regulation of high risk areas, tight regulation of narrow strips of land (buffers), open space zoning, and other implementing regulations?

We will examine the two questions in sequence.

PART 2: NO ADVERSE IMPACT AND THE COMMON LAW

Is the no impact goal consistent with the flood-related common law rights and duties of public and private landowners pertaining to flooding? Will adherence to the No Adverse Impact approach reduce successful suits against governments for increasing flood and erosion losses on private property?

SUCCESSFUL COMMON LAW SUITS AGAINST GOVERNMENTAL UNITS

Despite government efforts to protect lives and reduce property losses, natural hazards continue to take a heavy toll in the U.S. and abroad. Damages, including loss of life, due to Hurricanes Katrina, Rita, and Wilma are still rising and so are not yet tallied, but estimates are that Katrina-Rita will be the costliest disaster in U.S. history. The "Great Midwest Flood" along the Mississippi and Missouri Rivers in 1993 caused damages in excess of \$12.5 billion and nearly 50 deaths. Loss of life in the U.S. from hurricanes and flooding, as well as property losses, continue to mount as private and public development occurs in hazardous locations. Development in the watershed which increases flood and erosion on other properties further exacerbates the problem.

When individuals are damaged by flooding or erosion, they often file law suits against governments or other individuals, claiming that the governments have caused the damages, contributed to the damages, or failed to prevent or provide adequate warnings of natural hazards.

Box 1 outlines principal legal theories for such suits including "nuisance", "trespass", "violation of riparian rights", violation of the "law of surface water", "strict liability", "negligence", "denial of support", "statutory liability" and constitutional liability for "uncompensated takings". All but "statutory" grounds and "uncompensated takings" are "common law" grounds for suits. The common law is judge-made law dating back more than one thousand years. This judge-made law is primarily concerned with resolving disputes between individuals.

In a typical common law flood suit, a private landowner damaged by flood waters sues a community, alleging that the community actions increased flood or erosion damages on his or her property. The landowner's lawyer will argue liability based on one or several legal theories or grounds of the sort outlined in Box 1. To win in court, the landowner must prove the amount of flood damage, that the flooding or erosion was more severe than would have naturally occurred, and that the community's actions were the cause of the damage.

Box 1 Legal Theories or Grounds for Liability
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<p>Nuisance. At common law, no landowner (public or private) has a right to use his or her land in a manner that substantially interferes, in a physical sense, with the use of adjacent lands. See, e.g., <i>Sandifer Motor, Inc. v. City of Rodland Park</i>, 628 P.2d 239 (Kan., 1981) (Flooding due to city dumping debris into ravine which blocked sewer system was a nuisance.) "Reasonable" conduct is usually no defense against a nuisance suit, although reasonableness is relevant to a determination of nuisance in some contexts and the type of relief available.</p>

Principal activities which increase natural hazard losses on adjacent lands and may be subject to nuisance suits include: dikes, dams, levees, grading, construction of roads and other land alterations which increase flood heights and velocities on other lands; erosion control structures such as groins and seawalls which increase erosion and/or flooding on other lands; and mud slide, landslide, and other ground failure structures that increase rather than decrease damages on adjacent lands.

Trespass. At common law, landowners can also bring trespass actions for certain types of public and private actions which result in physical invasion of private property such as flooding or drainage. See *Hadfield v. Oakleim County Drain Com'r*, 422 N.W.2d 205 (Mich., 1988). There are several different types of "trespass" (trespass and "trespass on the case"). An extensive discussion of the law of trespass with all of its nuances is beyond the scope of this paper.

Violation of Riparian Rights. At common law, riparian landowners enjoy a variety of special rights incidental to the ownership of riparian lands. These rights or "privileges" include fishing, swimming, and construction of piers. Riparian rights must be exercised "reasonably" in relationship to the reciprocal riparian rights or other riparians. Courts in some instances have held that construction of levees, dams, etc. by one riparian which increase flood damages on other lands are a violation of the riparian rights of other riparians. See *Lawden v. Bosler*, 163 P.2d 957 (Okla., 1945).

Violation of the Law of Surface Water. Under the rule of "reasonable use" (or some variation of it) in most states landowners cannot, at common law, substantially damage other landowners by blocking the flow of diffused surface waters, increasing that flow, or channeling that flow to a point other than the point of natural discharge. Courts have applied these rules to governmental units as well as private landowners and have, in some instances, applied even more stringent standards to governmental units. See, for example, *Wilson v. Ramacher*, 352 N.W.2d 389 (Minn., 1984).

Strict Liability. Courts, in a fair number of states, have held that landowners and governments are "strictly liable" for the collapse of dams and other water control structures such as levees because impoundment of water, following an early English ruling, has often been held an "ultrahazardous" activity. Private and public landowners are liable for damages from ultrahazardous activities even when no negligence is involved. This topic will be the subject of a paper to be issued by the Association of State Floodplain Managers shortly.

Negligence. At common law, all individuals (including public employees) have a duty to other members of society to act "reasonably" in a manner so as not to cause damage to other members of society. "Actionable negligence results from the creation of an unreasonable risk of injury to others. In determining whether a risk is unreasonable, not only the seriousness of the harm that may be caused is relevant, but also the likelihood that harm may be caused." The standard of conduct is that of a "reasonable man" in the circumstances. Negligence is the primary legal basis for public liability for improper design of hazard reduction measures such as flood control structures, improperly prepared and issued warnings, inadequate processing of permits, inadequate inspections, etc. See discussion below; *Kunz v. Utah Power and Light Company*, 526 F.2d 500 (9th Cir., 1975).

Denial of Lateral Support. At common law, the owner of land has a duty to provide “lateral support” to adjacent lands and any digging, trenching, grading, or other activity which removes naturally occurring lateral support is done so at one’s peril. Government construction of roads, bridges, buildings, and other public works may deny lateral support to adjacent lands causing land failures (landslides, mudslides, erosion, building collapse). See discussion below; *Blake Construction Co. v. United States*, 585 F.2d 998 (Ct. Cl., 1978) (U.S. government liable for subsidence due to excavation next to existing buildings.)

Statutory Liability. Some states have adopted statutes which create separate statutory grounds for legal action. For example, the Texas Water Code, section 11.086, makes it unlawful for any person to divert the natural flow of waters or to impound surface waters in a manner that damages the property of others. See *Miller v. Letzerich*, 49 S.W.2d 404 (Tex., 1932).

Inverse Condemnation or “Taking” Without Payment of Just Compensation. Courts have quite often held governments liable for direct physical interference with adjacent lands due to flooding, mudflows, landslides, or other physical interferences based upon a theory of “taking” of property without payment of just compensation. Government landowners but not private landowners may be liable for such a taking. Successful inverse condemnation suits have been particularly common in California. For example, see *Ingram v. City of Redondo Beach*, 119 Cal. Rptr. 688 (Cal., 1975) in which the court held that collapse of an earthen retaining wall maintained by the city was basis for an inverse condemnation suit. But, inverse condemnation actions have been recognized in many other states as well. See, e.g., *Wilson v. Ramacher*, 352 N.W.2d 389 (Minn., 1984) (flooding); *McClure v. Town of Mesilla*, 601 P.2d 80 (N.M., 1979) (operation of drain pipe).

Successful liability suits based upon natural hazards have become increasingly expensive to governments, not only because of the increasing awards for flood and erosion damages but because of increasing attorney and expert witness fees and court costs which may exceed the damage award. See, for example, *City of Watauga v. Tayton*, 752 S.W.2d 199 (Tex., 1988). In this case, the trial court awarded only \$3,000 for damages to a home flooded by city actions and \$6,800 for destruction of personal property and fixtures. But it awarded \$19,500 for mental anguish and \$15,000 for attorney’s fees, more than three and one half times the amount of the physical damages. The appellate court overturned the award for attorney’s fees but upheld the award for mental anguish. For a much larger award of damages and hefty attorney’s fees, see *West Century 102 Ltd. v. City of Inglewood*, 2002 Cal. App. Unpub. LEXIS 1599 (Calif. App., 2002), in which the court awarded a judgment of \$2,448,120 against the city for water damage, including \$493,491 in attorney’s fees.

Successful liability suits of all types have increased in the last two decades for several reasons:

--**A growing propensity to sue.** Historically, members of society were more willing to accept losses from a broad range of natural hazard causes. Now, individuals suffering losses look for fault and monetary compensation from other individuals (public or private) who may have played even a limited role in causing or failing to prevent the losses.

--**Large damage awards and the willingness of lawyers to initiate suits.** Dramatic increases in damage awards, combined with expanded concepts of liability and lessened defenses, have encouraged lawyers to take liability cases on a contingent fee (20-60% or more) basis. This means that landowners and other claimants do not need large sums of money to initiate or pursue suits. Nor, will they be responsible for attorney's fees and court costs if they lose.

--**Governments are viewed as having "deep pockets".** Governments are often considered as being "able to pay". In some jurisdictions, governments may be held liable for the full amount of damages even where government actions were only a small contributor to such damages. Such joint and several liability has often been criticized and either judicially or legislatively changed in many states. But, even without joint and several liability, governments remain a good candidate for suit because juries often view them unsympathetically.

--**Expanded concepts of liability.** Courts and legislative bodies have expanded the basic rules of liability to make landowners and governmental units responsible for actions which result in or increase damages to others. For example, the traditional "common enemy" doctrine with regard to diffused surface waters (and other flood waters in some states), whereby a landowner could grade, dike, levee, or otherwise protect himself or herself against surface water without liability to other landowners or individuals who might be damaged by increased flows, has been replaced judicially or legislatively in most jurisdictions by a rule of "reasonable use". Pursuant to this rule, landowners must act "reasonably" with respect to other landowners. See, e.g., *County of Clark v. Powers*, 611 P.2d 1072 (Nev., 1980). In general, any activity which substantially increases the amount, velocity, or depth of surface waters on other lands has been held by courts to be unreasonable and potentially subject to liability. See, e.g., *Lombard Acceptance Corp. v. Town of San Anselmo*, 114 Cal. Rptr. 2d 699 (Cal. App., 2002), in which the court issued an injunction against a town for unreasonable increases in surface water which caused a landslide.

Similarly, the doctrine of caveat emptor (let the buyer beware) with regard to the sale of improved or unimproved property has been partially replaced by one of "implied warranty of suitability." Pursuant to this doctrine, a developer of new homes is now legally liable if the homes are not suitable for their intended uses due to flooding, erosion, subsidence, or other natural hazards.

--**Uncertainties with regard to the legal rules of liability and defenses (e.g., "act of God")** due to the evolving nature of the body of law and the site specific nature of many tort actions. The evolving and expanding nature of liability law, combined with the potential for large judgments, has encouraged landowners and their lawyers to initiate suits even in situations where no plaintiff has won before. With the potential for a several million dollar judgment in a single suit, lawyers can take chances on untested legal theories and factual situations with only a limited chance of success.

Even without expansion in basic rules of liability, the site-specific nature of negligence actions encourages a large number of suits due to the lack of hard and fast rules for negligent or non-negligent conduct. Negligence depends upon the circumstances. "Negligence" is, to a considerable extent, what a judge or jury says is reasonable or unreasonable in a specific circumstance.

--Abrogation or substantial modification of sovereign immunity in most jurisdictions. Traditionally governments could not be sued for negligence due to "sovereign immunity" although they were, in general, able to be sued at common law for nuisances and taking of property without payment of just compensation. In the last three decades, the defense of sovereign immunity has been substantially reduced or abrogated altogether by court action or, more commonly, by Congressional or legislative acts. As a result, governmental units at all levels of government are suable for negligence under certain circumstances, although there are exceptions. Most governments now carry liability insurance.

--Hazards have become more "foreseeable" and predictable. The potential for private and government liability has increased as the techniques and capabilities for defining hazard areas and predicting individual hazard events have improved and actual mapping of hazard areas has taken place. With improved predictive capability and the actual mapping of areas, hazard events are now (to a greater or lesser extent) "foreseeable" and failing to take such hazards into account may constitute negligence. See, e.g., *Barr v. Game, Fish, and Parks Commission*, 497 P.2d 340 (Col., 1972.)

--Limitations on the "Act of God" defense. "Act of God" was, at one time, a common, successful defense to losses from flooding and erosion. But, at common law, "acts of God" must not only be very large hazard events but must also be "unforeseeable". See, e.g., *Barr v. Game, Fish, and Parks Commission*, 497 P.2d 340 (Col., 1972.) See also, *Lang et. al v. Wonneberg et. al*, 455 N.W.2d 832 (N.D., 1990); *Keystone Electrical Manufacturing, Co., City of Des Moines*, 586 N.W.2d 340 (Ia., 1998). Improved predictive capability and the development of hazard maps for many areas have limited the use of this defense.

--Advances in the techniques for reducing hazard losses. Advances in hazard loss reduction measures (e.g., warning systems or elevating structures) create an increasingly high standard of care for reasonable conduct. As technology advances, the techniques and approaches which must be applied by engineers and others for "reasonable conduct" judged by practices applied in the profession also advance. Private landowners and governments are negligent if they fail to exercise "reasonable care" in the circumstances. Architects and engineers must exercise "reasonable care" and demonstrate a level of knowledge and expertise equal to that of architects and engineers in their region. See generally Annot., "Architect's Liability for Personal Injury or Death Allegedly Caused by Improper or Defective Plans or Designs," 97 *A.L.R.3d* 455 (2000). Widespread dissemination of information concerning techniques for reducing flood and erosion losses through magazines, technical journals, and reports, has also broadened the concept of "region" so that a broad if not national standard of reasonableness may now exist.

--Advances in natural hazard computer modeling techniques, which can be used to prove causation. Fifty years ago, it was very difficult for a landowner to prove that a particular activity on an adjacent land substantially increased flooding, subsidence, erosion, or other hazards on his or her land. This was particularly true when the increase was due to multiple activities on many lands, such as increased flooding due to development throughout a watershed. Today, sophisticated computer modeling techniques facilitate proof of causation and allocation of fault, although proof may still be difficult. See, e.g., *Souza v. Silver Development Co.*, 164 Cal App. 3d 165 (Cal., 1985); See, e.g., *Lea Company v. North Carolina Board of Transportation*, 304 S.E.2d 164 (N.C., 1983).

--Limitations upon the defenses of contributory negligence and assumption of risk.

Traditionally, contributory negligence (i.e., actions which contribute to the injury or loss) and assumption of risk were often partial or total defenses to negligence. Today most states have adopted comparative negligence statutes which permit recovery (based upon percentage of fault), even where the claimant has been partially negligent. In a somewhat similar vein, courts have curtailed the "assumption of risk" doctrine and have, in some cases, held that even relatively explicit assumption of risk is no defense against negligent actions.

Summary. All levels of government -- the federal government, states and local governments -- may now be sued for negligence, nuisance, breach of contract, or the "taking" of private property without payment of just compensation under certain circumstances when they increase flood or erosion hazards, although vulnerability to suit varies. As a practical matter, local governments are most vulnerable to liability suits based upon natural hazards because they are, in many contexts, the units of government undertaking most of the activities which may result in increased natural hazards or "takings of private property"; they are also the least protected by defenses such as sovereign immunity and statutory exemptions from tort actions. It is at the local level that most of the active management of hazardous lands occurs (road building and maintenance; operation of public buildings such as schools, libraries, town halls, sewer and water plants; parks). It is also at the local level where most public services with potential for creating liability, such as flood fighting, police, ice removal, emergency evacuation, and ambulance services, are provided.

EXAMPLES OF FLOODING, DRAINAGE, AND EROSION CASES

Units of government have been successfully sued for flooding, drainage, and erosion damages in a broad range of contexts which are illustrated below. Flooding affects, to a greater or lesser extent, much of the land in the U.S. Approximately 7% of the U.S. lies within the 100-year floodplain. Flooding is due to tides, storm surges, pressure differentials (seiches), long term fluctuations in precipitation leading to high groundwater levels or high lake levels, riverine flooding, flash flooding, storm surge (hurricanes), and stormwater flooding. High water levels and high velocities may kill people, livestock, and wildlife and destroy or damage structures, crops, roads, and other infrastructure.

Floods are, to a lesser or greater extent, foreseeable and predictable. As a result of the broad scale incidence of flood and drainage problems and the foreseeability of flooding, most (perhaps 85%) of natural hazard related liability suits against governments have been the result of flood or drainage damages. Many examples of successful cases are provided below and in other publications. See, for example, Binder, D.B., *Legal Liability for Dam Failures*, Association of State Dam Safety Officials, Lexington, Kentucky (1989); Annot, *Liability of Municipality or Other Governmental Subdivision in Connection with Flood Protection Measures*, 5 A.L.R.2d 57 (1949 and 2003 update). Cases illustrating various types of situations in which courts have held that governments may be sued for flooding, drainage, or erosion damages include the following. They have commonly been brought based on one or more of the legal theories identified in Box I. At one time, nuisance and trespass were the most common grounds for successful suits. More recently, negligence and unconstitutional takings have become more common.

Examples of suits include:

--Avery v. Geneva County, 567 So.2d 282 (Alab., 1990) (County may be liable for breaking a beaver dam which resulted in a flood and drowning.)

--United States v. Kansas City Life Insurance Co., 70 S. Ct. 885 (S.Ct., 1950) (Federal government is liable for artificially maintaining the Mississippi River at an artificially high level which raised the water table, blocked drainage of properties and caused destruction of the agricultural value of lands.)

--Coates v. United States, 612 F. Supp. 592 (D.C. Ill., 1985) (Federal government is liable for failure to give adequate flash flood warning to campers in Rocky Mountain National Park and to develop adequate emergency management plan.)

--Ducey v. United States, 713 F.2d 504 (9th Cir., 1983) (Federal government is potentially liable for failure to provide warnings for flash flood areas for an area subject to severe flooding in Lake Mead National Recreation Area.)

--County of Clark v. Powers, 611 P.2d 1072 (Nev., 1980) (County is liable for flood damage cause by county-approved subdivision.)

--Myotte v. Village of Mayfield, 375 N.E.2d 816 (Oh., 1977) (Village is liable for flood damage caused by issuance of a building permit for industrial park.)

--Masley v. City of Lorain, 358 N.E.2d 596 (Oh., 1976) (City is not liable under theory of trespass for increased flooding due to urbanization including lots and streets, but may be liable for inverse condemnation for damages due to storm sewer system.)

--Barr v. Game, Fish and Parks Commission, 497 P.2d 340 (Col., 1972) (State agency is liable for negligent design of dam and spillway inadequate to convey maximum probable flood; "act of God" defense inapplicable because of the foreseeability of the hazard event.)

--Rodrigues v. State, 472 P.2d 509 (Haw., 1970) (State is liable for damages due to inadequate maintenance of drainage culverts which were blocked by sand bars and tidal action.)

Cases are not confined to flooding and erosion but also include water-related landslides and earth movements. See, for example:

--ABC Builders, Inc. v. Phillips, 632 P.2d 925 (Wyo., 1981) (Evidence of city's failure to maintain a drainage ditch was sufficient to establish city's liability for resulting landslide.)

--Blau v. City of Los Angeles, 107 Cal. Rptr. 727 (1973) (City potentially liable under a theory of inverse condemnation for approving and accepting dedication of subdivision improvements that resulted in landslide.)

--Albers v. County of Los Angeles, 398 P.2d 129 (Cal., 1965) (County liable for inverse condemnation for landslide damage caused by public placement of fill; landowner could recover not only difference in fair market value before and after slide, but cost of stopping slide.)

LIABILITY FOR ENTIRELY "NATURAL" FLOOD AND EROSION DAMAGES

May a local government be held responsible for **all** flood or erosion damages occurring in a community? For, example, is it responsible for damages caused by overflow waters from a creek which has not been channelized or otherwise altered by the community?

Courts have generally held that landowners and governments have no affirmative duty to remedy **naturally occurring** hazards except in some special situations. See, e.g., *Souza v. Silver Development Co.*, 164 Cal App. 3d 165 (Cal., 1985). For example, a Georgia court held that one landowner with a beaver dam on his property was not responsible for removing this dam when it flooded adjacent property. See *Bracey v. King*, 406 S.E.2d 265 (Ga., 1991). The court in this case demonstrated humor which is uncommon in court decisions when it observed that "There is no suggestion in this case that the appellee (landowner) and/or his brother imported the offending beavers onto their property, trained them to build the dams, or in any way assisted or encouraged them in this activity."

Courts have also held in most contexts that landowners and governments ordinarily have no duty to warn visitors, invitees, trespassers, or members of the general public for **naturally occurring** hazards (not exacerbated or created by governments) nor do they have a duty to correct or ameliorate these hazards or reduce hazard losses including the adoption of regulations or hazard reduction structures (e.g., dams, disaster assistance, public insurance, etc.). However, there are exceptions to this general rule of no affirmative duty and there is a gradual trend in the courts to broaden these exceptions whenever governments take any action which directly or indirectly contributes to the flood or erosion damage. In addition, if governments do warn, correct or ameliorate hazards, or take other affirmative measures, they must do so with reasonable care.

Courts have repeatedly held that once a governmental unit elects to undertake government activities, even where no affirmative duty exists for such action, it must exercise reasonable care. See e.g., *Indian Towing v. United States*, 76 S. Ct. 122 (S.Ct. 1955). In the context of emergency services, this is often referred to as the "Good Samaritan" rule. Although a public entity or private individual ordinarily has no duty to provide aid to an individual in distress not caused by the public entity or private individual, once a governmental unit (or a private individual) has decided to provide aid, it must do so with ordinary care. As will be discussed in greater depth below, the doctrine applies in a broad range of contexts.

Some governments believe they may avoid **all** liability for hazard losses by avoiding various **future** affirmative actions which increase flood hazards by filling, grading, construction of bridges, flood control works, etc. This will reduce future liability. However, many public works projects already undertaken have increased flooding, drainage, erosion, or land failure hazards on other lands. Any construction of a public building and invitation to the public to use public land can create the potential for "premises" liability. Many of the land alteration activities which governments have been undertaking over the last three hundred years in the U.S., and are continuing to undertake, are "affirmative" acts which increase natural hazards -- with liability implications. In such situations, governments need to not only avoid actions which will increase future flood heights and velocities but undertake flood loss mitigation measures such as flood warning systems to reduce potential liability.

At the expense of belaboring the point, consider the typical municipality where many major land and water alterations have been carried out by the government or approved by government. These include public roads, sewers, water supply systems, stormwater systems, dikes, ditches, levees, general grading, and park development. Most private subdivisions have also been approved by governments under subdivision control laws; private buildings have been approved through building permits. These land alterations and permitted activities have modified runoff, drainage, stream and river channel flood characteristics, erosion potential, and landslide and mud slide potential throughout the community. The potential for damage from other hazards such as earthquakes (bursting pipelines), avalanches, and snow may also have been increased. Because government has modified the natural landscape, the argument of "doing nothing" to avoid liability has limited application. To reduce potential liability, governments need to avoid future increases in flood heights and simultaneously address pre-existing increases through flood hazard planning and plan implementation with a No Adverse Impact standard.

LIABILITY FOR AFFIRMATIVE ACTS WHICH INCREASE FLOOD AND EROSION DAMAGE

In what contexts may a community be held liable for increases in the amount and change the location of discharge of "surface" waters? Of waters in rivers, streams, and other channels?

As stated above, communities, like other landowners, may be held liable in almost all contexts for substantially increasing the amount of discharge or location of discharge of water with resulting damage to private property owners. They may be held liable under one or more of theories described in Box 1 for both increasing flood and erosion damage from surface waters and waters in rivers, streams, or other channels.

Under English common law, and the law of some states, private and public landowners could block or dispose of "diffused surface water" (i.e., surface water not confined to a defined watercourse, lake, or the ocean) pretty much as they wished under the "common-enemy doctrine". The common enemy doctrine was so named because "at one time surface water was regarded as a common enemy with which each landowner had an unlimited legal privilege to deal as he pleased without regard to the consequences that might be suffered by his neighbor...." *Butler v. Bruno*, 341 A.2d 735 (R.I., 1975). However the common enemy doctrine has been judicially or legislatively modified in all but a few states so that anyone (public or private) increasing natural drainage flows or the point of discharge does so at his or her peril. See generally, Annot., *Modern Status of Rules Governing Interference with Drainage of Surface Waters*, 93 A.L.R.3d 1193 (2003); R. Berk, *The Law of Drainage*, 5 Waters and Water Rights, #450 et seq. (R. Clark Ed., 1972); Kenworthy, *Urban Drainage--Aspects of Public and Private Liability*, 39 Den. L.J. 197 (1962).

As recently as 1993 the State of Missouri abrogated the "common enemy doctrine" in no uncertain terms:

The principal issue raised by this appeal is whether the modified common enemy doctrine should be applied to bar recovery by landowners and tenants whose property was flooded because a culvert under a highway bypass was not designed to handle the normal overflows from a nearby creek. We conclude that the common enemy doctrine no longer reflects the appropriate rule in situations involving surface water runoff and adopt a doctrine of reasonable use in its stead. See, *Heins Implement v. Hwy. & Transp. Com'n*, 859 S.W.2d 681 (1993).

On the other hand, Arizona reaffirmed that “the common enemy doctrine” was still in effect as recently as 1989:

Arizona follows the common enemy doctrine as it applies to floodwaters. Under this doctrine a riparian owner may dike against and prevent the invasion of his premises by floodwaters. If thereby the waters which are turned back damage the lands of another, it is a case of *damnum absque injuria*. This common enemy doctrine was not abrogated by the floodplain statutes is available to those who comply with or are exempt from the floodplain regulations, and is likewise available to a condemning authority when it is protecting its property like any other riparian owner. See, *White v. Pima County*, 161 *Ariz.* 90 (App. 1989) 775 *P.2d* 1154 (1989)

Two alternative doctrines to the common enemy doctrine are now applied to surface water in all but a few states. A highly restrictive “civil-law” rule has been adopted in a small number of states. The rule requires that the owner of lower land accept the surface water naturally draining onto his land but the upper owner may do nothing to increase the flow. See, *Butler v. Bruno*, 341 *A.2d* 735 (R.I., 1975). The rule is that “A person who interferes with the natural flow of surface water so as to cause an invasion of another’s interests in the use and enjoyment of his land is subject to liability to the others.” *Id.* at 737. See also Kinyon & McClure, *Interferences with Surface Waters*, 24 *Minn. L. Rev.* 891 (1940). This civil-law rule, like the common enemy doctrine, has, however, been somewhat modified in most of the states so that landowners may, to some extent, increase flows so long as they do so in good faith and “non-negligently.”

A third doctrine -- the rule of “reasonable use” -- has gradually replaced the common enemy and civil rules in most states. Under this rule, the property owner’s liability turns on a determination of the reasonableness of his or her actions. Factors relevant to the determination of reasonableness are similar to those considered in determining riparian rights and negligence (listed below). The issue of reasonableness is a question of fact to be determined in each case upon the consideration of all the relevant circumstances. *Butler v. Bruno*, 341 *A.2d* 735, 738 (R.I., 1975).

A very similar doctrine of reasonableness has been applied under the law of “riparian rights” which applies to water in watercourses. See generally Annot., *Right of Riparian Owner to Construct Dikes, Embankments, or Other Structures Necessary to Maintain or Restore Bank of Stream or to Prevent Flood*, 23 *A.L.R.2d* 750 (1952 with 2004 updates). The factors considered in determining “reasonableness” are similar to those used in determining whether a landowner has been “negligent” (see discussion below). Riparian rights have been interpreted, in some cases, to include the right to constructive flood and erosion protection measures so long as they do not damage other riparians. As the court in *Lowden v. Bosler*, 163 *P.2d* 957 (Okla., 1945) noted in holding a landowner liable for damages caused by a jetty placed in a river (*Id.* at 958):

A riparian proprietor may lawfully erect and maintain any work or embankment to protect his land against overflow by any change of the natural state of the river and to prevent the old course of the river from being altered; but such a riparian proprietor, though doing so for his convenience, benefit, and protection, has no right to build anything which in times of flood will throw waters on the lands of another such proprietor so as to overflow and injure him.

FACTORS RELEVANT TO REASONABLENESS

A variety of factors are relevant to the “reasonableness” of conduct in particular circumstances pursuant to a suit based on negligence and, to a lesser extent, other theories incorporating a reasonableness standard such the rules of “reasonable use” pertaining to diffused surface water and the law of riparian rights. Some of these include:

--**The severity of the potential harm posed by the particular activity.** Where severe harm may result from an act or activity, a “reasonable man” must exercise great care. See *Blue-flame Gas, Inc. v. Van Hoose*, 679 P.2d 579 (Col., 1984), in which the court held that the greater the risk, the greater the amount of care required to avoid injury. With an ultrahazardous activity, the degree of care required may be so great that it approaches strict liability.

--**Foreseeability of the harm.** A “reasonable man” is only responsible for injuries or damages which are known or could be reasonably foreseen. See *Scully v. Middleton*, 751 S.W.2d 5 (Ark., 1988). To constitute negligence, the act must be one in which a reasonably careful person would foresee such an appreciable risk of harm to others as to cause him not to do the act or to do it in a more careful manner. The test is not only whether he or she did in fact foresee the harm, but whether he or she should have foreseen it, given all the circumstances. For example, direct warning of a dangerous condition, such as the report from a user of a public road that a bridge was washed out, provides foreseeability. But so may a flood map or other less direct information.

--**Custom.** The standard for reasonable conduct in a negligence suit is usually a community standard. Therefore, evidence of the usual and customary conduct of others under the circumstances is relevant and admissible. See *The Law of Torts* 193. However, courts have found an entire industry careless and custom is not conclusive. See *The T.J. Hooper*, 60 F.2d 737 (2nd Cir., 1932). As noted by the Illinois Supreme Court in *Advincula v. United Blood Servs.*, 678 N.E.2d 1009 (Ill., 1996) “while custom and practice can assist in determining what is proper conduct, they are not conclusive necessarily of it. Such evidence may be overcome by contrary expert testimony (or its equivalence) that the prevailing **professional standard of care** (*emphasis added by the court*), itself, constitutes negligence.”

--**Emergency.** The overall context of acts determines their reasonableness for negligence purposes. For example, acts of a reasonable man in an emergency are subject to a lower standard of care than acts not in an emergency. See e.g., *Cords v. Anderson*, 259 N.W.2d 672 (Wis., 1977). An emergency is a sudden and unexpected situation which deprives an actor of an opportunity for deliberation.

--**The status of the injured party.** The duty of care owed by a private or public entity depends, to some extent, upon the status of the injured party and his or her relationship to the entity. Traditionally, at common law, the owner or occupier of land owed different standards of care to various categories of visitors for negligent conditions on the premises. See generally, Annot., *Modern Status of Rules Governing Landowner's Liability Upon Status of Injured Party as Invitee, Licensee, or Trespasser*, 22 A.L.R.4th 296 (1983 with 2003 updates). Some jurisdictions have held that an owner or occupier of land is held to a duty of reasonable care under all circumstances to invitees, licensees, and trespassers alike. Most others have held that the duty of reasonable care extends only to invitees and licensees but that a lesser standard of care exists

with regard to trespassers. In general, a landowner is only responsible to a trespasser for "willful and wanton" conduct with the exception of attractive nuisances. See *Adams v. Fred's Dollar Store*, 497 So. 2d 1097 (Miss, 1986).

--**Special relationship.** In some instances, a special relationship exists between an injured individual and a governmental unit that creates a special duty of care. For example, in *Kunz v. Utah Power and Light Company*, 526 F.2d 500 (9th Cir., 1975) a Federal Court of Appeals held that the Utah Power and Light Company which operated a storage facility at a lake had a special relationship with downstream landowners and a duty to provide flood control because they had operated the facility to provide flood control over a period of time and downstream landowners had come to rely upon such operation. Failure to act reasonably in light of this duty was negligence.

--**Statutes, ordinances, or other regulations applying to the area.** Negligence may arise from breach of a common law duty or one imposed by statute or regulation. See *Hundt v. LaCross Grain Co., Ind.*, 425 N.E.2d 687 (Ind., 1981) In general, violation of a statute or ordinance creates, at a minimum, a presumption of negligence or evidence of negligence. See, e.g., *Distad v. Cubin*, 633 P.2d 167 (Wyo., 1981). It is also relevant to nuisance and trespass. See, e.g., *Tyler V. Lincoln*, 527 S.E.2d 180 (2000).

GOVERNMENT FAILURE TO ADOPT REGULATIONS

May a governmental unit be liable for failure to adopt floodplain regulations?

In general, governmental units have no duty to adopt regulations and no liability results from failure to adopt a regulation. See, for example, *Hinnigan v. Town of Jewett*, 94 A.D.2d 830 (N.Y., 1983) (N.Y. court held that State of New York was not liable for failing to assure the participation of towns in the National Flood Insurance Program (NFIP) and, similarly, that the town of Jewett was not liable for failing to meet the minimum federal standards of the NFIP thereby making flood insurance available in the town.). See also *Urban v. Village of Inverness*, 530 N.E.2d 976 (Ill., 1988) (No affirmative duty by city to prevent flooding due to land alteration through adoption and enforcement of regulations on development.) However, see *Sabina v. Yavapai County Flood Control Dist.*, 993 P.2d 1130 (Ariz., 1999) (Court implied that Flood Control District might be liable for failing to regulate.)

However, legislatures in many states have adopted statutes requiring local governments to adopt floodplain regulations. See, *County of Ramsey v. Stevens*, 283 N.W. 2d 918 (Minn., 1979). These statutes create a duty to adopt regulations and might serve as the basis for suit if regulations were not then adopted. For example, see generally *NRCD v. NYSDEC*, 668 F. Supp. 848 (S.D.N.Y., 1987) (State liable for failing to adopted regulations as required.). See also *United States v. St. Bernard Parish*, 756 F.2d 1116 (5th Cir., 1985).

To be on the safe side, government units should adopt regulations where statutes require such adoption.

FAILING TO ADEQUATELY CONSIDER FLOODING IN PERMITTING

May governmental units be liable if they fail to adequately consider flooding in issuing regulatory permits with resulting damage to private landowners?

Courts in most jurisdictions have held that governments are immune from liability for issuance or denial of building and other types of permits because issuance is a discretionary function. See *Liability of government entity for issuance of permit for construction which caused accelerated flooding*, 62 A.L.R.3d 514 (2000). See *Wilcox Associates v. Fairbanks North Star Borough*, 603 P.2d 903 (Ala. 1979) and cases cited therein. This rule continues to prevail in the majority of the jurisdictions. See for example:

--Phillips v. King County, et. al., 968 P.2d 871 (Wash., 1998) (County not liable for approving a developer's drainage plan which resulted in flooding.)

--Johnson v. County of Essex, 538 A.2d 448 (N.J., 1987) (No township liability for approving plats and building permits which increased flow of water under pipe due to statutory plan and design immunity and discretionary immunity.)

--Loveland v. Orem City Corp., 746 P.2d 763 (Utah, 1987) (City not liable for approval of subdivision plat without requiring fencing of canal where child subsequently drowned was a discretionary function.)

Although the general rule is still no liability, courts have recognized some in-roads and qualifications on the rule, particularly where issuance of a permit results in damage to other lands. Annot., *Liability of Governmental Entity for Issuance of Permit for Construction Which Caused or Accelerated Flooding*, 62 A.L.R.3d 514 (2000). See for example:

--Hutcheson v. City of Keizer, 8 P.3d 1010 (Ore., 2000) (City liable for approving subdivision plans which led to extensive flooding.)

--Columbus v. Smith, 316 S.E.2d 761 (Ga., 1984) (Government entity which regulated construction along a stream in violation of a floodplain ordinance had a duty to prevent flooding to property along the stream caused by construction.)

--Kite v. City of Westworth Village, 853 S.W.2d 200 (Tex., 1993) (City was liable for approving subdivision plat which diverted water.)

--Hurst v. U.S., 739 F.Supp. 1377 (D.S.D, 1990) (U.S. Army Corps of Engineers potentially liable for failing to regulate building obstructions in navigable waters which increased erosion damage.)

--Columbus Ga. V. Smith, 316 S.E.2d 761 (Ga., 1984) (City may be held liable for approving construction project resulting in flooding.)

--Pickle v. Board of County Comm'r of County of Platte, 764 P.2d 262 (Wyo., 1988) (County had duty of exercising reasonable care in reviewing subdivision plan.)

Courts have also held governments liable to permittees for erroneous issuance of building permits in a number of cases. See cases cited in *Municipal Tort Liability for Erroneous Issuance of Building Permits: A National Survey*, 58 Wash. L. Rev. 537 (1983). See, for example, *Radach v. Gunderson*, 695 P. 2d 128 (Wash., 1985) (City was liable for expense of moving house which did not meet zoning setback requirements constructed pursuant to a permit issued by city.)

ACCEPTANCE OF DEDICATED STORM SEWERS, STREET, OTHER FACILITIES

May a governmental unit be held liable for flood damages which result from ditches, channels, stormwater detention facilities, roads, and other infrastructure constructed by developers and dedicated to governmental units?

In an increasing number of cases, courts have held governmental units responsible for approving and accepting storm sewers and other facilities dedicated to governmental units by subdividers or other developers. See for example:

--*City of Keller v. Wilson*, 86 S.W.3d 693 (Tex., 2002) (City liable for approving subdivision plat and acquiring easement which increased flood damage on other property.)

--*Kite v. City of Westworth Village*, 853 S.W.2d 200 (Tex., 1993) (City liable for approving subdivision plat and acquiring easement which increased flood damage on other property.)

--*City of Columbus v. Myszka*, 272 S.E.2d 302 (Ga., 1980) (City liable for continuing nuisance for approving and accepting uphill subdivision which caused flooding.)

--*Powell v. Village of Mt. Zion*, 410 N.E.2d 525 (Ill., 1980) (Once village approves and adopts sewer system constructed by subdivision developer, village may be held liable for damage caused by it.)

However, courts have refused to find cities liable in other contexts. See, for example:

--*M.H. Siegfried Real Estate v. City of Independence*, 649 S.W.2d 893 (Mo., 1983) (City cannot be required to construct culverts to facilitate the flow of surface water when it assumes maintenance of streets possibly built by others.)

--*Martinovich v. City of Sugar Creek, Mo*, 617 S.W.2d 515 (Mo., 1981) (City not responsible for sewer and catch basin constructed by private developer and never accepted by the city.)

INADEQUATE INSPECTIONS

May a governmental unit be held liable for failing to carry out adequate building inspections (e.g., failure to determine whether a structure complies with regulatory flood elevations and flood proofing requirements)?

Traditionally, failure of governments to carry out more traditional inspections or lack of care in such inspections was not subject to suit because inspections were considered either "governmental" or "discretionary" in nature. See *Municipal liability for negligent performance of building*

inspector's duties, 24 A.L.R.5th 200 (2003). See, for example, *Stemen v. Coffman*, 285 N.W.2d 305 (Mich., 1979) (Failure of city to require owners of multi-dwelling unit to abate alleged nuisance due to inadequate fire protection devices was discretionary and not negligence.); Stone, F.F. & A. Renker, Jr., *Government Liability for Negligent Inspections*, 57 Tul. L. Rev. 328 (1982). In addition, many states such as Kansas, Alaska, California and Utah have adopted statutes immunizing building inspection activities from suit. See K.S.A. 75-6104(j) (1989). Other examples of cases in which courts have refused to hold units of government responsible for inadequate inspections include:

--*Stannik v. Bellingham – Whatcom Bd. of Health* 737 P.2d 1054 (Wash., 1987) (Court refused to allow negligence claim against county by home buyers for failure to inspect and detect sewage disposal system which did not comply with county ordinance due to “public duty” doctrine.)

--*Siple v. City of Topeka*, 679 P.2d 190 (Kan., 1984) (Court refused to hold city liable for inspection of private tree by city forester which later fell on a car due to statutory immunity for inspections and public duty doctrine.)

But some courts hold governmental units responsible for inadequate inspections. See, for example:

--*Tuffley v. City of Syracuse*, 82 A.D.2d 110 (N.Y., 1981) (City was held liable based upon a theory of inverse condemnation for acts of a city engineer in failing to adequately inspect building site and determine that culvert running under site was part of a city storm water drainage system. The court held that a “special relationship” existed here.)

--*Brown v. Syson*, 663 P.2d 251 (Ariz., 1983) (Court held that home purchaser’s action against city for negligent inspection of home for violations of building codes was not barred by doctrine of sovereign immunity and public duty doctrine.)

INADEQUATE ENFORCEMENT OF REGULATIONS

Is a local government liable for failing to enforce floodplain regulations (e.g. illegal construction of a house in a floodway with resulting increased flood damages to adjacent lands)?

Courts have generally considered enforcement of regulations a discretionary function exempt from suit. However, as with negligent inspections, courts have held governmental units liable in a few instances. See, for example, *Radach v. Gunderson*, 695 P.2d 128 (Wash., 1985) (City was liable for expense of moving ocean-front house which did not meet zoning setback which was constructed pursuant to a permit issued by city. City was aware of violation before construction.)

LEGISLATIVE MODIFICATION OF COMMON LAW RULES

Could state legislatures modify the common law rules and impose a higher standard of care on local governments or private property owners for increasing flood damages on other lands, failure to comply with regulations, inadequate inspections, and similar actions?

It is clear that state legislatures could impose a higher standard of care on private landowners, public officials and local governments than imposed by common law by adopting remedial statutes. For example, lower courts and the U.S. Supreme Court have upheld state laws changing the "common enemy" doctrine with regard to surface water to a doctrine of reasonable use against claims of taking or violation of due process. See, E.G., *Chicago & Alton R. Co. v. Tranberger*, 35 S. Ct. 678 (1915); *Peterson v. Northern Pac. Ry. Co.*, 156 N.W. 121 (Minn., 1916); *Tranberger v. Railroad*, 156 S.W. 694 (Miss., 1913).

However, local governments cannot, by ordinance, change the common law in a local unit of government. But, they can adopt ordinances which help establish a higher standard of care in construction design and other activities. In many jurisdictions, violation of an ordinance or other regulation is considered negligence per se if (1) the injury was caused by the ordinance violation, (2) the harm was of the type intended to be prevented by the ordinance, and (3) the injured party was one of the class meant to be protected by the ordinance. See *Boyles v. Oklahoma Natural Gas Co.*, 619 P.2d 613 (Okla., 1980).

Although violation of a statute or ordinance is, at a minimum, evidence of negligence, compliance with an ordinance or statute does not bar a negligence suit. *Corley v. Gene Allen Air Service, Inc.*, 425 So. 2d 781 (La., 1983). In addition, approval of a permit for a project by a state administrative agency does not preclude a private law suit. For example, in *Oak Leaf Country Club, Inc. v. Wilson*, 257 N.W.2d 739 (Ia., 1977), an Iowa court held that approval by a state agency of a stream channelization project did not preclude judicial relief to riparian landowners for damage from the project.

In summary, a No Adverse Impact approach is, overall, consistent with landowner common law rights and duties. Adherence to a No Adverse Impact standard in road building, grading, stormwater management, filling, grading, flood control works, permitting, and other activities will reduce community liability.

**PART 3:
THE CONSTITUTIONALITY OF A NO ADVERSE IMPACT
REGULATORY STANDARD**

Would a community which adopted a No Adverse Impact performance standard in floodplain, zoning, subdivision control or other regulations be subject to successful landowner suits for “taking” private property without payment of just compensation? Would it be subject to successful suits if it adopted more specific implementing regulations such as a zero rise floodway restriction, stream setbacks, freeboard requirements for elevation of structures or open space zoning?

As will be discussed below, courts are likely to uphold a general No Adverse Impact performance standard. They are also likely to uphold more specific implementing regulations as long as the regulations do not deny landowners all permanent, non-nuisance like uses of entire properties. This will be explained below.

Despite the small number of regulatory cases holding that governments have “taken” private property without payment of just compensation through flood hazard and other hazard regulations, governments are often fearful that the regulations they adopt will be held a “taking”. Based upon the small number of successful cases to date and the overall trends in the courts, “taking” is not a serious challenge to performance-oriented hazard regulations and an overrated economic threat to public coffers. Successful regulatory taking cases for hazard-related regulations are extremely rare and are vastly outnumbered by successful common law cases holding governmental units liable for increasing flood, erosion or other hazard losses on private lands consistent with the legal theories previously described in Box 1 contained in Part I of this paper.

UNCOMPENSATED “TAKINGS”

The 5th Amendment to the U.S. Constitution and similar provisions in state constitutions prohibit governmental units from taking private property without payment of just compensation. Courts have held that unconstitutional “takings” may occur in two principal flood hazard contexts. The first occurs when a governmental unit increases flood or erosion damage on other lands through fills, grading, construction of levees, channelization or other activities as discussed. Governmental units may be found liable for such increases based upon a broad range of common law theories described in Box 1 located in Part I of this paper.

The second context in which governmental units may be held liable for “taking” private property without payment of just compensation is when they adopt floodplain regulations which severely restrict the use of private property. In such situations landowners sometimes claim “inverse condemnation” of their lands. However, very few of these suits have succeeded.

Over a period of years, there have been only a handful of successful challenges to floodplain regulations as a “taking”. Those few cases almost invariably involve almost complete prohibition of building on property, and no clearly demonstrated unique or quasi-unique hazard associated with the site in question. Thus far there are fewer than a dozen appellate cases which hold that a property has been unconstitutionally “taken”, in contrast with hundreds of cases supporting regulations. As we shall see, the trend in the courts is to sustain government regulation of hazardous locations and the prevention of harm. Nevertheless, local governments particularly are often con-

cerned about the possibility of a successful takings challenge to their regulations. Part of the concern with taking is due to misreading several U.S. Supreme Court decisions in the last decade addressing regulations for natural hazard areas described below. These decisions suggest that local and state regulations may be a “taking” in certain very narrow and easily avoidable circumstances. However, each of the decisions gave overall support to regulations.

Recent Federal Cases: Lingle v. Chevron

The United States Supreme Court recently issued a ruling in the Case of *Lingle V. Chevron* (No. 04-163, decided May, 23, 2005). That unanimous opinion of the Court sets forth four ways to pursue a Regulatory Taking Case:

A) Physical Invasion as in *Loretto v. Teleprompter Manhattan*, 458 US 419 (1982). The Loretto Case involved a New York City requirement that all residential buildings must permit a cable company to install cables, and a cable box the size of a cigarette pack. The Court held that any physical invasion must be considered a Taking.

B) The Total, or Near Total Regulatory Taking as exemplified by the Case of *Lucas v. South Carolina Coastal Council*, 505 US 1003 (1992), where plaintiff Lucas was prohibited from building a home on the only vacant lots left on an otherwise fully developed barrier beach just outside Charleston; (Note, the Court said that if Lucas was a “nuisance” under State law it might not be a Taking, but how could it be a nuisance if there were only two lots undeveloped on miles of Beach? What was the State plan to abate those nuisances?)

C) A significant, but not nearly total taking as exemplified by the *Penn Central Transportation Company v. New York City*, 438 US 104 (1978), where the Penn Central Company was not permitted to build above Grand Central Station in New York City to the full height permitted by the overlay zoning in the area, for Historic Preservation reasons, but was provided transferable development rights. In Penn Central, the Court used a three part test: a) economic impact, b) how regulation affects “investment-backed expectations”, and c) character of the government action.

D) Land use Exactions which are not really related to the articulated government interest as in *Nollan v. California Coastal Commission*, 483 US 825 (1987), where the California Coastal Commission conditioned a permit to expand an existing beachfront home on the owner, granting an easement to the public to cross his beachfront land. The articulated government interest was that the lateral expansion of the home would reduce the amount of beach and ocean the public on the road side of the home could see. The Court indicated that preserving public views from the road really did not have an essential nexus with allowing folks to cross a beach. The Court also cited the *Dollan v. Tigard*, 512 US 374 (1994) case where someone wanted to expand a plumbing store and the community wanted the store to give the community some adjacent flood plain property and an easement for bike path in return for the possible increase in traffic caused by the expansion of the store. Again, in Dollan, the court basically indicated that there was really no relationship between the government interest and the exaction attempted. Basically the Court is saying no to plans of extortion.

In Lingle, the Court specifically indicates that it will no longer use the first part of the two part test for determining a Taking set forth in *Agins v. City of Tiburon*, 447 US 255 (1980): a) whether the regulation substantially advances a legitimate state interest, b) denies owner an eco-

nominically viable use of land. The removal of this “substantially advances a legitimate state interest” prong of a takings test is a huge help to Floodplain Managers, to the concept of NAI and to Planning in general. In essence, the question of whether an action by a legislative body “substantially advanced a legitimate state interest” had provided a mechanism for judicial second guessing of the relative merits of legislative action. The Supreme Court is indicating that it will defer to legislative decisions unless: there is no real relationship between what the legislative body desires and the action taken, or there is some other due process or equal protection issue. *See*, Nollan, *supra*; Dolan *supra*; and Justice Kennedy’s concurring opinion in Lingle, *below*.

E) Justice Kennedy concurred in the majority opinion, but notes that the decision did not foreclose the possibility of litigating a regulation which was “so arbitrary or irrational as to violate due process”. It is not in any way clear as to why none of the other members of the Court joined in Justice Kennedy’s sentiments. However, this comment really does not matter to NAI because by its very nature NAI is the quintessence of the thoughtful and rational. The Court summed up its reasoning by stating that:

The Tests articulated in Lingle “...all aim to identify regulatory actions that are functionally equivalent to a direct appropriation of or ouster from private property...”

This clear statement by this Nation’s Highest Court tremendously supports both the principles of the National Flood Insurance Program (NFIP) and No Adverse Impact (NAI) floodplain and stormwater management. Both the NFIP and NAI seek to require the safe and proper development of land subject to a hazard. Neither the NFIP nor NAI floodplain and stormwater management require or support government regulations which oust people from their property.

Other Recent US Supreme Court Cases

A) *Kelo v. New London*, U.S. Supreme Court, No.04-108, Decided June 23, 2005.

Kelo involves condemnation, that is, a “paid taking” of residences. The case has to do with whether economic development in a community is considered a “public use” for purposes of a taking as described in the Constitution. The five-to-four decision that, yes, economic development can be considered a public use, shows how much deference the majority of the Justices are willing to give to local decision makers who, in this case, had decided to condemn private land so that commercial redevelopment could take place.. Pro-government and planning associations cheered the decision. However, the announcement of the decision was also greeted by widespread public concern, outrage, and proposed legislative correction of the decision from groups concerned about the rights of minorities as well as property rights advocates. This widespread concern illustrates the extreme sensitivity of issues involving property rights. For floodplain and stormwater managers, the primary lesson of this case is that the Court was willing to give enormous deference to local decisions about what is best for a community, thus offering support to the concepts and principles of the Flood Insurance Program and No Adverse Impact floodplain/stormwater management.

B) *San Remo Hotel v. City and County of San Francisco*, U.S. Supreme Court No. 04-340 decided June 20, 2005.

This unanimous decision in a case involving fees charged to permit the change of use of a hotel does not directly relate to hazard regulation. Nevertheless, it is important to floodplain managers because it indicates that taking claimants who have already litigated an alleged “taking” in state court do not get another “bite at the apple” in Federal court.

Box 2
Other Supreme Court Decisions
With Special Relevance to Floodplain Regulations

The following seven Supreme Court decisions in the last fifteen years have special relevance to floodplain regulations. Four of these (Tahoe, Dolan, First English, and Keystone) dealt with hazard reduction regulations; two with beach regulations (Lucas and Nolan) and one with wetlands (Palazzolo). The Court remanded the cases for further proceedings in five of the seven. The potential importance of holdings to future federal and state court cases is indicated.

--Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency, 122 S.Ct. 1465 (2002) (Court upheld Tahoe Regional Planning Agency temporary ordinances which had applied for 32 months to "high hazard" (steep slope) zones near Lake Tahoe against a claim that they were a taking of private property. The Court applied a "whole parcel" analysis to duration of regulation to decide that no taking had occurred. This case can be cited in the future to strongly support hazard-related regulations including "interim" regulations as well as moratoria on development when time is needed to adequately develop regulations e.g. in a post disaster context.)

--Palazzolo v. Rhode Island, 121 S.Ct. 2448 (2001) (Court held that purchase of wetland subject to restrictions was not bar to a suit for taking of private property but the test for taking was the value of the entire parcel and not simply the wetland portion. The case was remanded for further proceedings. This case may be cited in the future to help support hazard regulations in some contexts because it requires lower courts to consider the impact of regulations on entire parcels. But, it may also be cited to attack regulations where a landowner purchased lands subject to regulations and wishes to challenge the regulations. The Rhode Island Trial Court determined that there was no "taking" when it considered the case on remand. See discussion below under section entitled "Recent State Cases".)

--Dolan v. City of Tigard, 114 S.Ct. 2309 (1994) (Court held that city regulations for the 100 year floodplain which required a property owner to donate a 15 foot bike path along the stream were not reasonably related to the goals of the regulation and were therefore a taking. The Court stated that the municipality had to establish that the dedication requirement had "rough proportionality" to the burden on the public created by the proposed development. The Court later, in City of Monterey v. Del Monte Dunes at Monterey, Ltd, 119 S.Ct. 1624 (1999), held that rough proportionality test was limited to exactions of interests in land for public use.). Dolan may be cited those attacking floodplain dedication requirements where the dedication requirements are not roughly proportional to the burdens created by the proposed floodplain activity, and, in fact, have little or no relationship to the articulated government interest. The Courts will particularly scrutinize any government requirement that a property owner's right to exclude others from their property is being infringed.

--Lucas v. South Carolina Coastal Council, 112 S.Ct. 2886 (1992) (Court held that state beach statute prohibiting building of a house which prevent "any reasonable use of lots" was a "categorical" taking unless the state could identify background principles of nuisance and property law which would prohibit the owner from developing the property. The case was remanded for further determinations by the South Carolina court, which determined that the Coastal Council's

regulations were, in fact, a “taking”. South Carolina bought the property from Lucas and sold it to a builder. This case may be cited to challenge floodplain regulations if the floodplain regulations deny all economic use of entire lands and the prohibited uses are not nuisance-like in their surroundings or otherwise limited by public trust or other principles of state law. On the other hand, the case may be cited in the future to support floodplain regulations where proposed activities are limited by common law or other principles of state law or where regulations do not deny all economic uses.)

--Nollan v. California Coastal Commission, 107 S.Ct. 3141 (1987) (Court held that the California Coastal Council’s conditioning of a building permit for a beach front lot upon granting public access to the beach lacked an “essential nexus” between the regulatory requirement and the regulatory goals and was a taking. The Court held that the access requirement “utterly fail(ed) to advance the stated public purpose of providing views of the beach, reducing psychological barriers to using public beaches, and reducing beach congestion.” This case may be cited in the future to attack floodplain regulations if they lack adequate “nexus” to regulatory goals and dedications are required. However, inadequate nexus is very rarely a problem with floodplain regulations.)

--First English Evangelical Church of Glendale v. County of Los Angeles, 482 U.S. 304 (1987). (Court held that a temporary restriction by a flood hazard reduction ordinance which prevented the rebuilding of a church property was (potentially) a taking. The court remanded the decision to the Lower California court to redetermine whether a taking had occurred. The lower court held again that no taking had occurred. There was no further appeal of this decision. This case may be cited by landowners attacking floodplain regulations as a taking or temporary taking. However, this ruling is qualified by the Tahoe, above, which strongly upheld interim regulations as not a taking.)

--Keystone Bituminous Coal Association v. De Benedictis, 107 S. Ct. 1232 (1987) (Court held that public safety regulations which restricted the mining of all of the coal to prevent subsidence were not a taking because the impact of regulations upon an entire property, not simply the areas where coal could not be removed, should be considered. This case may be cited in the future, supporting whole parcel analysis for floodplain regulations (see also Tahoe and Palazzolo above). The case may also be cited supporting regulations which restrict threats to public safety or control of nuisances)

Traditional floodplain regulations permit some development in the floodplain, although an increasing number of local and state regulations require various types of compensatory measures to ensure that development will not increase flood heights on other lands, consistent with No Adverse Impact standard. Regulations preventing landowners from increasing flood or erosion damages on other lands have been broadly upheld for a variety of reasons. With regard to uses with nuisance-like impacts, the U.S. Supreme Court in *Keystone Bituminous Coal Assn. v. De-Benedictis*, 107 S. Ct. 1232, 1245 (1987) concluded:

The Court’s hesitance to find a taking when the state merely restrains uses of property that are tantamount to public nuisances is consistent with the notion of “reciprocity of advantage”.... Under our system of government, one of the state’s primary ways of preserving the public weal is restricting the uses individuals can make of their property.

While each of us is burdened somewhat by such restrictions, we, in turn, benefit greatly from the restrictions that are placed on others.... These restrictions are “properly treated as part of the burden of common citizenship”... Long ago it was recognized that “all property in this country is held under the implied obligation that the owner’s use of it shall not be injurious to the community”...and the Takings Clause did not transform that principle to one that requires compensation whenever the state asserts its power to enforce it.

A Texas court in *San Antonio River Authority v. Garrett Brothers*, 528 S.W.2d 266 (Tex., 1975) concluded, more broadly:

It is clear that in exercising the police power, the government agency is acting as an arbiter of disputes among groups and individuals for the purpose of resolving conflicts among competing interests. This is the role in which government acts when it adopts zoning ordinances, enacts health measures, adopts building codes, abates nuisances, or adopts a host of other regulations. When government, in its roles as neutral arbiter, adopts measures for the protection of the public health, safety, morals or welfare, and such regulations result in economic loss to a citizen, a rule shielding the agency from liability for such loss can be persuasively defended, since the threat of liability in such cases could well have the effect of deterring the adoption of measures necessary for the attainment of proper police power objectives, with the result that only completely safe, and probably ineffective, regulatory measures would be adopted.

Recent State Cases

A) *Gove v. Zoning Board of Appeals of the Town of Chatham*, Massachusetts Supreme Judicial Court, decided July, 26, 2005.

The Town of Chatham zoned several areas, including its Special Flood Hazard Areas (the area identified by the Federal Emergency Management Agency as being subject to at least a one-percent annual chance of flooding), in such a way that a variance is required to build. Gove sold a 1.8-acre parcel of land on the condition that a building permit for a single-family home would be issued. The Town declined to issue the permit, and Gove sued, alleging a taking. In this decision, Massachusetts’ highest court emphasized that the Town of Chatham had identified unique hazards on this erosion-prone coastal A-Zone property. The court found that the plaintiffs had not sufficiently shown that they could construct a home in this area without potentially causing harm to others. The Town made a good case that this is not just any A-Zone property in a SFHA. It is on the coast adjacent to the V Zone, in an area which has experienced major flooding and is now exposed to the open ocean waves due to a breach in a barrier beach just opposite the site. Further it is subject to accelerated “normal” erosion, and storm related erosion.

This decision by the Massachusetts Supreme Judicial Court very much validates and supports the National Flood Insurance Program, the concept of No Adverse Impact floodplain and stormwater management, as well as hazards based regulation in general. While the decision is binding only on Massachusetts Courts, it should have persuasive effect in other jurisdictions.

B) *Palazzolo v. State*, 2005 R.I. Super. LEXIS 108 (R.I. Super. Ct. July 5, 2005).

Palazzolo, an important Taking Issue case remanded in 2001 by the US Supreme Court, with instructions for re-hearing by the Rhode Island courts, was recently decided against the landowner. The decision is an extremely well written, well reasoned, huge win for floodplain and hazard managers. Essentially, a Rhode Island Superior court determined that the stringent restrictions in coastal construction implemented by the Rhode Island Coastal Resources Council did not "Take" the *Palazzolo* property in violation to the Fifth Amendment to the US Constitution. The case is well worth reading since it offers a great review of Takings Law, the Penn Central balancing test, the Public Trust Doctrine and nuisance law. A link to the case is: <http://www.olemiss.edu/orgs/SGLC/casealert.htm>. This case could conceivably be appealed by *Palazzolo* to the Rhode Island Supreme Court. An appeal back through the federal courts is conceivable, but somewhat unlikely in view of the *San Remo* decision explained above. The *Palazzolo* case is not necessarily "over and final". However, the Superior Court has written an extremely well reasoned opinion that should strongly resist challenge on appeal.

C) *Smith v. Town of Mendon*, 4 No. 177 New York Court of Appeals, decided Dec. 21, 2004.

This case involved a requirement by a town that, as a condition of issuance of a building permit, the property owner must grant a conservation easement for some portions of the site, including flood hazard areas, on which the Town had imposed conservation overlay zoning severely restricting development. The owner did not propose to build on these environmentally sensitive areas, but at the same time did not want to restrict any future activity by granting a conservation easement. New York's highest court issued a sharply divided (4-3) opinion that upheld the Town's requirement.

From a floodplain manager's perspective, the interesting thing is that there was no real argument in the case that the Town's restrictions on building in flood hazard areas was a taking. The plaintiff only argued against an easement that would restrict future development on other parts of the land, yet the court still upheld the community's requirement aimed at protecting environmentally sensitive and hazard-prone areas.

REGULATIONS EXCEEDING NFIP MINIMUM STANDARDS

Courts have sustained a wide range of floodplain regulations which exceed the specifically articulated minimum standards of FEMA's National Flood Insurance Program against challenges that they are unreasonable or a taking. See particularly *Hansel v. City of Keene*, 634 A2d 1351 (N.H., 1993) in which the New Hampshire Supreme Court upheld an ordinance adopted by the city of Keene which contained a "no significant impact" standard. The zoning ordinance prohibited new construction within the floodplain unless it was demonstrated "that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevations of the base flood at any point within the community." In sustaining the regulation, the court noted that the floodplain ordinance revealed "an understandable concern among city officials that any water surface elevation increase in the floodplain could, at a minimum, strain city resources and impose unnecessary hardship on city residents."

For other examples sustaining regulations which exceed minimum FEMA standards against "takings" and other challenges, see the following and other cases cited below pertaining to setbacks, tight restriction of high hazard areas, and open space zoning:

--American Cyanamid v. Dept. of Envir. Prot., 555 A.2d 684 (N.J., 1989) (Court held that N.J. DEP could use USGS 500-year design flood line for regulatory purposes.)

--New City Office Park v. Planning Bd., Town of Clarkstown, 533 N.Y.S.2d 786 (N.Y., 1988) (Court upheld planning board's denial of site plan approval because the developer could not provide compensatory flood storage for 9,500 cubic yards of fill proposed for the property. The court noted that "Indeed, common sense dictates that the development of numerous parcels of land situated with the floodplain, each displacing only a relatively minor amount of floodwater, in the aggregate could lead to disastrous consequences.)

Patullo v. Zoning Hearing Bd. of Tp. of Middletown, 701 A.2d 295 (Pa. Cowlth, 1997) (Court held that landowner as not entitled to a special exception or variance for construction of a garage in a 100 year floodplain where construction would have raised flood heights by 0.1 foot and area of the floodplain along a road by 1 foot.)

--Reel Enterprises v. City of LaCrosse, 431 N.W.2d 743 (Wis., 1988) (Court held that Wis. DNR had not taken private floodplain property by undertaking floodplain studies, disapproving municipal ordinance, and announcing an intention to adopt floodplain ordinance for city putting all or most properties within floodway designation. Plaintiff had failed to allege or prove the deprivation of "all or substantially all, of the use of their property." However, the court decision was partially overruled on other grounds.)

--State v. City of La Crosse, 120 Wis.2d 263 (Wis., 1984) (Court held that state's hydraulic analysis showing that fill placed in the La Crosse River floodplain would cause an increase greater than 0.1 in the height of the regional flood, contrary to the city's floodplain zoning ordinance and state regulations.)

Courts have only held flood-related regulations to be a taking in a small number of cases where regulations denied landowners all economic use of private lands. Various versions of the denial of economic use test have been widely applied at the state level for more than forty years. See Kusler, *Open Space Zoning: Taking or Valid Regulation*, 57 Minn. L. Rev. 1 (1972). For example, a New York Court of Appeals in *Arvene Bay Construction Co. v. Thatcher*, 15 N.E.2d 587 at 592 (N.Y., 1938), held that "An ordinance which permanently so restricts the use of property that it cannot be used for any reasonable purpose goes, it is plain, beyond regulation, and must be recognized as a taking of property." See also discussion below.

SIMULTANEOUS CONSTITUTIONAL CHALLENGES

Landowners wishing to challenge a floodplain regulation often simultaneously argue that the regulations are unconstitutional under the state and federal Constitution in a number of different ways--the regulations are adopted for improper goals; the regulations are not reasonably related (lack reasonable nexus) to regulatory goals; the regulations are discriminatory; and the regulations are an uncompensated taking of private property. Courts are more likely to find a taking if they find inadequate goals, inadequate nexus or discrimination.

Landowners have apparently never succeeded (I could find no appellate case) in attacking floodplain regulations as lacking adequate goals. For a case upholding goals see, e.g., *Society for En-*

vironmental Economic Development v. New Jersey Department of Environmental Protection, 504 A.2d 1180 (N.J., 1985). Landowners have also very rarely succeeded in attacking floodplain regulations as lacking adequate nexus to regulatory goals. For a single example see, e.g., Sturdy Homes, Inc. v. Town of Redford, 186 N.W.2d 43 (Mich. 1971) (No evidence of flooding for an area regulated as a floodplain.) Landowners have not succeeded in attacking floodplain regulations as discriminatory except where discrimination was also linked to takings challenges. See, e.g., Baggs v. City of South Pasadena, 947 F.Supp. 1580 (Fl., 1996), where a court rejected discrimination charges where a variance had been granted to some landowners but not to others. See also Hansel v. City of Keene, 634 A2d 1351 (N.H., 1993).

Courts have found in some instances that a community has failed to follow statutory procedures in adopting and implementing regulations (e.g., notice, hearing, publication of maps) and violated Due Process guarantees. This challenge is, however, separate from takings. Courts have required that communities follow statutory procedures in adopting and administering regulations and have occasionally invalidated regulations or permit decisions on this basis. See, e.g., Ford v. Board of County Commissioners of Converse County, 924 P.2d 91 (Wy., 1996).

FACTORS CONSIDERED BY THE COURTS IN A TAKINGS CASE

In deciding whether floodplain regulations take private property without payment of just compensation, courts simultaneously examine a variety of factors in addition to goals, nexus and possible discrimination suggested above. They examine the following three with particular care:

--**The nature of landowner's property interest.** Courts ask: Does the landowner own the floodplain area or is it owned by the public? Is the landowner's property subject to public trust? See, e.g., Phillips Petroleum Co. v. Mississippi, 484 U.S. 469 (1988), in which the Supreme Court held that private landowners who believed that they owned estuarine wetlands in Mississippi subject to the ebb and flow of the tide, and who had paid taxes on such lands for more than 100 years, did not in fact, own such lands and could not claim a taking when the state leased the lands to someone else. See also Bubis v. Kassin, 733 A.2d 1232 (N.J. 1999), in which the court held that a private property owner's easement over a beach and bluff areas was extinguished between the beach and bluff areas which were entirely below the mean high water mark.

Courts further inquire: What are the landowners' common law rights and duties? See discussion above. What are the landowners' reasonable, investment-backed expectations for the property? See generally Penn Central Transp. Co. v. City of New York, 438 U.S. 104 (1978), in which the Supreme Court indicated that factors relevant to determination of a taking included "the character of the government action", "the economic impact of the regulation on the claimant," and "the extent to which the regulation has interfered with distinct investment-backed expectations." *Id.* at 124.

--**The nature of the government action and the need for regulation.** Courts ask: Has the regulation been adopted to serve adequate goals? See above. Does the regulation have a reasonable relationship to the regulatory goals? If a landowner claims that regulations violate substantive due process because they lack adequate relationship to regulatory goals, the landowner's burden to overcome the presumption of validity is particularly great if a legislative act or expert agency action are involved. Courts have held that with regard to local zoning adopted by a local legislative body "In order to support his constitutional claims, the plaintiff is required to prove

that the defendant's actions were clearly arbitrary, unreasonable, and discriminatory and bore no substantial relation to the health, safety, convenience and welfare of the community." *Burns v. City of Des Peres*, 534 F.2d 103, 108 (8th Cir. 1976), cert. denied, 429 U.S. 861 (1976). Courts have held that if the issue is "fairly debatable", a legislative act must be upheld. See *Shelton v. City of College Station*, 780 F.2d 475 (5th Cir. 1986), cert. denied, 477 U.S. 905 (1986). Courts also ask: Is the regulation preventing a harm (e.g., a public nuisance)? See cases cited below.

--**The impact of the regulation on the landowner.** Courts inquire: What has the landowner paid for the land? What are the taxes? Does the landowner have some existing economic use of the land (e.g., a residence, agriculture, forestry, etc.)? What are the landowner's investment-backed expectations? What is the diminution in value due to the regulations? See, e.g., *McElwain v. County of Flathead*, 811 P.2d 1267 (Mont. 1991) (Court upheld 100 foot set back between septic tank field and floodplain against claim of taking, although the regulation reduced property values from \$75,000 to \$25,000 because the property owner was still able to utilize the property, although not as near the river.) Does the landowner have some economic use for the entire property? See discussion below.

Taking into account all of these factors, courts balance public interests and private rights to decide whether regulations have "gone too far". See *Penn Central Transportation Co. v. City of New York*, 98 S.Ct. 2646 (S. Ct., 1978) (Court upheld denial of air rights over Grand Central Station as not a taking and looked at the impact of the regulations on the entire property.) It is only when floodplain regulations deny all economic use of lands that regulations have encountered successful takings challenges. See cases cited below.

The "denial of all economic use" was set forth by Justice Scalia as a "categorical" test for taking in the 1992 Supreme Court decision, *Lucas v. South Carolina Coastal Council*, 112 S.Ct. 2886 (1992) although this test has been applied for many years in state courts. Justice Scalia concluded that "(w)here the State seeks to sustain regulation that deprives land of all economically beneficial use, we think it may resist compensation only if the logically antecedent inquiry into the nature of the owner's estate shows that the proscribed use interests were not part of this title to begin with." He emphasized, however, that this categorical rule applies only where there is a total loss of value through regulation.

Justice Scalia analogized regulations which prohibit all economically beneficial use of land to "permanent physical occupation" of land in arguing that such regulations should be subject to a categorical determination of taking if limitations upon use are not found in the property concepts of state law. He offered the following guidance in deciding whether state property law limitations upon use which would prevent the application of the categorical rule:

"Any limitation so severe cannot be newly legislated or decreed (without compensation), but must inhere in the title itself, in the restrictions that background principles of the State's law of property and nuisance already place upon land ownership. A law or decree with such an effect must, in other words, do no more than duplicate the result that could have been achieved in the courts--by adjacent landowners (or other uniquely affected persons) under the State's law of private nuisance, or by the State under its complementary power to abate nuisances that affect the public generally, or otherwise.

On this analysis, the owner of a lake bed, for example, would not be entitled to compensation when he is denied the requisite permit to engage in a landfill operation that would have the effect of flooding others' land. (*emphasis added*). Nor the corporate owner of a nuclear generating plant, when it is directed to remove all improvements for its land upon discovery that the plant sits astride an earthquake fault. Such regulatory action may well have the effect of eliminating the land's only economically productive use, but it does not proscribe a product use that was previously permissible under relevant property and nuisance principles. The use of these properties for what are now expressly prohibited purposes was always unlawful, and (subject to other constitutional limitations) it was open to the State at any point to make the implication of those background principles of nuisance and property law explicit...

The "total taking" inquiry we require today will ordinarily entail (as the application of state nuisance law ordinarily entails) analysis of, among other things, the degree of harm to public land and resources, or adjacent private property, posed by the claimant's proposed activities..., the social value of the claimant's activities and their suitability to the locality in question..., and the relative ease with which the alleged harm can be avoided through measures taken by the claimant and the government (or adjacent private landowners) alike...The fact that a particular use has long been engaged in by similarly situated owners ordinarily imports a lack of any common-law prohibition (though changed circumstances or new knowledge may make what was previously permissible no longer so....So also does the fact that other landowners, similarly situated, are permitted to continue the use denied to the claimant.

PERFORMANCE REGULATIONS AND DENIAL OF ALL ECONOMIC USE

Will performance-oriented No Adverse Impact floodplain regulations deny all economic use?

Denial of all economic use is rarely an issue with performance-oriented regulations, including a performance-oriented "No Adverse Impact standard". With a performance-oriented approach, landowners have a number of options for achieving the standard. This may include both primary and secondary uses. As noted by the Nebraska court of appeals in *Bonge v. County of Madison*, 567 N.W.2d 578 (Neb., 1997), "(t)o establish that a regulation constitutes a taking, the landowner bears the burden of showing that not only that all primary uses are unreasonable, but also that no reasonable secondary use (one permitted by special use permit or variance) is available."

For examples of cases sustaining performance-oriented floodplain regulations see:

--*In the Matter of Quality by Father & Son, Ltd. v. John Bruscella*, 666 N.Y.S.2d 380 (N.Y., 1997). (Denial of a variance for a house constructed below the flood elevation specified in a floodplain ordinance was valid.)

--*Beverly Bank v. Illinois DOT*, 579 N.E.2d 815 (Ill., 1991) (Floodplain legislation that restricted landowners from building in floodways was rationally related to several state interests and constitutional.)

--Responsible Citizens v. City of Asheville, 302 S.E.2d 204 (N.C., 1983) (Performance standard floodplain regulations are not a taking.)

--Rolleston v. State, 266 S.E.2d 189 (Ga., 1980) (Georgia's Shore Assistance Act requiring permits for altering the shore is valid and not a taking.)

--Kopelzke v. County of San Mateo, Bd. of Supervisors, 396 F. Supp 1004 (D. Cal., 1975) (County regulations requiring a geologic report concerning soil stability not a taking.)

Denials of individual permits or variances or refusal to approve subdivisions for failure to comply with performance standards have also been broadly held not to be a taking. See, for example:

--Wilkerson v. City of Pauls Valley, 24 P.3d 872 (Okl., 2002) (Mobil home park operator failed to demonstrate that city's denial of his request for variance for placement of additional homes on existing lots was abuse of discretion, contrary to law, or clearly against weight of evidence provided.)

--Gregory v. Zoning Board of Appeals of the Town of Somers, 704 N.Y.S.2d 638 (N.Y., 2000) (Court upheld denial of a variance to a landowner to build a single-family residence with frontage on only a dirt road subject to ponding, deep ruts, abrupt grade and vegetation because the condition of the dirt road made "emergency response difficult.)

--Sarasota County v. Purser, 476 So. 2d 1359 (Fla., 1985) (Court upheld denial of a special except for a 350 unit mobile home park in the floodplain.)

--Rolleston v. State, 266 S.E. 2d 189 (Ga., 1980) (Denial of permit for bulkheading pursuant to Georgia Shore Assistance Act not a taking.)

--Creten v. Board of County Commissioners, 466 P.2d 263 (Kan., 1970) (Court sustained denial of county permit for mobile home park in an industrial area subject to odor nuisances and flooding.)

--Falcone v. Zoning Board of Appeals, 389 N.E.2d 1032 (Mass, 1979) (Court held that zoning board of appeals did not exceed its authority in denying subdivision application for failure to comply with floodplain ordinance.)

--Kraiser v. Zoning Hearing Board, 406 A.2d 577 (Pa., 1979) (Court upheld decision of zoning hearing board of township denying a variance for a duplex residential dwelling in a 100-year floodplain conservation zone based upon substantial evidence of drainage and flooding problems and the possibility of increasing hazards to other buildings.)

--Vartelas v. Water Resources Comm'n., 153 A.2d 822 (Conn., 1959) (Court upheld denial of a single permit with a particular design and construction materials pursuant to a Connecticut state level floodway program.)

This is not to suggest that performance standards could not be held unreasonable or a taking if they made no sense (e.g., adoption of flood-related performance standards for an area not subject to flooding) or if they, in effect prevented all economic, non-nuisance activities.

ATTACHMENT OF CONDITIONS TO PERMITS

May governments attach conditions to permits to reduce the impacts of proposed activities on flooding and to protect structures? For example, might a state or federal agency attach a condition to a floodplain permit that requires the permittee to acquire flood easements from other potentially damaged property owners?

Courts have, with very little exception, upheld the conditional approval of permits or subdivision plats, providing the conditions are reasonable and proportional to the impacts of the permitted activity. Such conditional approvals are common with performance standard hazard-related regulations. Conditions may include design changes, preservation of floodways, dedication of certain floodplain areas to open space uses, adoption of deed restrictions for certain high risk areas, installation of stormwater drainage and detention areas, etc. This support for hazard mitigation conditions is due to the strong judicial support for hazard prevention and reduction goals and the clear relationship (in most instances) between the conditions and these goals. Examples of cases sustaining conditions include:

--New City Office Part v. Planning Board of Town of Clarkstown, 533 N.Y.S.2d 786 (N.Y., 1988) (Denial of site plan for office park was justified because it did not comply with planning board's requirements for building in the floodplain. Regulations required compensatory storage.)

--Wilson v. Dept. of Environmental Conserv., 524 N.Y.S.2d 45 (1988) (State could condition a building permit upon obtaining septic tank permit.)

--Board of Supr's of Charlestown Tp., v. West Chestnut Realty Corp., 532 A.2d 942 (Pa., 1987) (Court held that a condition to preliminary approval of a detailed stormwater plan was justified prior to final subdivision approval.)

--Osborn v. Iowa Natural Resources Council, 336 N.W.2d 745 (Ia., 1983) (Court held that conditions for an after-the-fact permit for a levee and straightening a creek channel were valid. These conditions included widening the channel, relocation of the levee, realignment of the channel, and providing a strip of land along the channel for wildlife habitat.)

--Cohalan v. Lechtrecker, 443 N.Y.S.2d 892 (1981) (City may rezone property conditioned upon private declaration of covenant restricting use.)

--Metropolitan St. Louis Sewer District v. Zykan, 495 S.W.2d 643 (Mo., 1973) (Court upheld regulations of the Metropolitan Sewer District requiring construction of drainage facilities in subdivisions and ordered both specific performance and payment of damages.)

--Longridge Estates v. City of Los Angeles, 6 Cal. Rptr. 900, (Cal., 1960) (Court held that city could reasonably charge subdivider for connection to use municipal storm drains and sewers where fees went exclusively for the construction of outlet sewers.)

--City of Buena Park v. Boyar, 8 Cal. Rptr. 674 (Cal., 1960) (Court upheld condition that \$50,000 be paid by developer to permit municipal construction of a drainage ditch to carry away surface waters from subdivision as a reasonable condition for subdivision plat approval.)

--County Council for Montgomery County v. Lee, 148 A.2d 568 (Md., 1959) (Court held that county could require that subdivider obtain drainage easements for construction of storm drainage outlet and file a performance bond to assure that the easements would be acquired.)

In broader land use control contexts, courts have sometimes disapproved conditions as a violation of Due Process or, in some instances, as a taking where the statute or ordinance did not expressly authorize such conditions, the conditions were unreasonable (not related to the regulatory goals), or the condition was not proportional to the impact of the proposed use. For example, in *Paulson v. Zoning Hearing Board of Wallace*, 715 A.2d 785 (Pa. Cmwlth., 1998), a court held that efforts to restrict the hours of operation of a go-cart operation in the floodplain in issuing a special except for a floodplain were not reasonably related to ordinance goals. The U.S. Supreme Court in *Nollan v. California Coastal Comm'n*, 483 U.S. 825 (1987) held that a public beach access dedication requirement did not bear a reasonable relationship (nexus) to regulatory goals and was a taking of private property. The U.S. Supreme Court in *Dolan v. City of Tigard*, 114 S.Ct. 2309 (1994) further held that regulations adopted by the City of Tigard which required a floodplain landowner to dedicate a bike path along a stream was unconstitutional and taking because the bike path requirement was not "roughly proportional" in "nature and extent to the impact of the proposed development". The Supreme Court clarified this requirement in the *City of Monterey v. Del Monte Dunes at Monterey, Ltd.* 526 U.S.687 (1999) by stating that it applied to "land use decisions conditioning approval of development on the dedication of property to public use."

There was some concern that courts would broadly disapprove conditions in light of the *Nollan* and *Tigard* decisions. However, this has not proven to be true. State and federal courts continue to approve reasonable conditions including dedications. See, e.g., *City of Annapolis v. Waterman*, 745 A.2d 1000 (Md., 2000) for a particularly thorough analysis and many case citations. But see *Isla Verde International Holdings, Inc. v. City of Camas*, 990 P.2d 429 (Wash., 1999) in which the court held unconstitutional an across the board 30% lot area dedication requirement.

A possible way for a community to address case-by-case determinations of "rough proportionality" with regard to dedication requirements is suggested by an Oregon case, *Lincoln City Chamber of Commerce v. City of Lincoln City*, 991 P.2d 1080 (Ore. 1999). In this case the court upheld an ordinance requiring dedication of "easements for drainage purposes" and "to provide storm water detention, treatment and drainage features and facilities". The ordinance further required that "(i)f the applicant intends to assert that it cannot legally be required, as a condition of building permit or site plan approval, to provide easements or improvements at the level otherwise required by this section, the building permit or site plan review application shall include a "rough proportionality" report, prepared by a qualified civil or traffic engineer...."

RESTRICTIVE REGULATION OF HIGH RISK AREAS

May a government unit adopt tight regulations for high risk areas such as floodways and velocity zones and dunes to implement a No Adverse Impact standard?

Courts have upheld highly restrictive regulations for high risk areas even when in some instances there were few economic uses for the lands because of the potential nuisance impacts of activities in these areas and because of public trust and public ownership issues. Examples include:

--Wyer. v. Board of Environmental Protection, 747 A.2d 193 (Me., 2000) (Court upheld denial of a variance for a sand dune area against claims of taking because the property had uses for parking, picnics, barbecues and other recreational uses and was of value to abutters.)

--Stevens v. City of Cannon Beach, 854 P.2d 449 (Ore., 1993) (Court held that denial of permit to build a sea wall as part of development for motel or hotel use in a flood area was not a taking.)

--Our Way Enterprises, Inc. v. Town of Wells, et al, 535 A2d 442 (Me., 1988) (Court upheld a 20 feet coastal setback from seawall.)

--Usdin v. State Dept. of Environmental Protection, 414 A.2d 280 (N.J., 1980). (Court upheld state floodway regulations prohibiting structures for human occupancy, storage of materials, and depositing solid wastes because of threats to occupants of floodway lands and to occupants of other lands.)

--Maple Leaf Investors, Inc. v. State Dept. of Ecology, 565 P.2d 1162 (Wash., 1977). (Court upheld denial of a permit for proposed houses in floodway of the Cedar River because there was danger to persons living in a floodway and to property downstream.)

--Turner v. County of Del Norte, 24 Cal. App. 3d 311 (Cal., 1972) (Court upheld county floodplain zoning ordinance limiting areas subject to severe flooding to parks, recreation, and agricultural uses.)

--Spiegle v. Beach Haven, 218 A.2d 129 (N.J., 1966) (Court sustained dune and fence ordinances for a beach area subject to severe storm damage where buildings had been destroyed in a 1962 storm. The regulation effectively prevented all building or rebuilding on several lots. The Court held that the plaintiff had not met his burden in proving a taking because the plaintiff had failed to prove "the existence of some present or potential beneficial use of which he has been deprived.")

--McCarthy v. City of Manhattan Beach, 264 P.2d 932 (Cal., 1953). (Court sustained a zoning ordinance which restricted ocean-front property to beach recreation uses for an area subject to erosion and storm damage due, in part, because there were questions as to the safety of the proposed construction at the site.)

PARCEL AS A WHOLE DOCTRINE

Can governmental units adopt very stringent regulations such as setbacks and floodway regulations applying to only portions of lots?

Floodway regulations, beach setbacks, bluff setbacks, fault line setbacks and other regulations for high risk areas which prohibit development in narrow strips of land pose less severe taking problems than regulations applied to broader areas because the U.S. Supreme Court and lower federal and state courts have usually examined the impact of the regulation upon entire parcels in deciding whether a taking has occurred. Lot sizes, therefore, also becomes important. Examples of U.S. Supreme Court cases in which the court refused to divide single parcels into discrete segments for a taking analysis include:

--Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency, 122 S.Ct. 1465 (2002) (Court upheld temporary ordinances for "high hazard" (steep slope) zones near Lake Tahoe. The Court applied a "whole parcel" analysis to duration of regulation to decide that no taking had occurred.)

--Palazzolo v. Rhode Island, 121 S.Ct. 2448 (2001) (Court held that test for taking was the impact on value of the entire parcel and not simply the wetland portion.)

--Keystone Bituminous Coal Association v. De Benedictis, 107 S.Ct. 1232 (1987) (Court considered the impact of regulations restricting the mining of coal upon the entire property not simply the areas where coal could not be removed.)

--Penn Central Transportation Co. v. City of New York, 98 S.Ct. 2646 (S. Ct., 1978) (Court upheld denial of air rights over Grand Central Station as not a taking and looked at the impact of the regulations on the entire property.)

--Gorieb v. Fox, 47 S.Ct. 675 (1927) (Court sustained a street setback of approx. 35 feet.)

Many examples can be also cited of lower courts sustaining regulations which tightly restrict only a portion of a property. See, for example:

--K & K Const. Inc., v. Department of Natural Resources, 575 N.W.2d 531 (Mich., 1998) (Three contiguous parcels should be considered in deciding whether wetland regulations are a taking.)

--Zealy v. City of Waukesha, 548 N.W.2d 528 (Wis., 1996) (Landowner's whole property needed to be considered, not just portion subject to wetland restriction, to determine whether a taking had occurred.)

--MacLeod v. County of Santa Clara, 749 F.2d 541 (9th Cir., 1984), cert. denied 472 U.S. 1009 (1985) (Denial of a permit for a timber operation on part of a parcel not a taking.)

--Deltona Corp. v. United States, 657 F.2d 1184 (Cl. Ct., 1984) (U.S. Court of Claims held that denial of a permit by the Corps of Engineers to dredge and fill a mangrove wetland in Florida did not take private property because the denial of the permit would affect the usefulness of only a portion of the property.)

--Moskow v. Commissioner of the Dept. of Environmental Management, 427 N.E.2d 750 (Mass., 1981) (Court upheld a state restrictive order for a wetland area important in preventing floods in the Charles River Watershed against claims of taking.)

--Krahl v. Nine Mile Creek Watershed District, 283 N.W.2d 538 (Minn., 1979) (Minnesota Supreme Court held that watershed district's floodplain encroachment regulations tightly controlling development in 2/3 of an 11-acre tract were not unconstitutional taking of property.)

Because courts usually look at the impact of regulations upon an entire property, large lot zoning for hazard areas may make sense not only in providing greater potential for safe building sites on each lot but in insuring the constitutionality of regulations. Courts have often sustained large lot zoning for hazard-related areas as serving proper goals. See, for example:

--Kirby v. Township Committee of the Township of Bedminster, 775 A.2d 209 (N.J., 2000) (Court sustained 10 acres minimum lot size area for environmentally sensitive area which included some floodplain.)

--Grant v. Kiefaber, 181 N.E.2d 905 (Ohio, 1960), affirmed 170 N.E.2d 848 (Ohio, 1960) (Court sustained 80,000 square foot lot size for a flood prone area.)

--Gignoux v. Kings Point, 99 N.Y.2d 285 (N.Y., 1950) (Court sustained 40,000 square foot lot size for swampy area and observed that the "best possible use of this lowland would be in connections with its absorption into plots of larger dimensions.")

Although courts have, in general, examined the impact of regulations upon an entire property, there are exceptions. For example, the U.S. Supreme Court in *Nollan v. California Coastal Commission*, 107 S. Ct. 3141 (1987) held that an attempt by the California Coastal Commission to require a landowner to dedicate a beach access agreement as a condition to receiving a building permit was a taking although this dedication affected only a portion of the property. However, this factual situation was different from most others because the Court held that this restriction lacked adequate relationship to the regulatory goals and attempted to allocate a portion of the land to active public use. See also *Dolan v. City of Tigard*, 114 S.Ct. 2309 (1994) and discussion above.

OPEN SPACE ZONING

Could government units apply open space zoning in implementing a No Adverse Impact standard?

Quite a large number of courts have sustained regulations restricting entire hazard areas to open space uses although there are some adverse decisions as well where the regulations were found to deny all economic use. Examples of cases upholding regulations include:

--*Bonnie Briar Syndicate, Inc. v. Town of Mamaroneck, et. Al.*, 94 N.Y.2d 96 (N.Y., 1999) (Court held that recreation zoning was not a taking for a golf course which was partially floodplain.)

--*Dodd v. Hood River County*, 136 F.3d 1219 (C.A. 9, 1998) (Court held that prohibition of homes in a forest zone was not a taking.)

--*Hall v. Board of Environmental Protection*, 528 A.2d 453 (Me., 1987) (Court held that sand dune law was not a taking despite a prohibition of year-round structures since the owner could live in or rent out spaces for motorized campers connected to utilities.)

--*Krahl v. Nine Mile Creek Watershed District*, 283 N.W.2d 538 (Minn., 1979). (Court held that watershed district's floodplain encroachment regulations affecting 2/3 of an 11 acre tract were not an unconstitutional taking.)

--*Turnpike Realty Co. v. Town of Dedham*, 284 N.E.2d 891 (Mass., 1972), cert. denied, 409 U.S. 1108 (1973) (Court upheld zoning regulations essentially limiting the floodplain to open space uses despite testimony that the land was worth \$431,000 before regulations and \$53,000 after regulation.)

Several, older, contrary cases exist, however, where courts held that regulations prevented all economic use of entire lands. But in these cases, the courts found that proposed uses would not cause safety threats or cause nuisances, or the regulations were subject to other infirmities. See, for example:

--Dooley v. Town Plan & Zoning Comm'n, 197 A.2d 770 (Conn., 1964) (Court held that open space floodplain zoning ordinance which denied all economic use of specific land was a taking.)

--Morris County Land Imp. Co. v. Parsippany-Troy Hills Tp., 193 A.2d 232 (N.J., 1963) (Court invalidated in total a wetland conservancy district which permitted no economic uses where the district was primarily designed to preserve wildlife and flood storage.)

WHEN THE ONLY ECONOMIC USES THREATEN PUBLIC SAFETY OR CAUSE NUISANCES

Can governmental units prohibit uses and activities which may threaten safety or cause nuisances where these activities may be the only economic use of specific hazard areas?

In a fair number of cases, courts have held regulations valid even where the regulations prevent all economic use of lands if proposed would be nuisance-like, threaten public safety, or be "unreasonable" in terms of the rights and duties of all landowners. Here is where common law rights and duties, discussed above, become important. Examples include:

--Goldblatt v. Town of Hempstead, 82 S. Ct. 987 (1962) (Supreme Court upheld ordinance which prohibited extraction of gravel below the groundwater level against taking claim due, in part, to the possible safety hazards posed by such open water pits. This ordinance effectively prevented an economic use of the land.)

--Consolidated Rock Products Co. v. Los Angeles, 370 P.2d 342, appeal dismissed, 371 U.S. 36 (Cal., 1962) (Court held that regulations which prevented the extraction of sand and gravel in a floodplain were not a taking despite the fact that extraction was the only economic use for the land because extraction of sand and gravel would have had nuisance-impacts upon the suffers of respiratory ailments who lived nearby.)

--McCarthy v. City of Manhattan Beach, 264 P.2d 932 (Cal., 1953), cert. denied, 348 U.S. 817 (1954) (Court held that open space beach regulations designed, in part, to prevent construction in areas subject to flooding and erosion were not a taking as applied to the facts of the case because the plaintiff did not show that the proposed use would have been safe.)

The author was, in fact, unable to find a single case from any jurisdiction where a landowner prevailed in a taking suit where a proposed use would have caused a nuisance or would have threatened public safety.

A somewhat more difficult issue arises where the proposed activity will not threaten adjacent lands but will primarily cause damage to the landowner if the proposed activity is located in a high risk area. For example, a landowner may wish to locate his or her home in a coastal wave or erosion zone. This may not increase flood or erosion losses on other property although the home may be destroyed. It has been argued that prohibition of such an activity is, in fact, "protecting a man against himself."

Prohibition of activities which may damage the landowner does have some support in other legislation. For example, legislatures have adopted vehicle seat belt, motorcycle helmet, and other laws which also are primarily designed to reduce injuries to individuals from risks they consciously assume. Such laws have been upheld in most instances. See, Kusler, J., et al, Vol. 1, *Regulation of Flood Hazard Areas to Reduce Flood Losses*, (1971) at p. 309 et. seq. Part of the justification for such laws is that seriously injured individuals often do not pay the medical costs or the long-term disability costs which are born by society as a whole.

This may also be true for construction of a home in a flood or erosion area. The individual constructing his house in a high risk hazard area (flash flooding, avalanche, mudslide, landslide, earthquake, fault line) may not only place himself in danger but his family, friends, and guests. Subsequent purchasers may also be unaware of and threatened by hazards. This can be a real problem because vacation properties (e.g., beach, mountainside) have a high turnover rate and are often purchased by visitors not familiar with the area. In addition, many of these private structures are, over time, converted to rental units and condominiums with broader public exposure to risk. The costs of extending public services to these areas may be high and such services may be repetitively damaged at public expense. If emergency rescue is necessary during a hazard event, police, fire, or other rescue personnel may be put at risk. Finally, governments often end up paying much of the bill for private occupation of high risk areas through disaster assistance, flood loss reduction measures, etc.

Public safety and welfare arguments, therefore, can be made that development (or at least development lacking extensive safety measures) is unreasonable in high risk areas even where such development lacks common law nuisance impacts. For example, in *Spiegle v. Beach Haven*, 218 A.2d 129 (N.J., 1966), the New Jersey Supreme Court held that a beach setback line that prevented building in an area subject to severe storm damage was not a taking, in part, because the proposed activities were not "reasonable" in the circumstances given the severe storm hazard. The language of the court is interesting and may be similar in other high risk situations (Id. at 137):

Plaintiffs failed to adduce proof of any economic use to which the property could be put. The borough, on the other hand, adduced un rebutted proof that it would be unsafe to construct houses oceanward of the building line (apparently the only use to which lands similarly located in defendant municipality had been put) because of the possibility that they would be destroyed by a severe storm--a result which occurred during the storm of March, 1962. Additionally, defendant submitted proof that there was great peril to life and health arising through the likely destruction of streets, sewer, water and gas mains, and electric power lines in the proscribed area in an ordinary storm. The gist of this testimony was that such regulation prescribed only such conduct as good husbandry would dictate that plaintiffs should themselves impose on the use of their own lands. Consequently, we find that plaintiffs did not sustain the burden of proving that the ordinance resulted in a taking of any beneficial economic use of their lands.

HOW "SAFE" IS "SAFE"?

Who is decide how "safe" is "safe"? To what extent will courts defer to legislative bodies on this issue?

This is still an open question when the risks are small. However, courts have afforded legislative bodies broad discretion in deciding acceptable and unacceptable limits when public health and involved. See, for example, the U.S. Supreme Court case, *Queenside Hills Realty Company v. Saxl*, 66 S. Ct. 850 (1946) in which the Court upheld a New York "Multiple Dwelling Law" which required that lodging houses of non-fireproof construction in existence prior to enactment of the statute be modified to comply with safety requirements. The owner of such a building argued that the cost of installing such a system (about \$7500) was too great. The Court rejected the due process arguments with language that can easily be applied to earthquake or flood retrofitting as well regulation of new development (Id. at 83):

(T)he legislature may choose not to take the chance that human life will be lost in lodging house fires and adopt the most conservative course which science and engineering offer. It is for the legislature to decide what regulations are needed to reduce fire hazards to a minimum.... (I)n no case does the owner of property acquire immunity against exercise of police power because he constructed it in full compliance with the existing laws.

SUMMARY, CONSTITUTIONAL CHALLENGES TO REGULATIONS

Courts are likely to uphold a performance-oriented, No Adverse Impact standard in floodplain regulations and more specific implementing regulations against claims of taking or unreasonableness. Such community regulations could be more stringent than existing FEMA minimum standards or state standards. FEMA encourages state and local regulations more restrictive than FEMA standards. They could require additional freeboard, establish set backs, impose tighter floodway restrictions, and very tightly regulate high risk areas. However, communities should approach with particular care situations where regulations prevent all economic use of entire properties, particularly where there are economic uses for these lands which pose no threats to safety or lack "nuisance" impacts. Consideration could be given to creating a residual value in the property through transferable development rights, seasonal recreational usage, or open space usage in conjunction with adjacent properties.

PART 4: KEEPING OUT OF LEGAL TROUBLE

What, then, can a community do to reduce potential common law legal liability from increased flood or erosion damages by applying a No Adverse Impact approach? How can it avoid Constitutional problems with No Adverse Impact regulations for private properties?

To reduce potential liability from landowner suits due to community-induced increased flood or erosion damages (Part 2, above), a community could:

1. **Adopt a No Adverse Impact standard for public works projects.** Liability will be reduced by not increasing flood and erosion on adjacent lands.
2. **Incorporate the No Adverse Impact standard in master plans and policies.** Implement this standard, in part, through master plans for community public lands and infrastructure construction, and management, including bridge and road construction and reconstruction, sewer and water installation, use of public parks and other public lands, construction of public buildings, construction of flood control structures, and other activities.
3. **Conduct a liability audit.** Conduct an "audit" of existing potential liability situations by determining where increased flooding or erosion is likely on private lands due to inadequate culverts or bridges, public roads or fills, increased runoff due to urbanization, and flooding due to approval of subdivisions and acceptance of dedicated storm water facilities. Hazard mitigation measures can then be focused on these areas to reduce potential liability.
4. **Carry out hazard reduction planning.** Develop and implement plans for reducing potential flood and erosion losses and liability through improved flood mapping, warning systems, evacuation plans, relocation of flood prone structures, resizing of bridges and culverts, acquisition of flood easement, and flood control measures can also reduce the potential for successful liability suits.
5. **Encourage private landowners to purchase insurance.** Landowners are less likely to sue governments for increases in flood and erosion damages if they are compensated by insurance for any losses.
6. **Adopt floodplain regulations for private property.** A community may reduce landowner suits claiming that the community has increased flood heights or velocities by adopting regulations restricting intensive use of such lands. For example, it can adopt large lot zoning, setbacks, and increased elevation requirements for private structures in such areas.

To reduce potential takings liability from floodplain regulations incorporating a No Adverse Impact standard (Part 3 above) a community could:

1. **Apply a No Adverse Impact standard in regulations** and implement the standard fairly and uniformly to building permits and site plan review, subdivision approval, acceptance of dedicated open space and storm water facilities, building code inspections and enforcement. Courts provide great support for regulations which are fairly and uniformly implemented.
2. **Require flood easements for increases in flood heights or velocities.** Allow landowners to increase flood heights and velocities only through special exception or variance processes. Allow such increases only if landowners will acquire flood easements from anyone who may be damaged by the increased flood heights and velocities.
3. **Prepare detailed and accurate maps.** Develop particularly accurate flood and erosion maps and other flood and erosion information where regulations must tightly control development (e.g., an urban floodway) and there is the possibility of a taking challenge based on denial of all economic uses.
4. **Reduce real estate taxes.** Many states allow local governments to reduce real estate taxes for wetlands, agricultural lands, and other open spaces.
5. **Undertake education efforts.** Work actively with landowners to educate them with regard to flood hazards and to help them prevent future increases in flood hazards. Such measures can help reduce their potential liability to other private landowners for increasing flood heights and velocities.
6. **Help landowners identify economic uses.** Work actively with landowners to help them identify economic uses for their floodplain lands, particularly where regulations may severely limit development on existing lots. Such uses many include farming, forestry, parking areas, use of floodplains as recreation areas in subdivisions, use of floodplains as open spaces to meet minimum lot size requirements for residential zoning with placement of structures on uplands, ecotourism, and other activities.
7. **Undertake selective acquisition.** Actively acquire and place in public ownership selected floodplain areas as part of post flood relocation, greenway, stormwater management, parks and recreation, and other programs. Acquisition may be particularly appropriate where regulations may deny all economic use of low risk private lands.

Summary & Conclusion

Stormwater and floodplain managers can be heartened by the recent decisions and opinions in three Supreme Courts cases and in three states, all of which support the concept of government management of areas prone to flooding.

- Four tests for a “taking” have been clearly delineated by the Supreme Court, all of which tend to restrict takings to fairly narrow circumstances.
- The Court has indicated that deference will be given to local decisions in matters of land use and community development -- a stance helpful to stormwater and floodplain management because it underscores the responsibility for and prerogatives of localities for management of land within their jurisdictions.
- Two influential states’ high courts have supported communities’ zoning, regulations, and other management techniques intended to protect development from hazards, prevent development from having adverse impacts on other property, and to preserve environmentally sensitive areas. .

When NAI planning is done and the community’s plans and regulations look like they may meet resistance from landowners and developers, here are some hints to help frame the regulation to avoid a Taking ruling:

- Avoid Interfering with the Owners Right to Exclude Others. See, e.g., *Loretto v. Teleprompter Manhattan* 458 US 419 (1982).
- Avoid Denial of All Economic Use. See, e.g., *Lucas v. South Carolina Coastal Council*, 505 US 1003 (1992).
- In Highly Regulated Areas Consider Transferable Development Rights or Similar Residual Right so the Land Has Appropriate Value. See, *Penn Central Transportation Company v. City of New York* 438 US 104 (1978).
- Clearly Relate Regulation to Preventing a Hazard. See, the very favorable court rulings in *Gove v. Zoning Board of Appeals of Chatham, Massachusetts* and *Smith v. Town of Mendon*, 4 No 177 New York Court of Appeals (highest court in New York State) decided December 21, 2004; in contrast to the unfortunate cases of *Annicelli v. Town of South Kingston*, 463 A.d 133 (1983); and *Lopes v. Peabody* 417 Mass. 299 (1994).
- Even Better Odds if there is Flexibility in the Regulation and the Community Applies the Principle to their Own Activities.
- See, also American Planning Association (APA) *Policy Guide on Takings* adopted in 1995.

When you consider its basic concept, NAI has broad support. For example, the Cato Institute is a conservative think tank closely associated with the “Constitution in Exile”, the “Property Rights Movement” and other similar causes. The Institute stated that *compensation is not due when:*

“...the government acts to secure rights -- when it stops someone from polluting his neighbor...it is acting under its police power...because the use prohibited...was wrong to begin with.” “Protecting Property Rights from Regulatory Takings” (the Cato Institute, 1995, Chapter 22, p.230).

The Institute has also testified before Congress about legislation requiring government paying landowners for Regulations limiting what a property owner can do. The Institute testified that there should be provided a "...nuisance exception to the compensation requirement...When regulation prohibits wrongful uses, no compensation is required." (Testimony of Roger Pilon Senior Fellow and Director, Center for Constitutional Studies, Cato Institute, Before the Subcommittee on Constitution, Committee on Judiciary, US House of Representatives, February 10, 1995.)

▲ So How Do We Proceed?

▲ Planning

▲ Partnerships

▲ Planning

▲ Multi-Use Mapping and Engineering

▲ Planning

▲ Fair Regulation to Prevent Harm

▲ DHS/FEMA is embarking on a Five Year Flood Map Modernization Program.

▲ As Part of that Effort there is a Cooperating Technical Partners Program.

▲ Think of Other Hazard Managers With Whom to Partner on NAI, Other Partners could include :EPA Wetlands, Watershed, USGS, Others

So how will folks who want to fight your efforts to plan and regulate proceed? They will likely use three approaches:

I) Bluster and Threats;

II) Allegation that the Regulator has deprived a Developer of a Constitutional Right "Under the Color of Law". See, 42 USC Section 1983/1988; and

III) "Class of One" Allegations of Discriminatory Treatment Based on Personal Animus, or Other Inappropriate Factors.

A) So, how does NAI help with Bluster and Threats? First by ensuring the affected portions of the community are notified, and can express their concern to elected officials, and second by putting the burden on the developer to show how she will not harm others.

B) How does NAI help with Allegations of Depriving Someone of Property under the "color of law"? At a recent American Bar Association course, a developer's attorney acknowledged that from a purely legal perspective, there was essentially no chance for a successful "Takings" lawsuit against hazard based regulation. However, he said that property owners might well succeed by essentially rolling over government because States and Municipalities did not have the legal information to fight back. Now you do.

Courts are so deferential to government efforts to prevent harm that the Defendant Government or Official can easily allege that the Plaintiff and Plaintiff's Attorney should be sanctioned for bringing a frivolous lawsuit under Rule 11 of the Federal Rules of Civil Procedure or similar State Rules; and/ or Bar Regulator Ethics Rules.

C) How does NAI help with Class of One Allegations? First, NAI reduces the confrontation between regulator and developer; and second NAI makes the development process a collegial problem solving effort. YOU can help this one by not reacting to threats in a way which can bite you later.

Local Officials should understand that:

- ▲ Hazard Based Regulations Are Generally Sustained Against Constitutional Challenges
- ▲ Goal of Protecting the Public Is Afforded ENORMOUS DEFFERENCE by the Courts

Therefore local officials should:

- Be Confident!
- Be Assertive Protecting the Public and the Landowner!
- Partner With Other Hazard Regulators, such as wetlands programs

You can follow the NAI approach and set the regulatory standards needed to protect people and property in your community. Remember, you have the law on your side.

- ▲ You Do Not need to be a Punching Bag!
- ▲ Be Ready with the NAI Tools, fairly Applied!
- ▲ There are Serious Sanctions Available for Frivolous Lawsuits!

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Community Resources Counsel <http://www.communityrights.org>

Georgetown Environmental Law and Policy Institute <http://www.law.georgetown.edu/gelpi/>

Washington University School of Law <http://law.wustl.edu/landuselaw/>

Liability for Water Control Structure Failure Due to Flooding



**LIABILITY FOR WATER
CONTROL STRUCTURE
FAILURE DUE TO FLOODING**

Edward A. Thomas, Esq.
Michael Baker, Inc.
“Challenge Us”

**For The Association of State Floodplain Managers and
The Arizona Floodplain Management Association**

November 4, 2005

Preface

This paper is a pro bono effort of the author, sponsored by Michael Baker Inc., the Association of State Floodplain Managers, and the Arizona Floodplain Management Association. The opinions contained in the paper are the author's and do not necessarily represent the views of any organization or company.

This paper is based on general principles of law. It is not legal advice. For legal advice please consult an attorney licensed to practice in your jurisdiction.

I. Summary

This paper will examine the standards used by courts in the United States to assess liability for damage due to the failure of a flood control structure. As used in this paper, "flood control structure" includes dams, levees, and other major non-natural structures that store, divert, or transport large volumes of water. Determining who will pay for such damage involves a fundamental conflict between the two of the most important beneficial incidents of land ownership: the right of exclusive occupation and the right of utilization. The owner of the land on which the flood control structure is situated desires to fully utilize his or her land, and often to help provide beneficial services such as flood control and water supply to the community. The damaged property owner wishes to exclusively occupy and enjoy her land without serious injury from adjacent property owners. Either right carried to an extreme requires one owner to surrender valuable property rights to the other. The legislature or the courts must draw a line between each party's property rights in such a way as to fairly reconcile their conflicting desires. Exact placement of that boundary line between the property rights of owners will be a reflection of existing social, political, and economic conditions that prevail in society.

Early English Common Law established a boundary line that greatly favored protecting the adjacent property owner from damage by someone who had caused an artificial change in the flow of water. Later, some jurisdictions in the United States modified this doctrine to hold that a water control facility owner would only be liable for damage resulting if the facility failed if the plaintiff could demonstrate that there was a lack of due care in building or maintaining the water control structure. Today,

virtually all states impose some form of strict liability on owners of water control structures that cause harm to others even if the owner utilized utmost care, unless the damage was caused by an unforeseeable "Act of God" or some third party.

II. English Common Law

Early English Common Law held that a person was absolutely responsible for any damage resulting from his actions regardless of intent or fault.¹ Absolute liability supported two important goals of the law: It discouraged dangerous conduct² and placed the burden of paying damages on the party who caused the problem.³

The Industrial Revolution placed a premium on the encouragement of commercial and industrial activity. The concept of strict liability was considered an impediment to commercial and industrial activity. As the Industrial Revolution swept through England, the courts gradually developed the concept that if there was no fault⁴ on the part of the party who caused the harm then there should be no payment of damages to the injured party. In this manner a transition was made to a standard of negligence for most conduct between two parties where one suffered damage as a result of the other's actions.⁵

At the same time that the concept of negligence was developing, the landmark case of *Rylands v. Fletcher* was decided.⁶ One commentator has observed that perhaps

¹ See, e.g., *Anonymous*, Y.B. Edw. IV F. 7 pl. 3 (K.B. 1466) where Justice Brian stated "... if a man commits an assault on me and I cannot avoid him...and I lift my stick in self-defense... and there is a man in back of me and I injure him in lifting my stick in that case he would have an action against me, although my lifting the stick was lawful to defend myself and I injured him with-out intent."

² James, *Accident Liability Reconsidered: The Impact of Liability Insurance*, 57 Yale L.J. 549 (1948) [hereinafter cited as James].

³ See, e.g., *Lambert v. Bessey*, 83 Eng. Rep. 220 (K.B. 1681).

⁴ For the purposes of this article the term fault means legal fault. Moral fault is not significant to this article. See, W. Prosser, *The Law of Torts* 18 (1971) for a discussion of the subtle difference between moral and legal fault.

⁵ See, Sheldon, *Return to Anonymous: The Dying Concept of Fault*, 25 Emory L.J. 163, (1976) [hereinafter cited as Sheldon].

⁶ 159 Eng. Rep. 737 (Ex. 1865), *rev'd*, L.R. 1 Ex. 265 (1866), *aff'd*, L.R. 3 H.L. 330 (1868).

no case in history has occasioned more controversy and comment.⁷ Briefly stated, the facts of the case are that a mill owner constructed a dam to obtain water power. The site of the water reservoir created by the dam was riddled with abandoned and blocked-up mine shafts. These shafts connected to active mine workings on an adjacent property. Ten days after the reservoir was filled, water broke through the abandoned shafts and caused serious flood damage to the mine on the adjacent property. If the water had poured directly into the adjacent mine shaft rather than coming to rest for ten days, the English courts would have found that a trespass had taken place. Had the water slowly seeped into the mines, the English courts would have found this to be an abiding nuisance. The mill owner would have been liable for the damage caused in either case.⁸ There is a clear indication in *Rylands* that the contractor who built the dam was aware of the abandoned mine shafts in the area where the reservoir would be and was negligent in going forward with the construction nevertheless. However, Common Law did not yet recognize the principal that an employer might be held liable for the negligence of an independent contractor.⁹ At trial, therefore, courts found that no existing theory of law permitted recovery by the mine owner. On appeal, the decision by the trial court was overruled, and Justice Blackburn stated a theory justifying recovery by the mine owner based on the ancient Roman maxim *sic utere tuo ut alienum non laedas* – use your property so that you do not damage property of another.¹⁰

Blackburn wrote that:

...the true Rule of Law is, that the person who for his own purposes brings on his lands and collects and keeps there anything likely to do mischief if it escapes,

⁷ See, H. Foster and W. Kecton, *Liability Without Fault in Oklahoma*, 3 Okla. L.R. 1 (1950) [hereinafter cited as Foster].

⁸ F. Bohlen, *The Rule in Rylands v. Fletcher*, 59 U. PA.L.R. 298, 311, 312 (1911).

⁹ W. Prosser, *Selected Topics on the Law of Torts*, p. 136 (1953) [hereinafter cited as Prosser].

¹⁰ Foster, *supra*, at 31.

must keep it in at his peril, and, if he does not do so is *prima facie* answerable for all the damage which is the natural consequence of its escape.¹¹

A strict liability rule of law was not strange to the Common Law of England. It was well established in cases of trespass, nuisance, and straying animals.¹² Blackburn's generalization of a widely accepted theory of law was sharply limited on further appeal to the House of Lords.¹³ There Lord Cairns stated that the rule of law articulated by Blackburn applied only to the "non-natural" use of land, as distinguished from "any purpose for which it might in the ordinary course of the enjoyment of the land be used."¹⁴ Later English cases elucidated the meaning of "non-natural" to mean unusual, abnormal, or inappropriate in the circumstances of the surrounding area.¹⁵

III. Common Law in the United States

When *Rylands v. Fletcher* was decided, courts in the United States had just begun to develop the concept of negligence in actions for damages between two otherwise blameless individuals.¹⁶ The *Rylands* rule of law was accepted in the Massachusetts courts,¹⁷ which had first articulated the concept of negligence eighteen years earlier.¹⁸ Shortly after the Minnesota courts accepted the rule of *Rylands*, that rule was strongly

¹¹ *Rylands v. Fletcher*, L.R. 1 Ex. 265, 279-80 (1866).

¹² Foster, *supra*, p. 31.

¹³ Prosser, *supra*, p. 139

¹⁴ *Rylands v. Fletcher*, L.R. 3 H.L. 330, 338 (1868). The Arizona Supreme Court, in denying "strict liability with respect to publicly owned water control facilities, indicated that "...The Arizona Canal meets all the requirements to be considered at this time a natural watercourse flowing through the Salt River Valley. By this we mean that it has developed the characteristics of a natural watercourse, but this does not mean that the water belongs to the public as do all wholly natural waters (A.R.S. § 45-101), nor do we imply that the Water Users are relieved from the duty to maintain and repair the canal (A.R.S. §§ 45-204 and 45-205)." *Ramada Inns, Inc. v. Salt River Val. Wat. Users' Ass'n*, 111 Ariz. 65 (1974)

¹⁵ Prosser, *supra*, p. 141, 142.

¹⁶ Sheldon, *supra*, p. 167.

¹⁷ Prosser, *supra*, p. 149, citing *Ball v. Nye*, 99 Mass. 582, 97 Am. Dec. 56 (1868).

¹⁸ Sheldon, *supra*, p. 167 citing *Brown v. Kendall*, 60 Mass. (6 Cush.) 292 (1850).

repudiated by influential decisions in New York, New Hampshire, and New Jersey.¹⁹ The decisions of these courts focused on the broad statement of the law articulated by Justice Blackburn, rather than the more limited legal principle articulated by the appeals court.

These courts felt that *Rylands* indicated that the defendant would be absolutely liable in all cases whenever anything in his control escaped and caused damage. Thus, the *Rylands* rule of law was misstated and rejected by these and other jurisdictions as misstated. *Rylands* acquired a bad reputation in some states as “a Foreign aberration beyond all reason”.²⁰ Today, however, the rule of *Rylands v. Fletcher* is accepted by name or inference in far more jurisdictions than reject it. It is accepted in Arkansas,²¹ California (except for publicly owned flood control works, modified recently to be more like strict liability),²² Colorado,²³ the District of Columbia,²⁴ Florida,²⁵ Indiana,²⁶ Iowa,²⁷ Kansas,²⁸ Maryland,²⁹ Massachusetts,³⁰ Minnesota,³¹ Missouri,³²

¹⁹ Prosser, *supra*, p. 145 citing *Losee v. Buchanan*, 51 N.Y. 476, 10 Am. Rep. 623; (1873); *Brown v. Collins*, 53 N.H. 442, 16 Am. Rep. 372 (1873) and *Marshall v. Wellwood*, 38 N.J.L. 339, 20 Am. Rep. 394 (1876).

²⁰ Prosser, *Id.* At 150, 151.

²¹ *Chapman Chemical Co. v. Taylor*, 215 Ark. 630, 222 S.W. 2d 820 (1949); *North Little Rock Transportation Co. v. Finkbeiner*, 243 Ark. 596, 420 S.W. 2d 874 (1967). *But, c.f.*, *Dye v. Burdick* 262, Ark. 124, 553 S.W. 2d 833 (1977) which indicates that a dam across a natural watercourse was not an ultrahazardous thing, and, therefore, the *Rylands* rule was inapplicable.

²² *Green v. General Petroleum Corp.*, 205 Cal. 328, 270 p. 952 (1928). The principle, however, was not applied to a reservoir in *Sutliff v. Sweetwater Co.*, 182 Cal. 34 186 P. 766 (1920); nor was it applied to government-owned flood control works including levees. See, *Belaire v. Riverside County Flood Control District*, 47 Cal. Rptr. 693, 764 P 2d 1070 (1988). However the recent decision in the Paterno case seems suspiciously like Strict Liability to this author and to other commentators as we shall see later in this paper. See, *Paterno v. State*, C040553, (Cal.App.4th) (2003)

²³ *Sylvester v. Jerome*, 19 Colo. 128, 34 P. 760 (1893), *Barr v. Game Fish & Parks Comm'n*, 497 P. 2d 340 (Colo. Ct. App. 1972).

²⁴ *Brennan Construction Co. v. Cumberland*, 29 App. D.C. 554, 15 L.R.A. (N.S.) 535 10 Ann. Cos. 865 (1907).

²⁵ *Cities Service Co. v. State*, 312 So. 2d 799 (Fla. 2d Dist. Ct. App. 1975).

²⁶ *Niagra Oil Co. v. Jackson*, 48 Ind. App. 238, 91 N.E. 825 (1910).

²⁷ *Healey v. Citizens Gas & Electric Co.*, 199 Iowa 82, 201 N.W. 118 (1924).

²⁸ *State Highway Commission v. Empire Oil & Refining Co.*, 141 Kan. 161, 40 p. (2d) 355 (1935).

²⁹ *Toy v. Atlantic, Gulf & Pac. Co.*, 176 Md. 197 4 A 2d 757 (1939).

³⁰ *Clark-Aiken Co. v. Cromwell-Wright Co.*, 367 Mass. 70, 323 N.E. 2d 876 (1975).

³¹ *Bridgeman-Russell Co. v. City of Duluth*, 158 Minn. 509, 197 N.W. 971 (1924).

³² *French v. Center Creek Powder Mfg. Co.*, 173 Mo. App. 220, 158 S.W. 727 (1913).

New Jersey,³³ New Mexico,³⁴ Ohio,³⁵ Oregon,³⁶ Rhode Island,³⁷ South Carolina,³⁸ and West Virginia.³⁹

In addition, several states use different rules of law such as absolute nuisance, trespass, or nuisance *per se* in such a way that it is really the implementation of the rule in the *Rylands* case.⁴⁰ The Supreme Court of Texas, which had strongly rejected the *Rylands* rule in *Turner v. Big Lake Oil Co.*,⁴¹ now has accepted the doctrine of strict liability for cases of intentional discharge of a harmful substance, but not for the extraction of groundwater.⁴² Thus, despite strong and even vituperative denunciation by some courts⁴³ and writers⁴⁴ the principles of *Rylands v. Fletcher* are now generally accepted by courts in the United States.⁴⁵ In applying the *Rylands* principle of strict liability, most courts will use the “ultrahazardous test” contained in the *First Restatement of Torts*, which provides that “...one who carries on an ultrahazardous

³³ *City of Bridgeton v. B.P. Oil, Inc.*, 146 N.J. Super. 189, 369 A. 2d 49 (1976)

³⁴ *Gutierrez v. Rio Rancho Estates, Inc.*, 94 N.M. 84, 607 P. 2d 622 (1979).

³⁵ *Defiance Water Co. v. Olinger*, 54 Ohio St. 532, 44 N.E. 238 (1896)

³⁶ *Brown v. Gessler*, 191 Or. 503, 230 P. 2d 541 (1951).

³⁷ *Gagnon v. Landry*, 103 R.I. 45, 234 A. 2d 674 (1967).

³⁸ *Frost v. Berkeley Phosphate Co.*, 42 S.C. 402, 2 S.E. 280 (1894).

³⁹ *Weaver Mercantile Co. v. Thurmond*, 68 W. Va. 530, 70 S.E. 126 (1911).

⁴⁰ W. Ginsberg and L. Weiss, *Common Law Liability for Toxic Torts: A Phantom Remedy*, 9 Hof. L.R. 859, 913 (1981); [hereinafter cited as Ginsberg] Citing: *Dutton v. Rocky Mountain Phosphates*, 151 Mont. 54, 438 P. 2d 676 (1968); *Dixon v. New York Trap Rock Corp.* 293 N.Y. 508 58 N.E. 2d. 517 (1944); 293 N.Y. 508 58 N.E. 2d. 517 (1944); *Pennsylvania R. Co. v. Sagamore Coal Co.* 281 Pa. 233, 126 A. 386 (1924).

⁴¹ 128 Tex. 155, 96 S.W. 2d. 221 (1936).

⁴² *Atlas Chem. Indus., Inc. v. Anderson*, 514 S.W. 2d. 309 (Tex. Civ. App. 1974) *aff'd* 524 S.W. 2d 681 (1975), and *Friendship Dev v. Smith-Southwest Industries*, 576 S.W.2d 21, 576 S.W.2d 21 (Tex. 1978)

⁴³ See e.g., *Turner v. Big Lake Oil*, *supra*.

⁴⁴ Smith, *Tort and Absolute Liability*, 30 Harv. L.R. 241, 319, 408 (1917); *Thayer Liability Without Fault*, 29 Harv. L.R. 801 (1916).

⁴⁵ Ginsberg, *supra*, p. 913 A notable exception is Arizona which has held in *Ramada Inns, Inc. v. Salt River Valley Water Users' Association*, 111 Ariz. 65, 523 P.2d 496 (1974) that the vital importance of the Arizona Canal precluded the imposition of a standard of strict liability.

activity is liable to another person whose land, person, or chattels the actor should recognize as likely to be harmed...although the utmost care is exercised to prevent the harm.”⁴⁶ The *Restatement* goes on to state that an activity is “ultrahazardous” if it (a) necessarily involves a risk of serious harm to the person, land or chattels of others which cannot be eliminated by the exercise of the utmost care, and (b) is not a matter of common usage.”⁴⁷ The *Restatement* specifically notes that it expresses no opinion as to whether a large water tank or reservoir is to be considered an ultrahazardous activity.⁴⁸ Other courts in determining whether to apply a *Rylands*-type test of strict liability will use the test set forth in the *Restatement (Second) of Torts* which focuses on the relationship of the object that caused the damage to the surrounding area.⁴⁹ Some jurisdictions that purport to have adopted the test set forth in the first *Restatement* very clearly also look at the character of the area surrounding the object

⁴⁶ *Restatement of Torts*, §519 (1938).

⁴⁷ *Id.* at §520.

⁴⁸ *Id.* §520 Comment c. Caveat.

⁴⁹ *Restatement (Second) of Torts § 519 (1976)* provides:

(1) One who carries on an abnormally dangerous activity is subject to liability for harm to the person, land or chattels of another resulting from the activity, although he has exercised the utmost care to prevent the harm.

(2) This strict liability is limited to the kind of harm, the possibility of which makes the activity abnormally dangerous.

The following factors will be considered when determining whether an activity is abnormally dangerous:

- (a) existence of a high degree of risk of some harm to the person, land or chattels of others;
- (b) likelihood that the harm that results from it will be great;
- (c) inability to eliminate the risk by the exercise of reasonable care;
- (d) extent to which the activity is not a matter of common usage;
- (e) inappropriateness of the activity to the place where it is carried on; and
- (f) extent to which its value to the community is outweighed by its dangerous attributes

that caused damage.⁵⁰ A focus on both the object that caused the harm and the area that surrounded the object is fully in keeping with the rule of *Rylands v. Fletcher*.⁵¹

IV. Negligence

Professor Prosser has stated that:

“(i)t is quite apparent that the same courts which purport to reject the English principle (of *Rylands v. Fletcher*) have in fact applied it under another name, and that under that name the doctrine is universally accepted in the United States.”⁵²

However, Prosser also points out that because courts will look to the area surrounding an object that has caused harm to determine if strict liability should be imposed, there can be no universal statement that the release of water from a failed dam will always trigger strict liability on the part of the defendant.⁵³ Therefore, in any given situation a plaintiff might have to demonstrate that the release of water from a failed dam was caused by the negligence of the dam owner. Negligence is simply the creation of an unreasonable risk to others. Elements of a claim of negligence are duty, breach of duty, causation, and damage. Negligence may also be found *per se* if a defendant violates a statute requiring certain standards.⁵⁴

A. Duty of Care

In determining if and how much care a dam owner had a duty to provide, the usual standard is how much care an ordinarily prudent person *in a similar circumstance* would take. The late Dean Thayer of Harvard University indicated that the duty of care in circumstances where life and limb were at stake is the highest possible.⁵⁵

Thayer indicated that:

⁵⁰ California has specifically adopted the *First Restatement's* “ultrahazardous” test. In *Alonso v. Hills*, 95 Cal. App. 2d 778, 214 p. 2d 50 (1950), strict liability was imposed for blasting in a populated area. However, in *Houghton v. Loma Prieta Lumber Co.* 152 Cal. 500, 93 P. 82 (1907), strict liability was not imposed for blasting in a comparatively deserted area. Thus, California is really using the type of analysis set forth in the *Restatement (Second)*.

⁵¹ Prosser, *supra* at 149.

⁵² Prosser, *supra* at 170.

⁵³ Prosser, *Nuisance Without Fault*, 20 Tx. L.R. 399, 409 (1942).

⁵⁴ *Corpus Juris Secundum*, Vol. 65, negligence §1, §19 (1966).

⁵⁵ Thayer, *Liability without Fault*, 24 Harv. L.R. 801, 805 (1916) [hereinafter cited as Thayer].

An ordinary prudent person engaged in an enterprise which involved substantial risk would not only take every precaution to inform himself of the dangers of his enterprise before undertaking it, and to guard against such dangers in construction, but also to use unremitting diligence in maintenance and inspection.”⁵⁶

Advances in the sciences of hydraulics and hydrology enable a dam owner to determine what probable maximum floods could occur in an area⁵⁷ and what would be the likely result of the failure of the dam.⁵⁸ These recent advances in science should result in a gradual refinement of the nature and extent of the duty of care a dam owner owes to his or her downstream neighbors. At least one court has used these recent advances in determining the standard of care owed by a dam owner.⁵⁹

B. Breach of Duty

Proving that a dam owner has breached the duty of care can be difficult and is often complicated by the fact that often the portion of the water control structure that caused the harm has disappeared during the event, thus eradicating much of the physical evidence of the maintenance and even design of portions of the structure.⁶⁰ However, as a result of the loss of life and property due to the collapse of dams, the United States embarked on a national program of inspection of dams.⁶¹ Detailed reports on the design, condition, and degree of hazard of 8,818 dams throughout the country are now available.⁶² Nearly 3,000 of the dams inspected were evaluated as unsafe, primarily due to inadequate spillway design. If a dam collapses, these reports will be invaluable both to plaintiff and defendant in arguing how carefully the dam owner exercised his special obligation to prevent loss of life and property downstream.

⁵⁶ *Id.*, at 806.

⁵⁷ U.S. Department of Interior, *Design of Small Dams*, pp. 37-97 (1977); U.S. Federal Emergency Management Agency, *Federal Guidelines for Selecting and Accommodating Inflow Design Floods for Dams*, pp. 1-37 (undated, published 1984) [hereinafter cited as FEMA]

⁵⁸ National Academy, *Safety of Existing Dams*, pp. 4-39 (1983).

⁵⁹ *Barr, supra* at 343-344.

⁶⁰ Interviews with various employees of Michael Baker Inc.

⁶¹ Department of the Army, Office of the Chief of Engineers, *National Program of Inspection of Non-Federal Dams*, p. IV, (1982).

⁶² *Id.* p. VI.

At the present time a similar program for the inspection of levees and other major water control structures does not exist in the United States. In view of the spectacular and costly failure of the New Orleans levees after Hurricane Katrina, such a program could possibly be developed.

In situations like collapse of a water control structure, many courts would also permit the plaintiff to invoke the doctrine of *res ipsa loquitur*, that is, the thing (in this case the failure of a water control facility) speaks for itself. Presumably, the failed structure shouts “negligence!”⁶³ One commentator has observed that the use of *res ipsa loquitur* is essentially the equivalent of strict liability.⁶⁴ Certainly, shifting the burden of coming forward with evidence so as to require the defendant water control structure owner to explain how his dam failed despite due care makes the plaintiff’s case easier to present and improves the plaintiff’s chances of being able to be permitted to present the case to a jury. Since juries find for the plaintiff in two-thirds to three quarters of all cases presented to them,⁶⁵ the effect of *res ipsa loquitur* may well be essentially the same as strict liability.⁶⁶

C. Causation

In order to recover under a negligence theory the plaintiff must also show that the failure of the dam caused damage to the plaintiff’s property.⁶⁷

1. Causation of Damage – Direct causation of harm in a case involving the release of water from a failed dam is usually fairly obvious. However, there are two circumstances in which causation could play an important role. The first involves dam failure during an extremely large flood in which it can be shown that the plaintiff’s property would have been flooded whether the dam had failed or not. In this case the release of waters impounded by the dam may have been the immediate

⁶³ Gregory, *Trespass to Negligence to Absolute Liability*, 37 Va. L.R. 359, 381 (1951).

⁶⁴ Leflar, *Negligence in Name Only*, 27 N.Y.U. L. Rev. 564, 582 (1952)

⁶⁵ James, *Accident Liability: Some Wartime Developments*, 55 Yale L.J. 365, note 161 at 374 (1946).

⁶⁶ See, e.g., *Dye v. Burdick*, __Ark.__, 553 S.W. 2d 833 (1977), where the court refused to apply a strict liability test considering the facts of the case but permitted plaintiff to plead *res ipsa loquitur*; *Bowling v. City of Oxford* 267 N.C. 552, 148 S.E. 2d 624 (1966); and *Brizendine v Nampa Meridian Irr. Dist.*, 97 Idaho 580, 548 p. 2d 80 (1976).

⁶⁷ Prosser, *Handbook of the Law of Torts*, §30 (1971).

and first cause of the damage, flooding from some other source would have caused equivalent damage to the plaintiff's property and the plaintiff will not recover damages.⁶⁸

The second situation in which causation would be of significance is when several dams collapse like a series of dominoes. Proving that any one owner caused damage and/or apportioning damage among the owners is extraordinarily complex and involves endless permutation of fact and legal theory.⁶⁹ Nevertheless, advances in hydrology and hydraulic engineering make it possible to reconstruct the contribution each law made to downstream damage.⁷⁰

A convincing demonstration that the actions of the defendant did not, in fact, cause harm to the plaintiff may also be used as a defense.⁷¹

2. Damage

The requirements for proof of damage need little comment in this paper since the entire thrust of the article assumes damage to property. Nevertheless, note that failure of large water control facilities sometimes results in permanent damage to land and property values. The measure of any damages claimed will be the difference between the value of the property before the flood and the value of the property immediately after the flood.⁷¹

V. Defenses

Throughout this paper, the *Rylands* rule has been referred to as being one of "strict" rather than "absolute" liability. Absolute liability would imply that the defendant was an insurer.⁷² Strict liability indicates that there are defenses to the

⁶⁸ See, e.g., *Beauton v. Connecticut Light & Power Co.*, 3A. 2d 315 (1938).

⁶⁹ A. Becht and F. Miller, *The Test of Factual Causation in Negligence and Strict Liability Cases*, p. 125 et. seq. (1961).

⁷⁰ Personal knowledge of the author.

⁷¹ See, e.g. *St. Martin v. Gen. Homes-Louisiana*, 467 So.2d. 1361 (La. App. 5 Cir.) (1985)

⁷¹ See, e.g., *State of Colorado v. Nicholl*, ___ Colo. ___, 370 P. 2d 888 (1962).

⁷² See, *Wheatland Irrigation District v. McGuire* ___ Wyo ___, 537 P. 2d 1128 (1975).

allegation of liability and that a water control facility owner is not necessarily an insurer against all damage caused by a dam failure.⁷³

There are three generally recognized defenses against the imposition of strict liability: if the escape of the dangerous substance from the defendant's premises is due to a) the plaintiff's own fault, b) a *vis major*, the act of God, or c) to acts of third parties which the defendant had no reason to anticipate.⁷⁴ Except as noted, these defenses should be good against accusations of negligence including negligence *per se*, and the invocation of the principal of *res ipsa loquitur*.⁷⁵

A. Act of God

An Act of God or *vis major* is defined as: an unusual, extraordinary, sudden, and unexpected manifestation of the forces of nature, such as earthquakes, violent storms, lightning, and extraordinary or unprecedented floods, which could not have been reasonably anticipated, guarded against, or resisted.⁷⁶ Dams can be designed to have spillways that pass a volume of flood water so as to minimize or eliminate the possibility of failure of the dam itself because of flood.⁷⁷

In determining whether a storm that caused a structure failure could have been anticipated, courts will either look to the maximum experienced rainfall in an area⁷⁸ or to an engineer's calculation of a foreseeable peril.⁷⁹ In a Colorado case, the court used the "probable maximum flood"⁸⁰ as a standard to determine whether the spillway of a failed dam was properly designed.⁸¹

⁷³ Thayer, *supra*, pp. 803-804

⁷⁴ 62 Am. Jur. 2d, Premises Liability §8 "Escaping Substances; Doctrine of Rylands v. Fletcher."

⁷⁵ Thayer, *supra*, pp. 803-804

⁷⁶ American Jurisprudence, 1 *Proof of Facts*, "Act of God" p. 143.

⁷⁷ U.S. Department of Interior, *Design of Small Dams*, pp. 37-95 (1977).

⁷⁸ See, e.g., *Bradford v. Stanley*, ____ Ala. ____, 355 So. 2d 328 (1978).

⁷⁹ See, e.g., *Diamond Springs Lime Co. v. American Rivers Constructors*, 16 Cal. App. 3d 581, 94 Cal. Rptr. 200 (1971).

⁸⁰ The predicted probable maximum flood is always greater than recorded prior occurrence because the method is a maximizing process of recorded prior occurrence.

⁸¹ *Barr, supra*.

The use of a standard to define Act of God as a storm resulting from the “most severe combination of critical meteorologic and hydrologic conditions” that are reasonably foreseeable to trained hydrologists may not be appropriate in all times and everywhere. The federal government recommends criteria that, like the *Rylands* rule, vary depending on the area in which a water control facility is to be located:

Situation in case of failure	Minimum Inflow Design Flood (IDF)
a. Loss of human life, extensive property damage, or serious social impacts attributable to dam failure occurs.	IDF is equivalent to the probable maximum flood (PMF).
b. Special case of a. Total reservoir volume is small compared to the PMF volume so that the threat to human life from floods is not increased by dam failure above that resulting from maximum controlled releases.	IDF selection is based on the level beyond which the potential for loss of human life from dam failure outflow does not exceed potential loss of life from controlled releases through spillways and other release facilities. A larger IDF should be selected if an economic analysis indicates this would be cost effective.
c. Loss of human life attributable to dam failure is not expected, and economic and social impacts are within acceptable limits.	IDF selection is based on an economic evaluation and other relevant factors.
d. Situation the same as in condition a.; however, an IDF equivalent to the PMF cannot be accommodated. No good alternatives are available due to constraints (physical, economic, social, etc.).	IDF is determined as described in section H.4. [this discusses the details of weighing the costs vs. benefits of alternatives to full compliance with the probable maximum flood design]. ⁸²

Although there is no direct reference in the standard definition of Act of God to considerations involving the consequences of dam failure, it is reasonable to assume that a prudent expert will follow good engineering practices as well as any state, local, and federal guidelines, to determine how to design and maintain a particular water

⁸² See FEMA, *supra*, at p. 32. Designing a water control facility to take into account the magnitude of the harm that would occur due to failure seems generally accepted in existing case law. See, e.g., *Wolf v. St. Louis Independent Water Co.*, 10 Cal. 541 (1858), *Dover v. Georgia Power Co.*, 168 S.E. 117 (1933), *City Water Power Co. v. Ferguson Falls*, 128 N.W. 817 (1910).

control structure, including a review of the consequences of the failure of that structure.

It should be emphasized that, to be a valid defense, the Act of God must be the sole cause of a flood. If the defendant was also negligent because of poor maintenance procedures, the Act of God defense will not hold up.⁸³

B. Acts of Third Parties

A dam owner will not be liable for the unforeseeable acts of third parties. All commentators agree that if damage is caused by the act of a third party over which the defendant had no control, no liability will attach.⁸⁴

C. Plaintiff's Fault

The modern sciences of hydrology and hydraulics permit us to easily chart the depth, velocity, and path of a flood caused by the failure of a dam. As previously noted, this fact has implications for the definition of the dam owner's duty of care, and may even influence the definition of what a prudent person would do with respect to a probable maximum flood. However, just as a person who stood next to a blasting operation might not be able to recover damages because he assumed the risk by being there,⁸⁵ there is at least a possibility that a good defense can be made if someone locates in an area that will be flooded due to the failure of a water control structure. The national program that publishes maps of all known flood hazards in the United States⁸⁶ does not examine or consider the possibility of dam failure in preparing its maps, which are designed to be relied upon by those who build in flood hazard areas.⁸⁷ In view of this, it would seem unreasonable to require even the most sophisticated builders to analyze the consequences of the failure of a dam on another person's property prior to building on their own property. However, there is some support in a

⁸³ See, *Barr, supra*, (poor design) and *Curtis v. Dewey, supra*, (poor maintenance procedures).

⁸⁴ See, *Wheatland Irrigation District, supra* at pp 1132-1136 for a thorough discussion of this matter.

⁸⁵ Prosser, *Selected Topics, supra* p. 184.

⁸⁶ National Flood Insurance Program 42. *U.S.C.* §§ 4001-4128

⁸⁷ Interview with J. Murphy P.E. of Michael Baker Inc. October 28,2005.

recent Iowa case that construction in a high risk area below a dam could be a nuisance, requiring a downstream mobile home park be removed rather than the dam modified.⁸⁸

D. Statutory Privilege

If an activity is authorized to be carried out by statute or when the law requires that the activity be carried out, strict liability will not be imposed without a showing of negligence due to the doctrine of statutory privilege.⁸⁹ The United States government has statutory immunity from suit for all its flood control activity.⁹⁰ This immunity from suit includes failure of both levees and dams.⁹¹ Although many states require that a person obtain a license to operate or construct a dam, I have been unable to find direct case law or a specific basis on any of these statutes for a belief that the licensing of a dam provides a form of statutory immunity. However, I would certainly raise statutory immunity as a defense in a case involving strict liability, particularly in a case where there was a license from a state to carry out a public service such as electric production or provision of water supply.⁹²

VI. Conclusions

Strict liability for damage caused by the release of water from a water control facility is the general rule of law in the United States. The roots of the doctrine of strict liability for the failure of water control facilities are deep and pervasive. Looking at the doctrine in an historical context, the willingness of some United States courts to

⁸⁸ See, *Easter Lake Estates, Inc. v. Iowa Natural Resources Council*, _____ Iowa ____ 328 N.E. 2d 906 (1982).

⁸⁹ Prosser, *Torts* pp. 465-466 (1941). This doctrine is often applied to “escapes” of gas, electricity, or water from pipes or conduits under city streets. See, however *Pacific Bell v. City of San Diego*, 81 Cal. App. 4th 596, 96 Cal.Reptr. 2d. 897 (2000) where strict liability was imposed with respect to the failure of a City-owned water pipe.

⁹⁰ 33 U.S.C. §702(c) states: “No liability of any kind shall attach to or rest upon the United States for any damage from or by floods or flood waters at any place.” This provision was enacted into law in order to encourage the creation of flood control works.

⁹¹ *Aetna Ins. Co. v. United States*, 628 F. 2d 1201 (9th Cir. 1980), *cert. denied*, 450 U.S. 1025 (1981).

⁹² A Minnesota court held that the importance of a dam providing public power permitted the court to find that the doctrine of strict liability was not applicable. The court, however, permitted the use of the *res ipsa loquitur* so the defendant still had to show he was not negligent. See, *City Water Power Co. v. Fergus Falls*, 113 Minn. 33, 128 N.W. 817 (1910).

hold that a plaintiff must prove negligence in order to recover for damage done by water escaping from a failed water control facility is strongly influenced by public policy to encourage the needed supply of water⁹³, or to encourage the construction of flood control facilities. The modern trend back towards a “*Rylands* rule” of strict liability is certainly influenced by the twentieth century tendency of courts and legislature to be more concerned with compensating victims than with litigating “fault.” A good illustration of this trend is a recent California case, where the state was found liable for the failure of a levee. While the court did not impose “strict liability” *per se*, the court’s reasoning imposed a standard very similar to it.⁹³

Despite the alleged existence of a “crisis” in the availability of liability insurance in the United States,⁹⁴ which some groups suggest could be alleviated by reform of the tort laws, moving away from a system of “no fault” victim compensation towards a fault-based negligence system,⁹⁵ I do not believe that the trend towards strict liability for water facility failure will be reversed, except possibly in situations like that faced in Arizona, where the provision of water through water control facilities such as the Central Arizona Project, is necessary to support life itself.⁹⁶

Unlike more recent “no fault” systems of insurance for compensating victims, strict liability for dam failures has deep historical roots, and reflects the reality that a potential victim of flooding due to dam failure would have a great deal of practical difficulty in obtaining insurance in order to spread his risk among other potential victims.⁹⁶ In addition, like other “no fault” systems such as Worker’s Compensation,

⁹³ Sheldon, *supra* at 201, *Ramada Inns, Inc. v. Salt River Valley Water Users' Association*, 111 Ariz. 65, 523 P.2d 496 (1974), and *Paterno v. State*, C040553, (Cal.App.4th) (2003).

⁹⁴ *Sorry Your Policy is Cancelled*, Time Magazine, March 24, 1986, p. 16 *et seq.*

⁹⁵ See, e.g., Testimony of Former Administrator of the United States Federal Insurance Administration, Jeffrey S. Bragg, before Committee on Commerce, Science, and Transportation, United States Senate, pp. 8-12 (1986).

⁹⁶ See, *Ramada Inns, Inc. v. Salt River Val. Wat. Users' Ass'n*, 111 Ariz. 65 (1974).

⁹⁶ Flood Insurance is usually sold only in areas identified as “special flood hazard areas.” Areas protected by levees from a flood having a 1% annual chance of occurrence, including required freeboard and maintenance are not considered “special flood hazard areas”. See, 44 *CFR* 65.10. In addition, the issuer of a policy of flood insurance may pursue a subrogation remedy against the water control facility owner, thus bringing us full circle back to owner’s liability.

strict liability has the great advantage that it encourages negotiated settlements rather than lawsuits, thus relieving a burden on the court system,⁹⁷ and allowing a greater percentage of the premium income to be paid the damaged party.⁹⁸

In addition, strict liability can serve as a powerful deterrent to unsafe water control facilities since large insurance companies increasingly reduce loss by identifying potential claim-generating problems and requiring that the problem be solved as a condition of writing or renewing a liability policy.⁹⁹

From the perspective of a water control facility owner, the outlook is not as grim as it might seem at first glance. Failure of a major water control facility during a storm is likely to lead to the imposition of strict liability. However, advances in hydrology and hydraulics offer protection to the water control facility owners as well as to the public at large. Investigations of potential for failure undertaken by the owners of water control facilities before that failure may well provide an owner with the unwelcome and unpleasant news about the safety of these facilities. At the same time, awareness of any deficiencies should give early warning of problems while they can be corrected.

⁹⁷ See, J. O'Hara, *Case Comments*, 4 Fla. St. U.L. Rev. 304, 313.

⁹⁸ Sheldon, *supra*, at 198.

⁹⁹ *Id.* at 204.