



# Legal and Policy Opportunities for Disaster Risk Reduction

# Welcome!

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# Purpose of Module

- Discuss integration of engineering, planning, policy, and legal research into a fundamental message:
  - Safe development, climate adaptation, and hazard mitigation provide the most resilient path for the entire community
- Provide a development approach for hazard mitigation, floodplain management, and water quality that meets the needs of the entire community

# Learning Objectives

1. State the ancient legal and equitable roots and concepts of safe or “do no harm” development decisions, including higher standards designed to protect the property and rights of everyone
2. Explain how floodplain management, and other forms of regulation designed to prevent harm, generally avoid the “takings” issue
3. Explain the evolving professional “Standard of Care”
4. Identify important legal concepts discussed in this module, such as Variances

# Impediments to Safe Regulation

- The National Oceanic and Atmospheric Administration (NOAA) commissioned a study which surveyed planners about impediments to safe development
- Two major reasons cited:
  - 1) **Fear of the “taking” issue**
  - 2) **Externality and economic pressure**



[click to view report]

# Impediments to Safe Regulation (cont.)

- 3) Another impediment to add to the NOAA list:  
**A false perception of immunity**
- Some public officials believe that they are immune from suit for the consequences of actions they take which harms others
  - Many Floodplain Managers have expressed that such an attitude is making their jobs much more difficult

# Impediments to Proper Floodplain Management

## I. Economics and Externality

- “Externality” – when a transaction between some parties has impacts on others not involved, or an action affects others because it is external to the actors and may not affect their choices
  - Beneficial externality, such as providing water quality or scenic benefits
  - Negative externality, such as imposing costs of preventable damage

# The Problem of Externality

- Often have problems when one group pays maintenance or replacement of something, yet a different person or group uses that same something
- Classic examples of externality:
  - Park bench
  - Disaster assistance
- Who pays for disaster assistance?
- Who benefits?



# Who Usually Pays for Disaster Assistance?

- The Federal, and sometimes state, taxpayer through:
  - Internal Revenue Service (IRS) casualty losses
  - Small Business Administration (SBA) loans
  - Disaster Community Development Block Grant (CDBG) funds
  - The whole panoply of federal and private disaster relief
- Disaster victims themselves, and their families, businesses, and supply chains

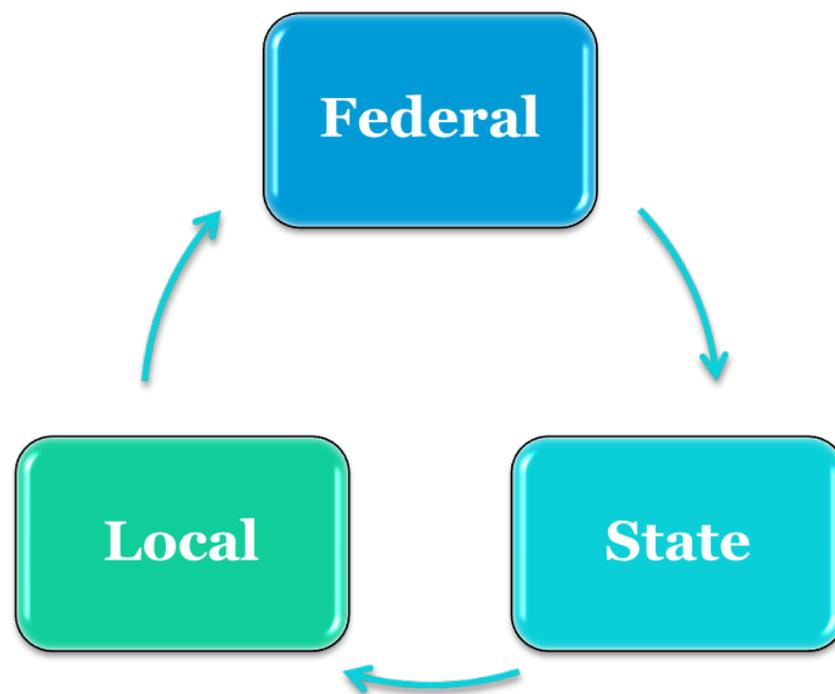
## *Cui Bono?* Who Benefits?

At least the short-term benefits of unwise or improper floodplain development flow to:

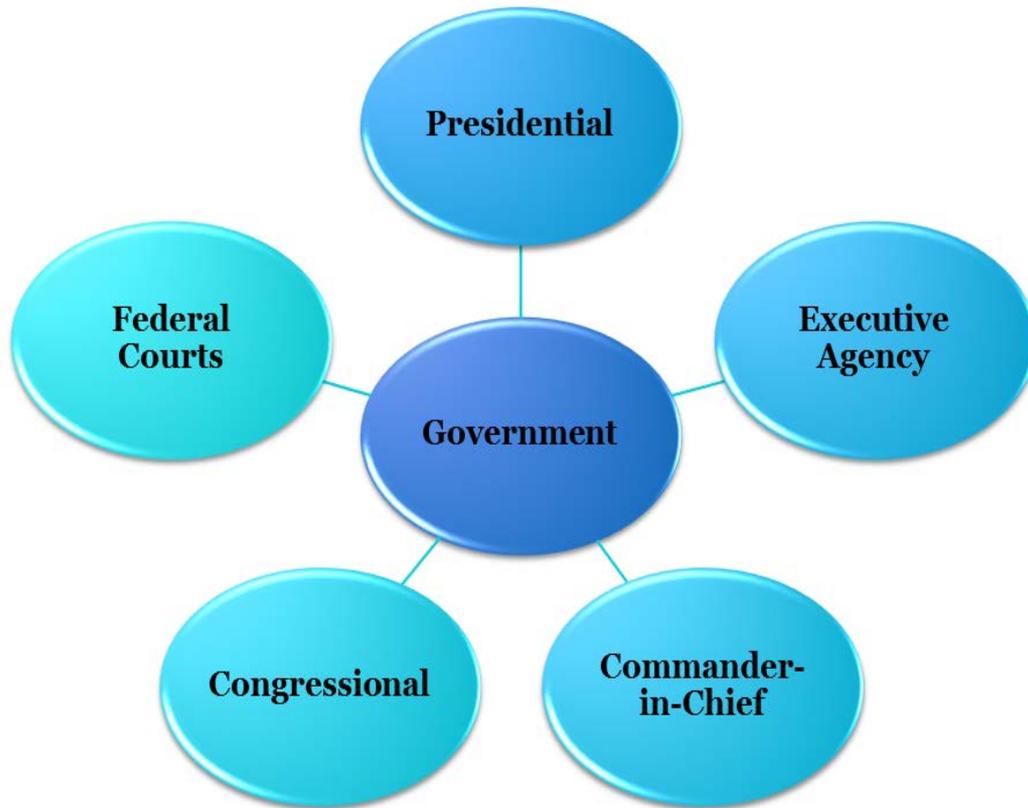
- Developers (profit on sale and occupancy)
- Local governments (real estate and sales taxes, jobs, etc.)
- State government (some sales tax, jobs, etc.)
- Mortgage companies (profits on loans, etc.)
- The occupants of floodplains who may benefit from a lovely place to be (for a while)

# Why Should the Government Do Something about This?

- Fundamental duty
- Protect the present
- Preserve a community's future



# Is There a Government Duty to Prevent Harm?



Does government have a “duty” to prevent injurious consequences from floods?

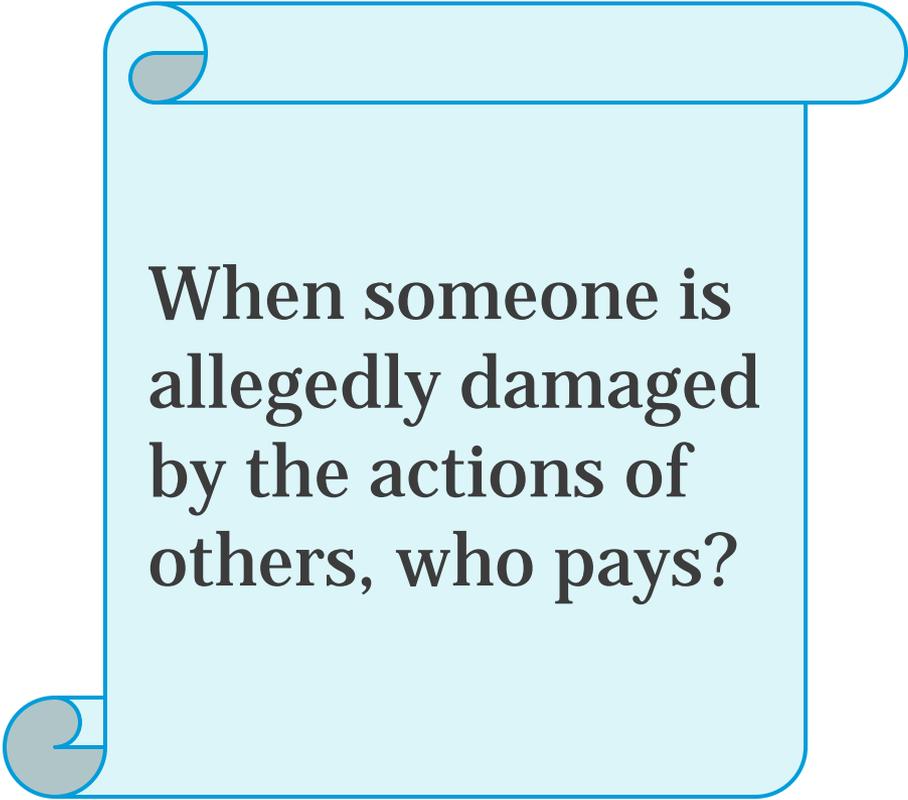
Why Else Should Government Do  
Something about This?

**Liability**

# How Can You Best Avoid Litigation?



# Natural Hazards and Litigation



When someone is allegedly damaged by the actions of others, who pays?

This is a fundamental question of law

# Three Ways to Support Reconstruction Following Disaster Damage

## Self Help

- Loans
- Savings
- Charity
- Neighbors

## Insurance Disaster Relief

- A combination of social insurance and self help

## Litigation

The preferred alternative is...

to have NO DAMAGE...

due to land use and hazard mitigation

# Grounds for Suit

- **Standard of Care** for professionals is increasingly high as professionals develop increasingly sophisticated design methods
- Previously accepted defenses (such as the "common enemy doctrine" for flooding) are increasingly replaced by "**Rule of Reasonable Person**"
- The "Reasonable Person" who is a professional is expected to **have and apply expert technical knowledge** (e.g., regarding land use or engineering or drainage)

# Proof of Causation of Harm is Easier Now Than in Past Times



## Forensic Science

- Flood
- Fire
- Earthquake
- Water pollution

# Situations Where Governments and Landowners May be Held Liable

- Construction of a road causes damage
- Stormwater system increases flows
- Development blocks watercourse
- Bridge without adequate opening

# Situations Where Governments and Landowners May be Held Liable (cont.)

- Grading land increases runoff
- Flood control structure causes damage
- Filling wetland causes damage
- Issuing permits for development that causes harm to a third party

# You Do Not Always Win

## **Texas lawsuit dismissed on procedural grounds**

*Campbell v. Hays County*, TX Court of Civil Appeals, 2003  
Tex. App. LEXIS 8501, 2003

- Homeowners find out that they are in floodplain
- Then they get flooded
- Homeowners sue municipality and local officials
- Court says they should have sued within two years of learning of the problem
- Suit barred by statute of limitations

# Katrina Legal Situation

- Katrina lawsuits
- 500,000 Plaintiffs; \$278 Billion in damages requested
- **Approximately 1,000 plaintiff attorneys involved - learning about levees, floods, and liability**
- For the first time in many years, lenders will lose considerable money on mortgages in a disaster area
- May 1, 2015 Decision: *St. Bernard Parish Gov't v. United States*, 121 Fed. Cl. 687 (Fed. Cl. 2015)

# The Impediments to Proper Floodplain Management

## **II. Concerns about a “Taking”**

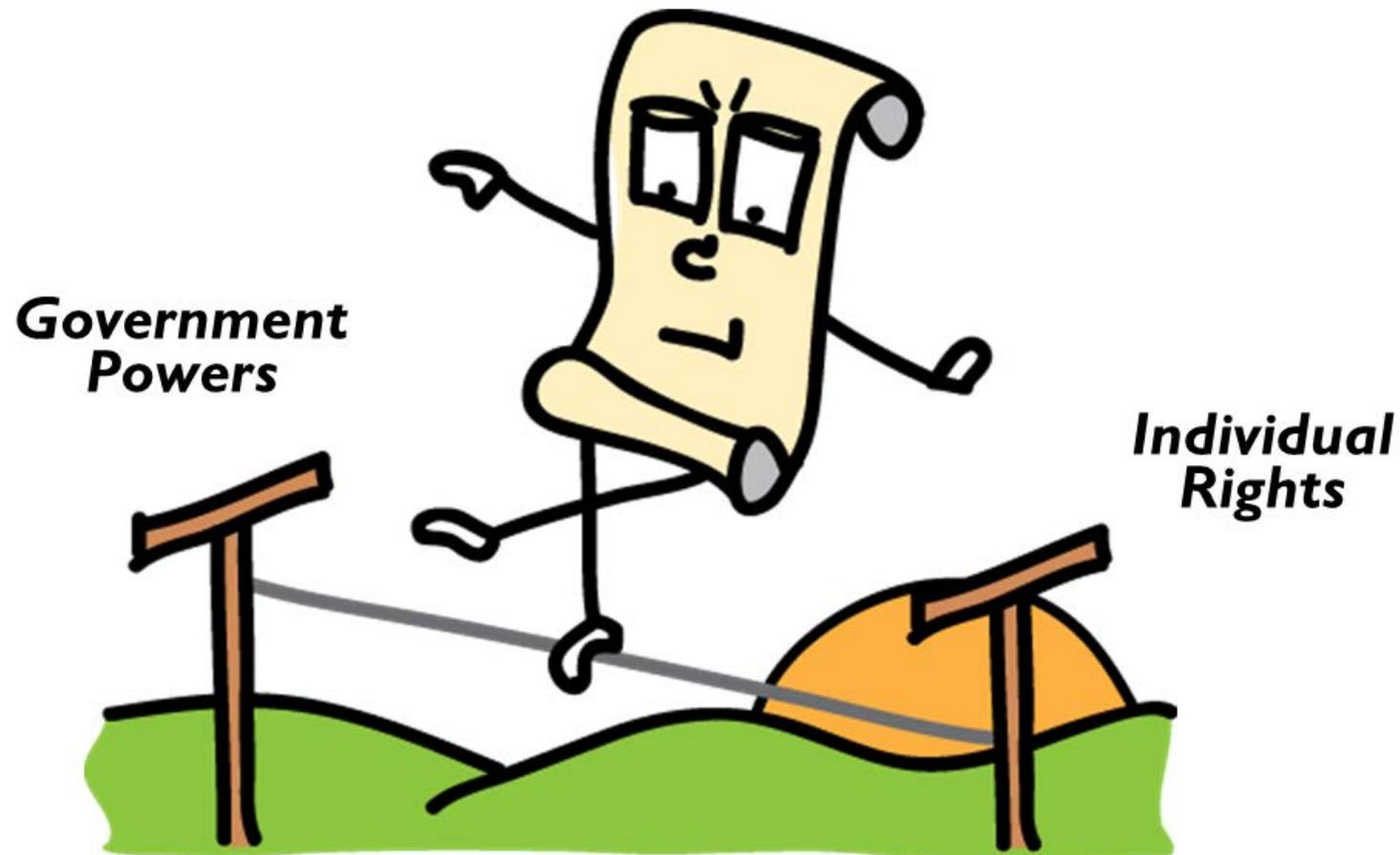
- Let us start with the US Constitution...

# 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*

# The Constitution of the United States



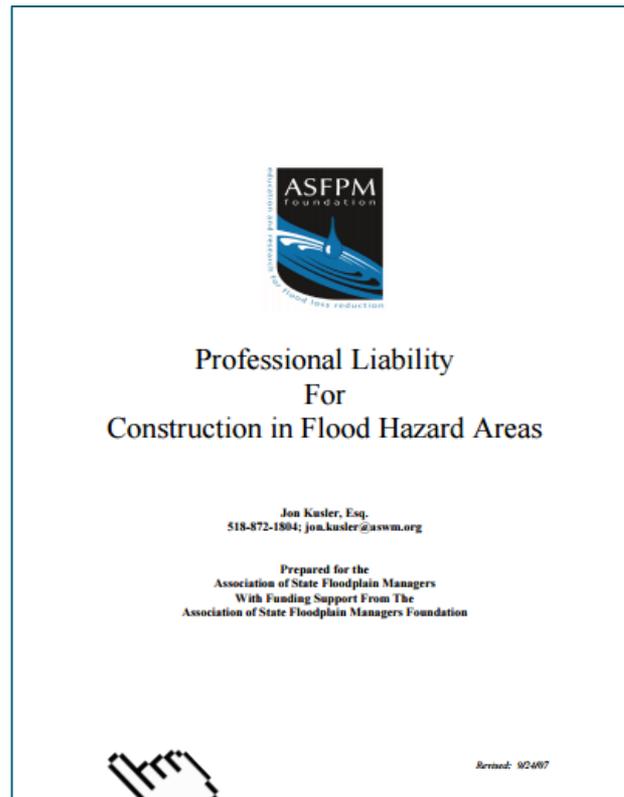
# Increase in Cases Involving Land Use

- Huge increase in taking issue cases and related controversies involving development
- Thousands of cases reviewed by Jon Kusler, Ed Thomas, 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

- Regulations clearly based on hazard prevention and fairly applied to all: successfully held to be a taking – almost none!
- Many cases where **communities and landowners are held liable for harming others**

# Legal Issues: Professional Liability for Construction in Hazardous Areas



[click to view paper]

- *Professional Liability for Construction in Flood Hazard Areas* by Jon Kusler, PhD, Esq.
- Prepared for the Association of State Floodplain Managers Foundation

# New Trend in the Law

- Increasingly, states are allowing lawsuits against communities for alleged goofs in permitting construction **OR** in conducting inspections



# Legal Research Observations

- Many cases where communities try to prevent building in a hazardous area
- Refuse the requested permit based on nebulous environmental or aesthetic concerns
- And they lose
- **If permit refusal was clearly related to harm prevention, would very likely have a different result**

# 2015 Case on Floodway Restrictions

- Beyond FEMA minimum standards
- All construction prohibited in a floodway
- Decided in 2015 in South Carolina

*Columbia Venture, LLC  
v. Richland County,*  
2015 S.C. LEXIS 281  
(S.C. Aug. 12, 2015)

# Discussion Question



***What is the theme in these examples of community legal liability for permitting or undertaking activity?***

## Discussion Question (cont.)



***What is the theme in these examples of community legal liability for permitting or undertaking activity?***

- They did not do safe planning and consider foreseeable natural hazards
- They did not **identify the impacts** of the development activity
- They did not **notify** the soon-to-be afflicted members of the community

## Discussion Question (cont.)



***What is the theme in these examples of community legal liability for permitting or undertaking activity? (cont.)***

- They did not **redesign or reconsider** the project
- They did not require appropriate and necessary **mitigation** measures

# Landowner Does Not Have All Rights Under The Law

- No right to be a nuisance

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- No right to violate the property rights of others

# Landowner Does Not Have All Rights Under The Law (cont.)

- No right to be a nuisance
- No right to violate the property rights of others
- No right to **trespass** ← Why trespass in a water case?

# Landowner Does Not Have All Rights Under The Law (cont.)

- No right to be a nuisance
- No right to violate the property rights of others
- No right to trespass
- No right to be **negligent** ← Negligence?

# Landowner Does Not Have All Rights Under The Law (cont.)

- 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**

# Landowner Does Not Have All Rights Under The Law (cont.)

- 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 the **Public Trust**

“By the law of nature these things are common to all mankind, the air, running water, the sea and consequently the shores of the sea.”  
(Institutes of Justinian 2.1.1 circa 530 A.D. some say 533 A.D)

# Public Entities Do Not Have The Right To Do Just Anything Either!

- No right to use public office to wage vendettas
- No right to abuse the public
- No right to use regulation to steal from a landowner

# Can Government Adopt Higher Standards than FEMA Minimums?

"... **any floodplain** management regulations adopted by a State or a community which are **more restrictive** than (the FEMA Regulations) **are encouraged** and shall take precedence."

- FEMA Regulations Encourage Adoption of Higher Standards
- 44 CFR section 60.1(d) (emphasis added)

# Discussion Question



***Why might all governments wish to consider higher standards?***

# Why Might All Governments Wish To Consider Higher Standards?

- Uncertainties in flood elevations (and hydrologic variations)
- Plasencia- Larson paper on flood height increases due to future watershed development
- Consequences if a factory, water treatment plant, or other critical facility is flooded
- Height of freeboard
- 50% chance that 1% flood will be exceeded within 70 years - Bulletin 17 B

# Governmental Rights and Duties to Manage Development



**Does government have *a right* to regulate to prevent harm?**



**Does government have *an affirmative duty* to regulate to prevent harm?**

Let's discuss some recent cases based on the 5<sup>th</sup> Amendment to help understand the current state of the Law

# *Arkansas Game and Fish Commission v. US*

- Not a “regulatory takings” case
- Arkansas sued the US Army Corps of Engineers alleging damage to Dave Donaldson Black River Wildlife Management Area (WMA), about 24,000 acres
- The majority was purchased to preserve bottomland habitat and provide top-quality waterfowl hunting

# *Arkansas Game and Fish Commission v. US (cont.)*

- The Donaldson WMA is a significant portion of the remaining bottomland hardwood habitat in eastern Arkansas and provides critical wintering habitat to thousands of migratory birds
- This case is about direct damage or intrusion to a property by government action

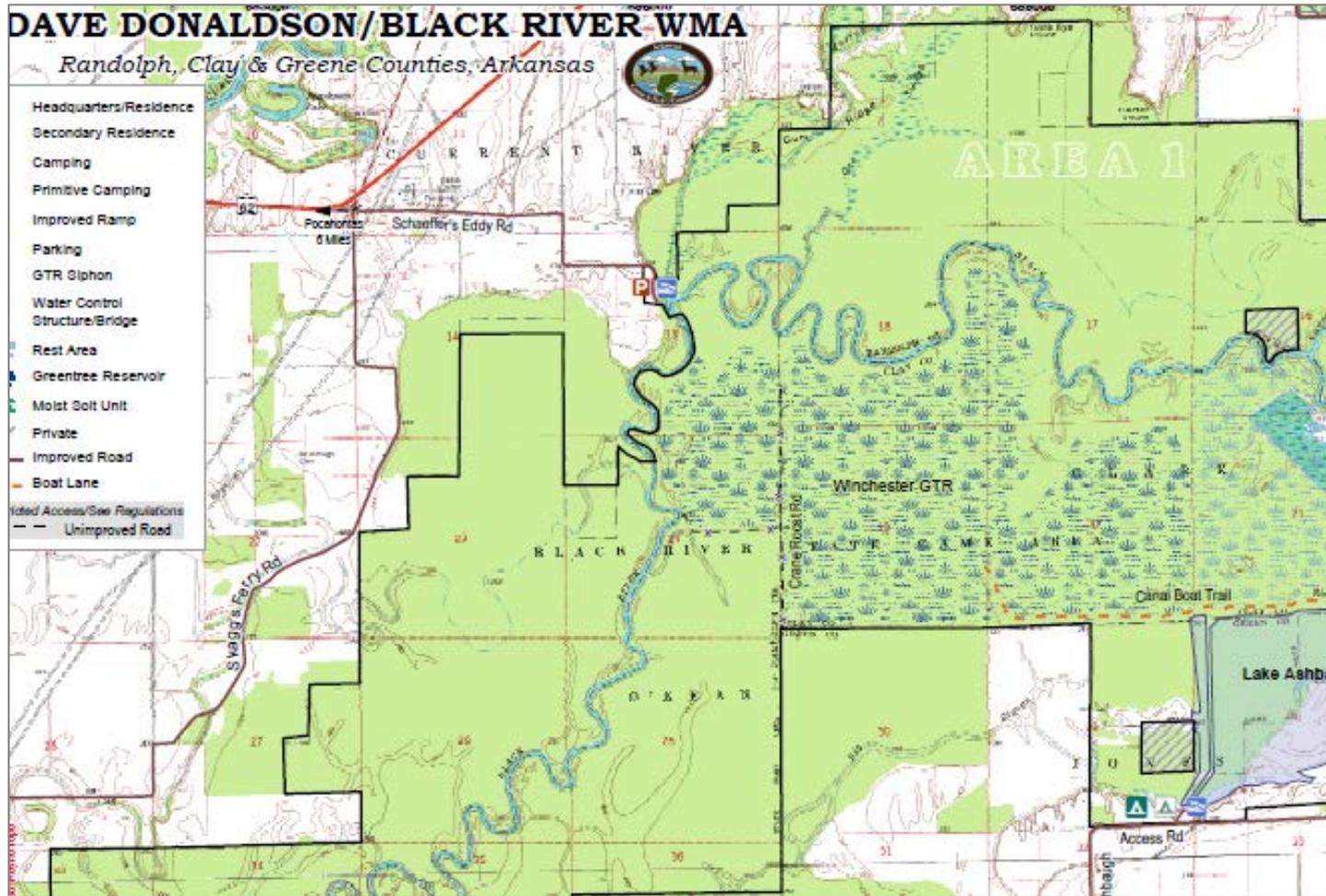
# Dave Donaldson Black River Wildlife Management Area (WMA)



*Dave Donaldson WMA is a “Crown Jewel” of our state’s great wildlife management heritage*

~ Arkansas Game and Fish Commission Chief Legal Counsel Jim Goodhart

# Donaldson Black River WMA (cont.)



The area has extensive wetlands

# Management of the Donaldson WMA



- Seasonal flooding
- Selective thinning of trees

Photograph of a flooded forest courtesy of Chris Violette in August 2012  
Water Log

# US Army Corps of Engineers (USACE) Involvement

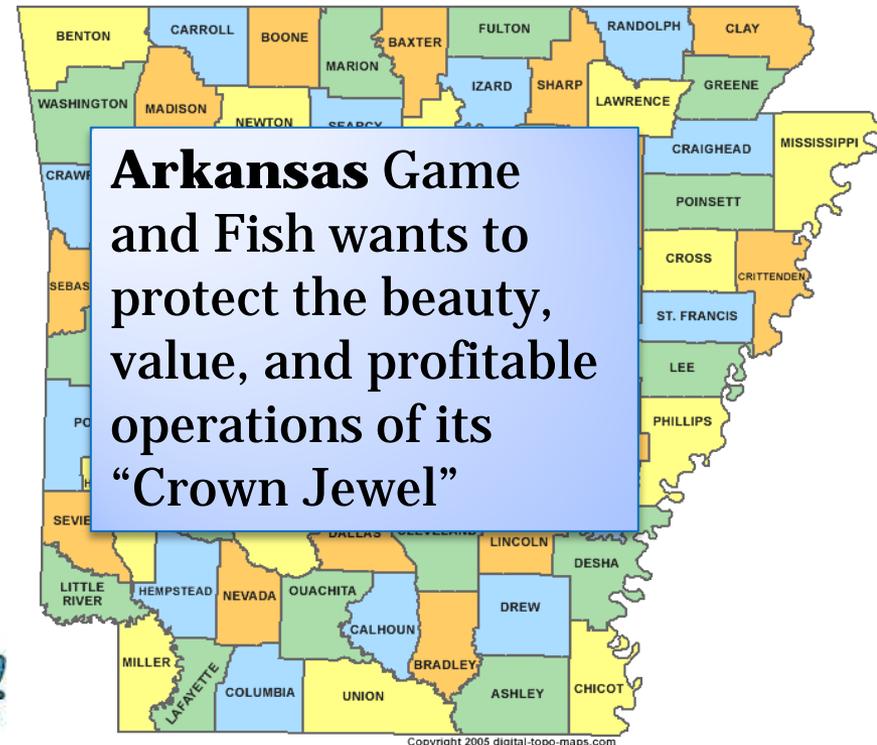
- USACE built and operates the Clearwater Dam in **Missouri** about 120 miles away from Donaldson WMA
- 1993-2000: a series of temporary deviations to **provide Missouri farmers more time to harvest their crops**
- State of **Arkansas Game and Fish disagrees loudly and often**, claiming possible damage to Donaldson WMA

# Clearwater Lake Dam, Piedmont MO



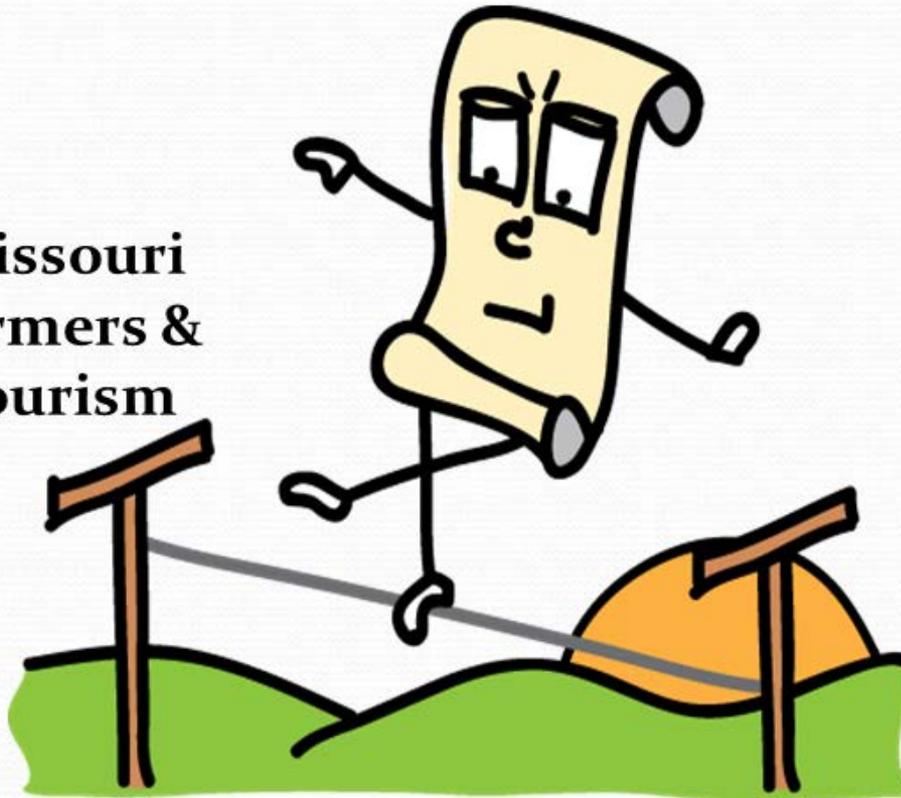
“One of the largest single events that took place in the history of Piedmont... was the official opening of the Clearwater Lake Dam”

# Classic Property Rights Dispute



# USACE Must Balance Rights of Competing Parties

**Missouri  
Farmers &  
Tourism**



**Arkansas State  
Agency and  
Crown Jewel  
Donaldson  
Wildlife  
Management  
Area**

# Negotiations about the Issue

- USACE forms an Advisory Committee to develop formal revisions to the 1953 Operating Plan for releasing water from the Clearwater Lake Dam during the period 1993-2000
- A 1999 USACE National Environmental Policy Act (NEPA) Environmental Study finds there is potential damage due to the 1993 and later water releases
- In 2000, USACE reverts to 1953 plan of releases

# Negotiations about the Issue (cont.)

- Arkansas wants compensation for damages to the Donaldson WMA hardwood forests...
  - Damages caused by longer duration of flooding during critical months of the growing season...
  - Caused by the deviations from the 1953 plan during the period 1993-2000

# What about Governmental Immunity?

**Governmental immunity** describes the various doctrines or statutes that provide federal, state, or local governments immunity from tort-based claims

# Litigation Begins in 2005

- Negotiations for damage to forest and land restoration were not successful
- Since this case involves moving water into someone's property, normally it would be considered some sort of Tort Case involving a trespass or a similar action
- Instead, the State of Arkansas makes this into a lawsuit based on the protections of the US Constitution's Fifth Amendment

WHY?

# Special Sovereign Immunity for the United 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....”**

United States Code

- Courts have found that this phrase applies to flood control but not to other efforts such as navigation (See, *GRACI v. UNITED STATES*, 456 F.2d 20 (5th Cir. 1971))
- Litigation pending to test constitutional limits of this immunity is continuing

# Previous Cases on Federal Immunity for Flood Control

- Multiple people drowned in separate accidents at reservoirs in Arkansas and Louisiana when flood control dams built by the US Army Corps of Engineers (USACE) are operated
- Trial Court in Arkansas finds that **although USACE willfully and maliciously failed to warn of a known danger**, the USACE was immune from damages under the Mississippi Flood Control Act of 1928 (33 U.S.C. §702c)

See, *United States v. James*, 478 U.S. 597 (1986)

# The US Court of Appeals Had Reversed the Trial Court

The Court of Appeals finds that Congress intended 33 U.S.C. §702c to immunize the Government from liability for:

- Damage resulting **directly** from construction of flood control projects, and
- Flooding **caused by factors beyond the Government's control, but had not intended to shield the negligent or wrongful acts of Government employees either in the construction or continued operation of flood control projects**

# US Supreme Court Decision

"As the facts in this case demonstrate, one can well understand why the Court of Appeals sought to find a principled way to hold the Government responsible for its concededly negligent conduct. But our role is to effectuate Congress' intent, and Congress rarely speaks more plainly than it has in the provision we apply here. If that provision is to be changed, it should be by Congress and not by this Court. We therefore follow the plain language of 702c, a section of the 1928 Act that received careful consideration by Congress and that has remained unchanged for nearly 60 years, and **hold that the Federal Government is immune from suit in this type of case.**"

# A Perception of Immunity

## **Third major impediment to safe development**

- Some public officials believe they are immune from suit for the consequences of actions they take that harm others
- Many Floodplain Managers have expressed that such an attitude is making their jobs much more difficult

# *Arkansas Game and Fish v. US Litigation*

- Following an 11-day trial, Arkansas wins \$5.5 million for damages, and \$176,000 for remediation
  - The US Court of Claims finds the flooding was substantial and predictable
- On Appeal, US wins!
  - The US Court of Appeals agrees with the carefully crafted US government argument that **since the flooding was temporary it could not be a taking**

# Arkansas Game and Fish v. US Litigation (cont.)



- State wants:
  - Damages for value of dead and dying timber
  - Funding to restore areas where timber died on Donaldson WMA
  - Especially wants the USACE to change the river flow operations so as to prevent future damage to the timber
- US offered to settle for \$13 Million
  - Will not agree, however, to State request to make a legally binding to return river flow operations to 1953 Plan

## Arkansas Game and Fish v. US Litigation (cont.)

**“We rule today, simply and only, that government induced flooding temporary in duration gains no automatic exemption from Takings Clause inspection.”**

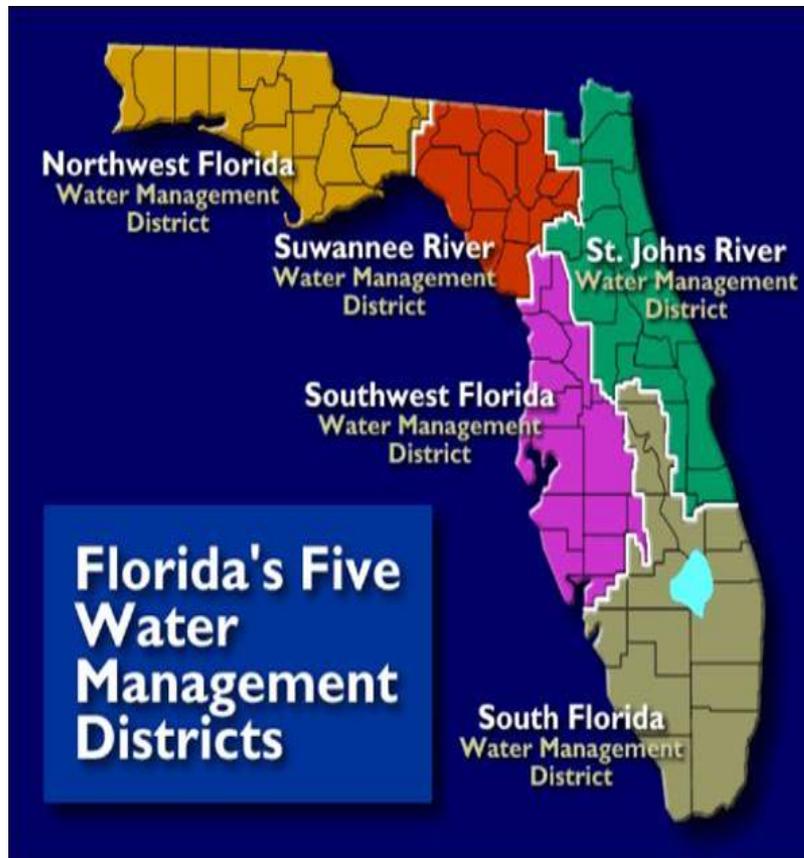
- US Supreme Court rules that just because the flooding was temporary it might still be a “Taking”
- Government argument is based on *dicta* in an old case, which indicates that to be a “Taking” flooding must be permanent [*Sanguinetti v. United States*, 264 U.S. 146 (1924)]

## *Arkansas Game and Fish v. US Litigation (cont.)*

- Arkansas Game and Fish on remand
- Case goes back to US Court of Claims: Arkansas wins
- Case appealed to US Court of Appeals for the Federal Circuit: Arkansas wins again

*Arkansas Game and Fish Commission v. United States, 736 F.3d 1364 (Fed. Cir. 2013)*

# Additional Taking Test



## *Koontz v. St. Johns River Water Mgmt. Dist., No. 11-1447, (U.S. June 25, 2013)*

- “The St. Johns River Water Management District [has] authority to tax, issue water permits and regulate wetlands....”
- The nine members of the St. Johns board... are appointed by the governor... a system sometimes criticized as giving too much power to non-elected officials.”

# Takings Doctrine in Short Summary

## Five Major Tests for a Taking

- I. Physical Intrusion
- II. Total or Near Total Regulatory Taking
- III. Penn Central Taking
- IV. A land use exaction, which has little or no relationship to the "property"
- V. Degree to which the invasion is intended or is a foreseeable result

## Focus on Fourth Test: *Koontz*

- An exaction which has little or no relationship (nexus) to the articulated government interest is unconstitutional
- Usually called the ***Nollan and Dolan Test***:  
Must be nexus and “rough proportionality” between the exaction and the development’s impact

# Koontz Facts



- Koontz father applies for a permit to build on approximately 4 of about 15 acres of largely wetland property
- Water Management District, under Florida wetland protection rules, seeks to condition permit

Photo: Typical wetland in area; by St Johns Water Management District

# Large Number of Mitigation Projects in Area Due to Increased Flooding



Seawall Construction in  
St. Augustine



Floodwall in Jacksonville

Photos by E.A. Thomas

Note: This information is background; not in the case record

# National Hazard Mitigation Collaborative Alliance Toured the Area in 2012



## Observations:

- Serious and worsening flood problems in the area
- Need for better Low Impact Development (LID)-based development standards and stormwater system maintenance

Photos by E.A. Thomas

Note: This information is background; not in the case record

# Koontz Case

## Discussions with Koontz

- Contractor is willing, in return for the permit, to offer the rest of his land for a conservation easement
- District offers two possible suggestions:
  - a) Limit development to 1 acre; or
  - b) Hire contractors to mitigation district-owned wetlands several miles away (i.e., pay money to enhance those public wetlands)

## **Koontz response: No way! See you in court**

- Koontz wins money damages at trial, loses on appeal to Florida Supreme Court

# US Supreme Court

## Koontz Wins!

# The Good News

- The Supreme Court seems to agree with safe-development-based planning
- Justice Alito wrote in the majority opinion:

"Insisting that landowners internalize the negative externalities of their conduct is a hallmark of responsible land-use policy, and we have long sustained such regulations against constitutional attack. See *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926)."

# The Aftermath: Viewpoints



**Victory!**



**Devastating!**

# The Aftermath: Viewpoints (cont.)

- Some believe the *Koontz* case strongly encourages resilient development

## Turning *Koontz* Into an Opportunity for More Resilient Communities

By EDWARD THOMAS AND LYNSEY R. JOHNSON

Before the U.S. Supreme Court decided *Koontz v. St. Johns River Water Management District*<sup>1</sup>, much uncertainty surrounded the decision. Even after the Court released its decision in June 2013, some uncertainty remains. However, it is absolutely clear that the Supreme Court handed down a decision strongly supporting local and state efforts to ensure that the development activities of one person do not harm the community or neighboring properties. The decision will certainly impact future development decisionmaking. It compels local and state governments to more closely examine potential harm that may be caused by a development, then carefully craft conditions for that development to mitigate harm in a more open and transparent manner. We view the Court's decision as an opportunity for the "Whole Community"—insurance professionals, emergency management staff, elected officials, climate

*California Coastal Commission*<sup>6</sup> and *Dolan v. City of Tigard*,<sup>7</sup> both address the issues of exactions. In *Nollan*, the Court found that where an exaction creates a public easement across private property, it is a compensable taking *unless* it has a "close nexus" between the purpose of requiring a permit and the requested exaction.<sup>8</sup> Further, the Court in *Dolan* required there to be a "rough proportionality" between the burden on the private-property owner and the benefit to the public.<sup>9</sup>

In *Nollan*, the property owners wanted to build a larger structure on their beachfront property. In order to do so, the Nollans needed to get a development permit from the California Coastal Commission. However, the Commission would only grant the permit if the Nollans allowed a public easement to pass across a portion of their beach property between the high-tide line and seawall. The Commission reasoned that the easement would block the ocean view and structures, which would



[click to view article at  
American Bar Association  
website]

# What Happened Next?

- This case went back to the Florida courts for further proceedings relative to, among other items:
  - Causation
  - Foreseeability
  - Amount of damages, if any
- Koontz wins again

# What Next?

- Case is almost sure to encourage litigation
- How to avoid such litigation?

# Court Tests for Future Takings Litigation

**Harm Prevention Regulation is at core of why we have such an institution as “Government”**

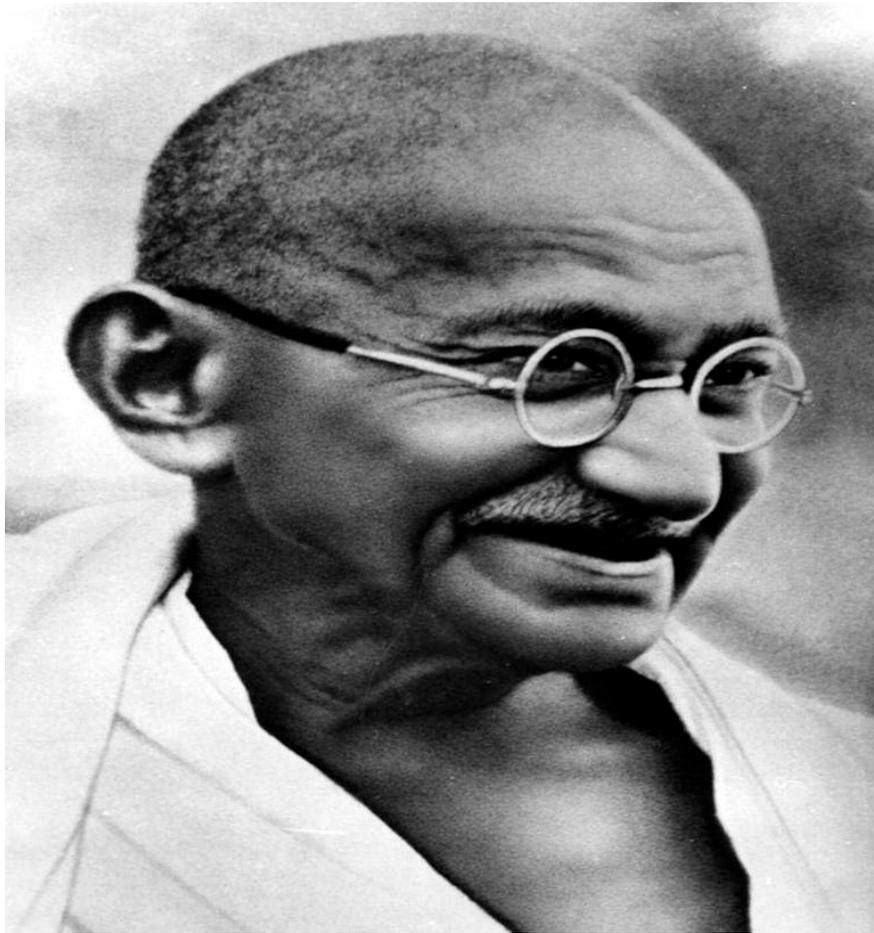
# Discussion Question



***Who is Mohandas K. Gandhi?***

- a) One of the great moralists of the 20<sup>th</sup> century***
- b) A British trained attorney-at-law***
- c) A tremendous influence on the philosophy which guided Dr. Martin Luther King***
- d) All of the above***

# Two Great Moralists of the 20<sup>th</sup> Century



# Gandhi's Writings

***“Sic Utere Tuo Ut Alienum Non Laedas”***

- Use your property so you do not harm others is  
*“A grand doctrine of life and the basis of  
(harmonious relationships) between neighbors”*

# Who Else Likes *Sic Utere*...?

- Oklahoma Supreme Court
- *Chicago, R. I. & P. R. Co. v. Groves*, 1908 OK 5 (Okla. 1908)

"The general rule of law is, that every man has a right to have the advantage of the flow of water, in its natural channel, in his own land. But in using it the owner must so apply the water as to work no material injury or annoyance, to his neighbour (*sic*) either above or below him. The maxim *sic utere tuo ut alienum non laedas*, applies with peculiar propriety to this class of cases."

# Avoiding a Taking

- Avoid interfering with the owner's right to **exclude others**
- Avoid denial of all **economic use**
- In highly regulated areas, consider **transferable development rights** or similar residual right so the land has appropriate value
- **Clearly relate regulation to preventing a hazard**  
*See, Different result in Koontz-what harm was being prevented?*
- Establish a fair **variance procedure**



A closer look

# Speaking of Variances...

- Pennsylvania Statute: 53 P.S. § 10910.2
- 10910.2. Zoning hearing board's functions; **variances**

“...requests for variances where it is alleged that the provisions of the zoning ordinance **inflict unnecessary hardship** upon the applicant. 53 P.S. § 10910.2

that there are **unique physical circumstances** or conditions,

That the variance, if authorized, will not alter the essential character of the neighborhood or district in which the property is located, nor substantially or permanently impair the appropriate use or development of adjacent property, **nor be detrimental to the public welfare. 53 P.S. § 10910.2”**

# Variations

Virtually ALL State Zoning Enabling Statutes are specific that no variance can ever be granted when such variance would:

- Have a negative impact on public health or welfare; or
- Result in increased costs to public

## Examples:

- Handicapped person wants to build below BFE or ease of access- Hardship-Yes? OK?
- Building must be built 20 feet above ground; height restriction in area is 20 feet? Hardship?

# Group Activity



***Do reasonable, fairly applied hazard based regulations decrease the VALUE of a property?***

- Not the price, the **value**

Hint: the problem of the purloined purse

# Group Activity: The Purloined Purse Defense

Fifth Amendment to the Constitution of the United States:

***“... nor shall private property be taken for public use without just compensation.”***

# Group Activity: The Result

***“The taking clause was never intended to compensate property owners for property rights they never had.”***

*– Massachusetts Supreme Judicial Court*

*Gove v. Zoning Board of Appeals*

444 Mass.754 (2005) Massachusetts Supreme Judicial Court, decided July 26, 2005

# How About Another Defense?

- I have a permit to snatch wallets and purses?
- Right here – look
- Legislature passed a law to help raise funds for local government

# Purloined Purse in a Flood Context

- Defendants built flood control works knowing that they could cause upland flooding
- Such works were a substantial concurring cause of the injury

*Akins v. California*, 48 Cal. App. 4th 832 (Cal. App. 3d Dist. 1996)

# A Conservative, Property Rights View

The Cato Institute indicates that **compensation is not due** when:

***“... regulation prohibits wrongful uses, no compensation is required.”***

# A Solution

Go beyond existing and NFIP and State Minimum Standards for **No Adverse Impact – Community Rating System (CRS) Type**

- Development decision-making
- Planning
- Emergency Preparedness

# Implementing Safe Development or NAI in the Real World

- Comprehensive watershed future conditions water resources mapping looking at water supply-water quality-stormwater management and flooding
- Interim Measure
  - Require a demonstration that **ALL** development does not change the hydrograph for the 1-10-50-100-500 year BOTH flood and storm
- If time permitted, we would have engineers discuss exactly how to do these steps
  - Low Impact Development (LID)

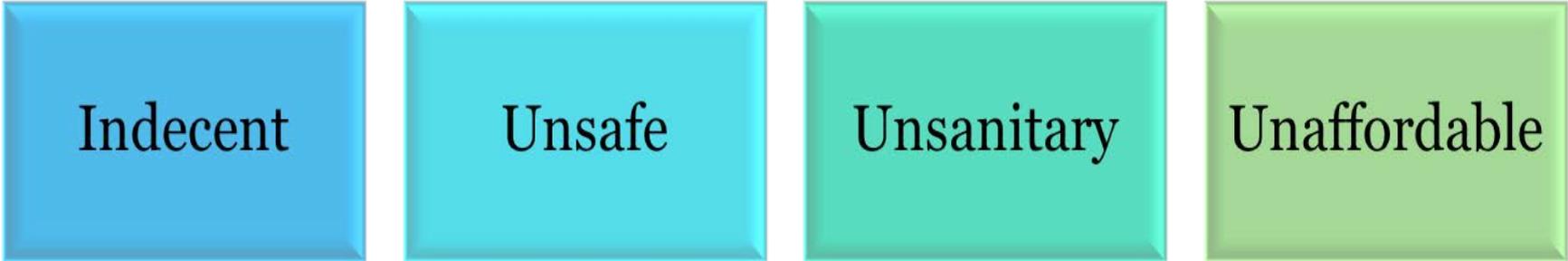
# Message for All Involved in Emergency Management and Community Development

The fundamental rules of developing livable communities, as articulated by Federal Law, envision housing and development which is:



# Development Destroyed or Damaged by Foreseeable Natural Processes Fails that Vision!

Housing and development which are so poorly planned, engineered, or designed that they are destroyed by such natural processes are:



Indecent

Unsafe

Unsanitary

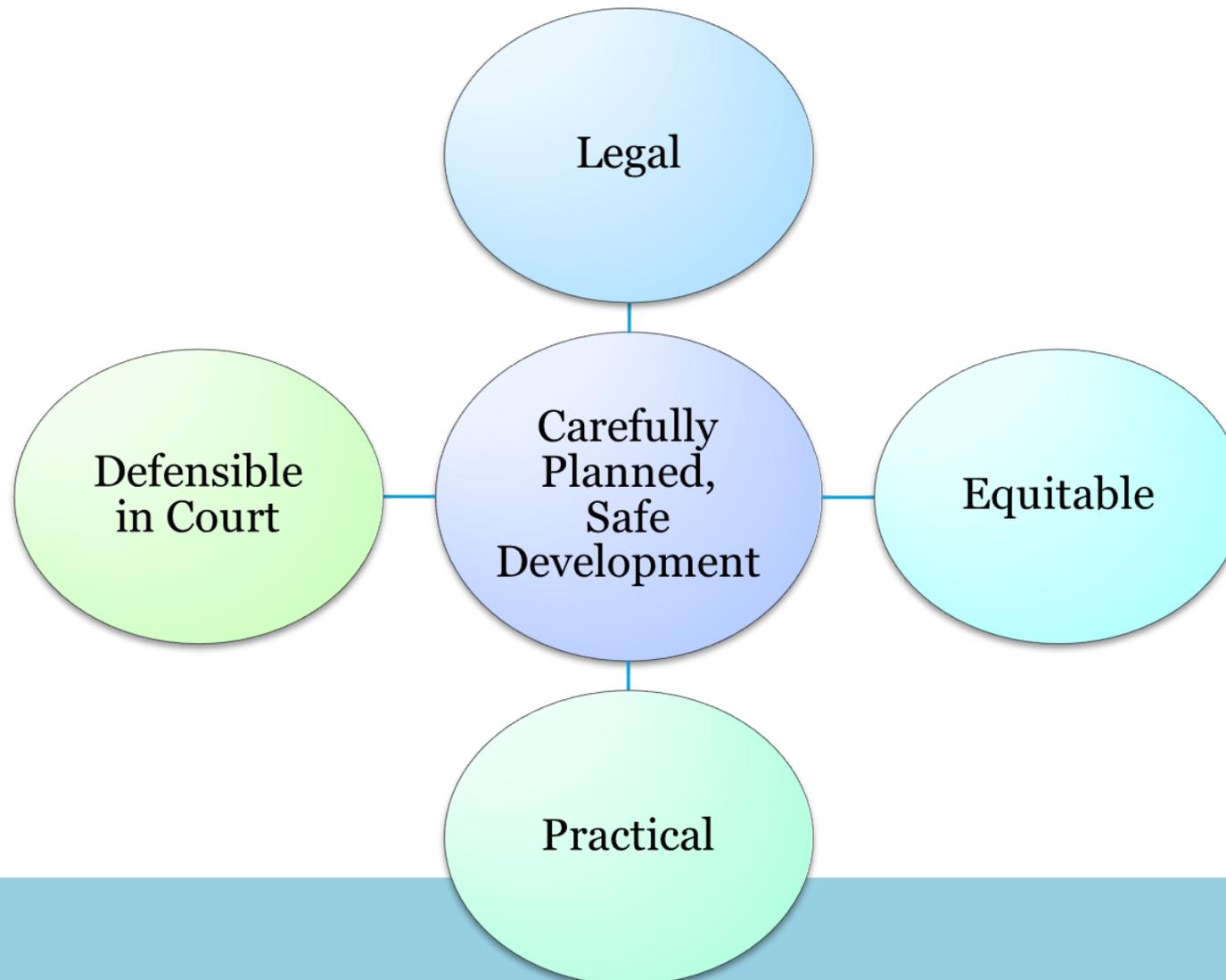
Unaffordable

# Summary

Fundamentally our society must and will choose either:

- Better standards to protect resources and people, or
- Standards which inevitably will result in destruction and litigation

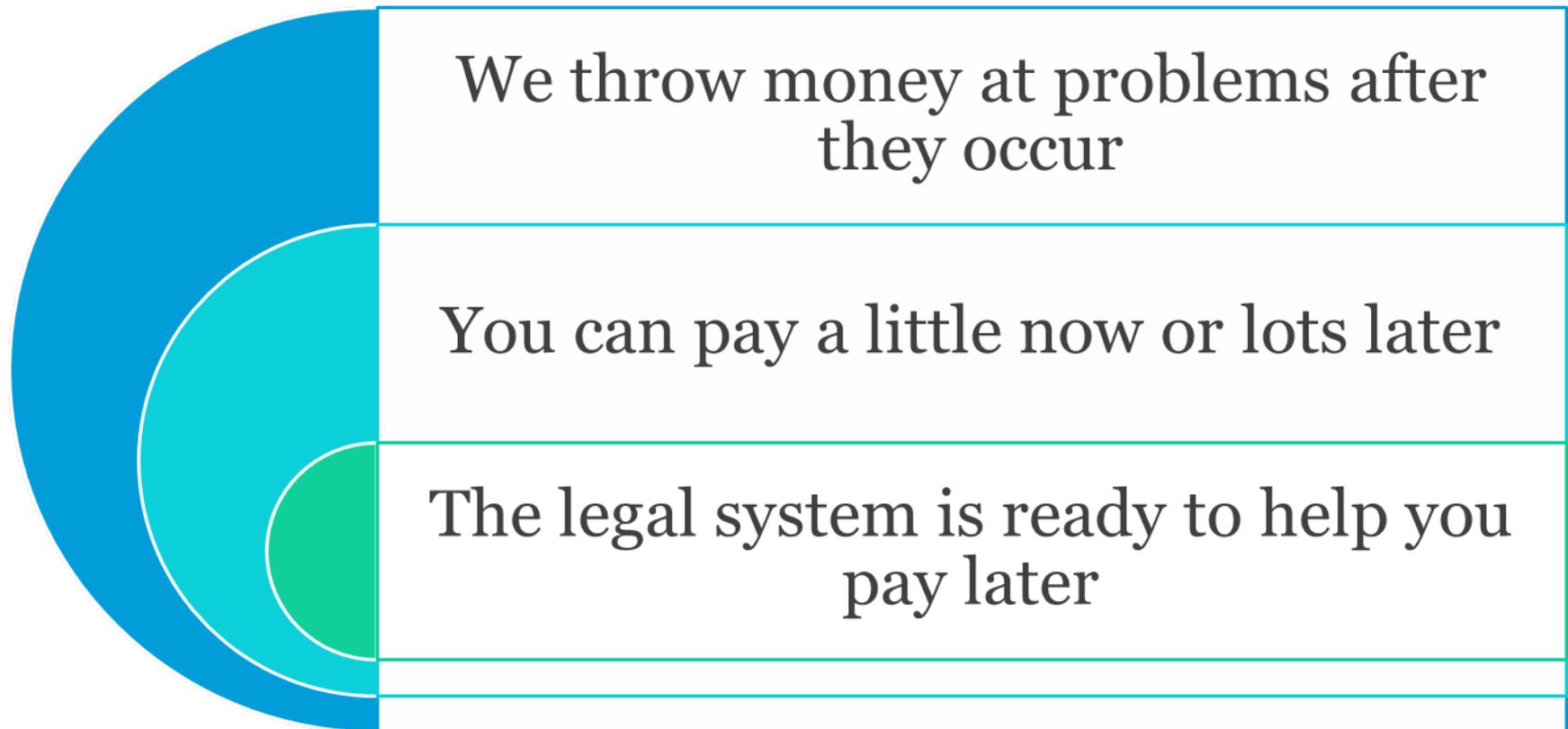
# Safe Development



# 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

# Take Away Messages on Prevention



# Review of Learning Objectives

1. State the ancient legal and equitable roots and concepts of safe or “do no harm” development decisions, including higher standards designed to protect the property and rights of everyone
2. Explain how floodplain management, and other forms of regulation designed to prevent harm, generally avoid the “takings” issue
3. Explain the evolving professional “Standard of Care”
4. Identify important legal concepts discussed in this module, such as Variances

# Thank You!



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- **Questions and/or comments**
- **Contact information**

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