

Floodplain Management and No Adverse Impact: Law and Policy Concerns

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Gulf Coast Community Flood Resilience:
Application of No Adverse Impact for Coastal Communities
Biloxi, MS ▪ September 8, 2016

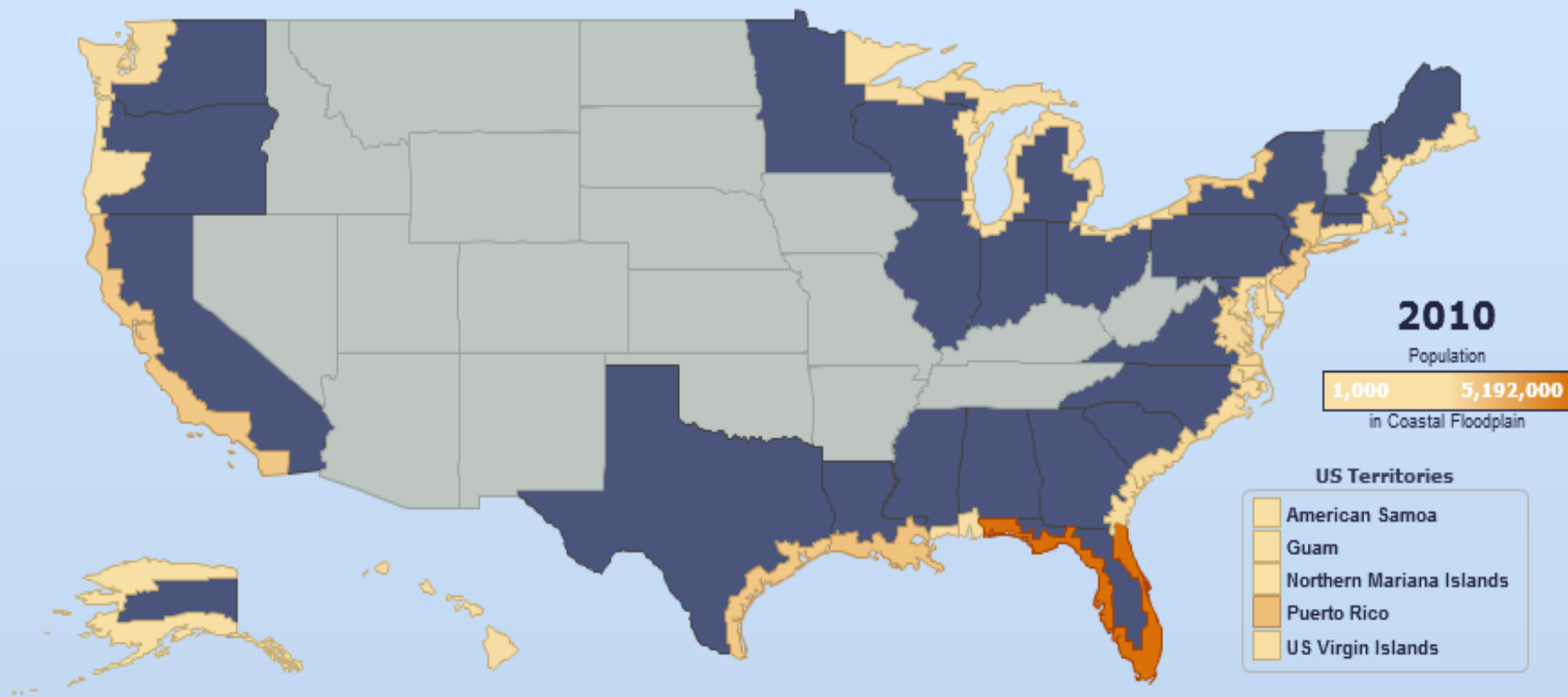
OVERVIEW

- Background:
 - No Adverse Impact (NAI) Principles
- Ownership of the Beach & Tidelands
 - The Public Trust Doctrine
- Legal Authority for Local Action
 - 5th Amendment Takings Claims
- Design Smart: Avoiding Takings Claims
- Recent Trends: A Look at Recent Legal Challenges to Stormwater Management and Coastal Development
- A Living Shorelines Example
- Recommended Practices: Conducting an Audit

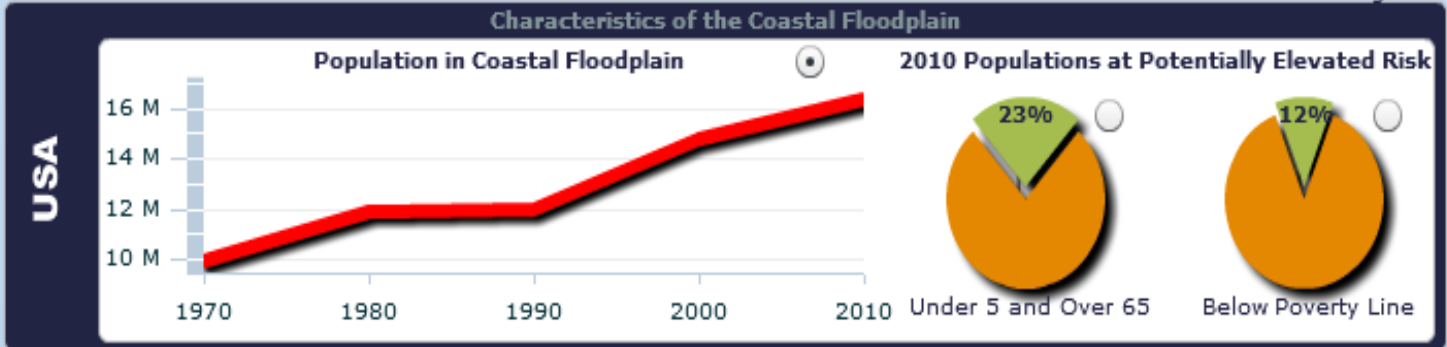
POLICIES CONTRIBUTE TO RISK

- Federal Policies
 - NFIP & the 100-Year Standard
 - Emphasis on structural approaches
 - Disaster relief environment
- State & Communities
 - Emphasis on managing land use for short-term benefits
 - Flooding often seen as a federal problem
- Public Perceptions
 - Unaware of – or unwilling to accept – residual risk
 - Misplaced concerns about having to obtain flood insurance

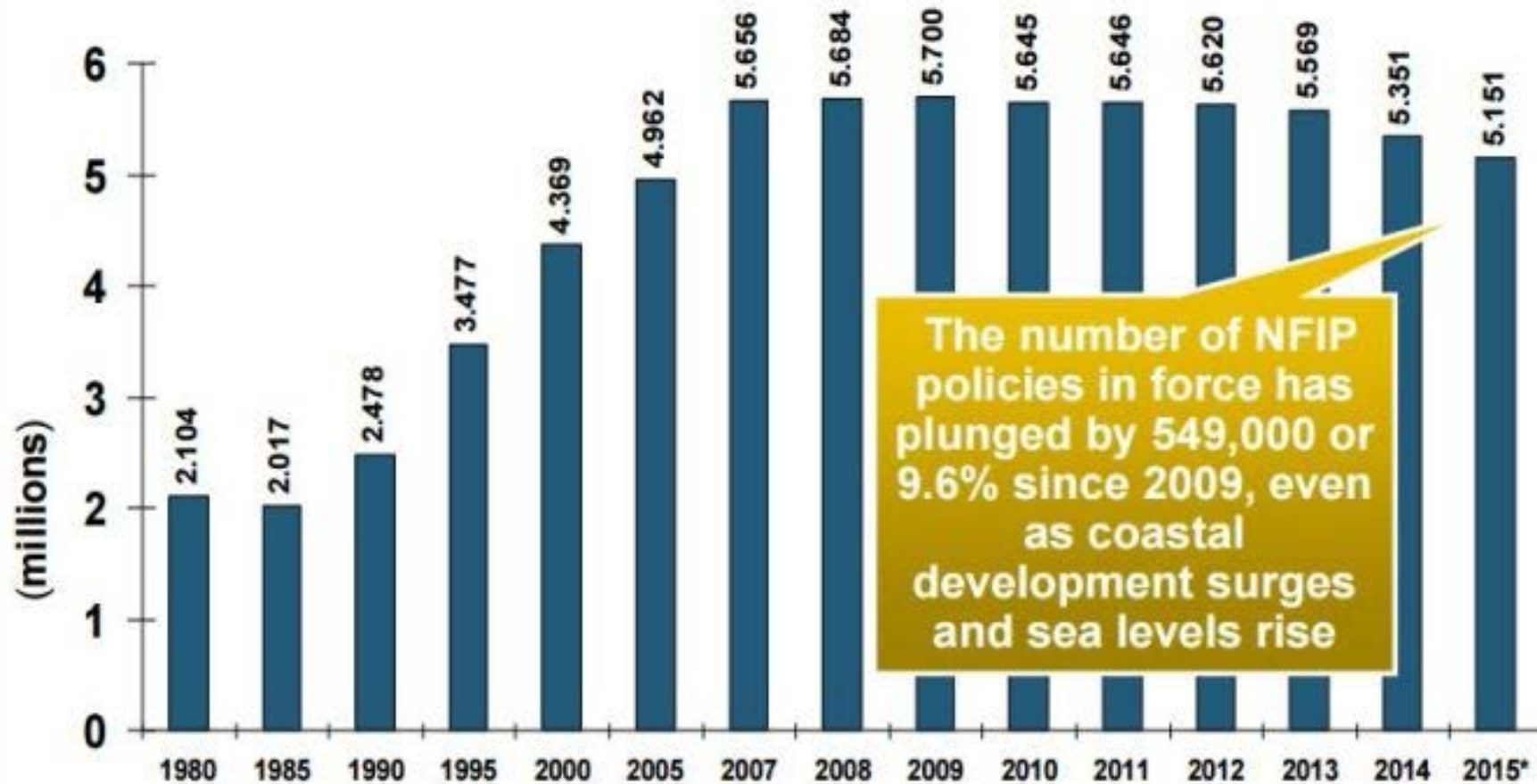
Population in the Coastal Floodplain: 1970-2010



Note about Percentages



Number of National Flood Insurance Program Policies in Force at Year-End, 1980-2015*



Source: National Flood Insurance Program.

* As of July, 2015

CURRENT POLICIES INCREASE RISK:

- Promote intensification in risk areas
 - Ex: development in floodplain
- Do not take into consideration changing conditions
- Ignores adverse impacts to existing properties
- Undervalues natural floodplain functions

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

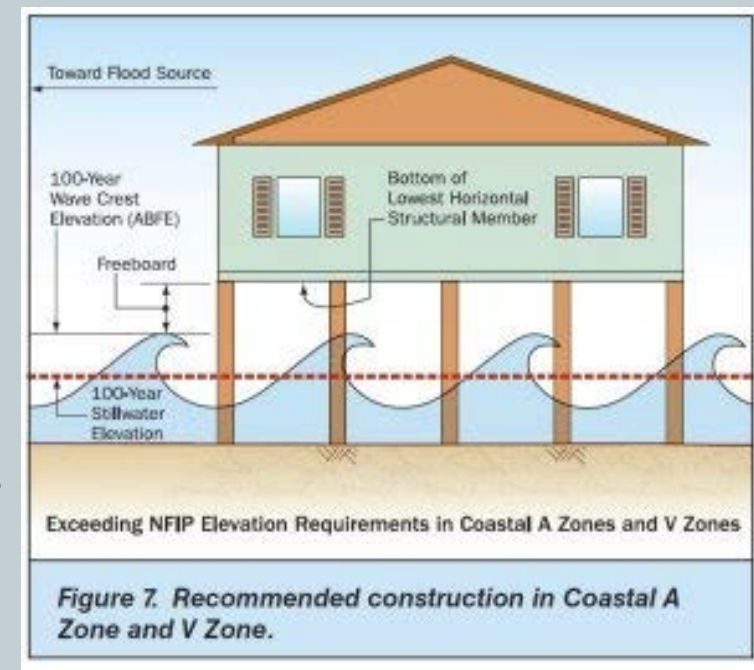
... and, are you willing to pay for it?



Flooding, Baton Rouge Area, August 2016

NAI MITIGATION PRINCIPLES

- Mitigate While Not Transferring A Problem Elsewhere
- On-site Mitigation Retrofits
 - Elevation
 - Floodproofing
- Nonstructural Mitigation
 - Acquisition, Relocation & Restoration
 - Upstream Detention/Retention
- Structural Measures – Often With Adverse Impacts
 - Levees
 - Channels
 - Dams



FLOODPLAIN MANAGEMENT: ROLES

FEDERAL ROLE

- Federal
 - National Flood Insurance Act
 - FEMA, Corps, EPA & other federal agencies
 - National Flood Insurance Program

STATE ROLE

- State
 - State Floodplain Managers
 - State Land Use Programs & Policies
 - State Emergency Management
 - Cooperating Technical Partners

FLOODPLAIN MANAGEMENT ROLES

LOCAL ROLE

- Development Standards & Review
 - Permitting & Code Enforcement
- Local Emergency Management Programs
 - Community Rating System



PERSONAL ROLE

- Risks & Decisions
- Information & Preparation
- Responsibilities & Expectations



PUBLIC TRUST DOCTRINE

Origins in Roman Law:

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 ... The seashore extends as far as the greatest winter flood runs up.

- *Justian Code 535 CE (AD)*



LEGAL ORIGINS

- U.S. Constitution
 - States retain ownership of the lands beneath navigable waters
 - Federal government retains supreme, but not exclusive, control over navigation



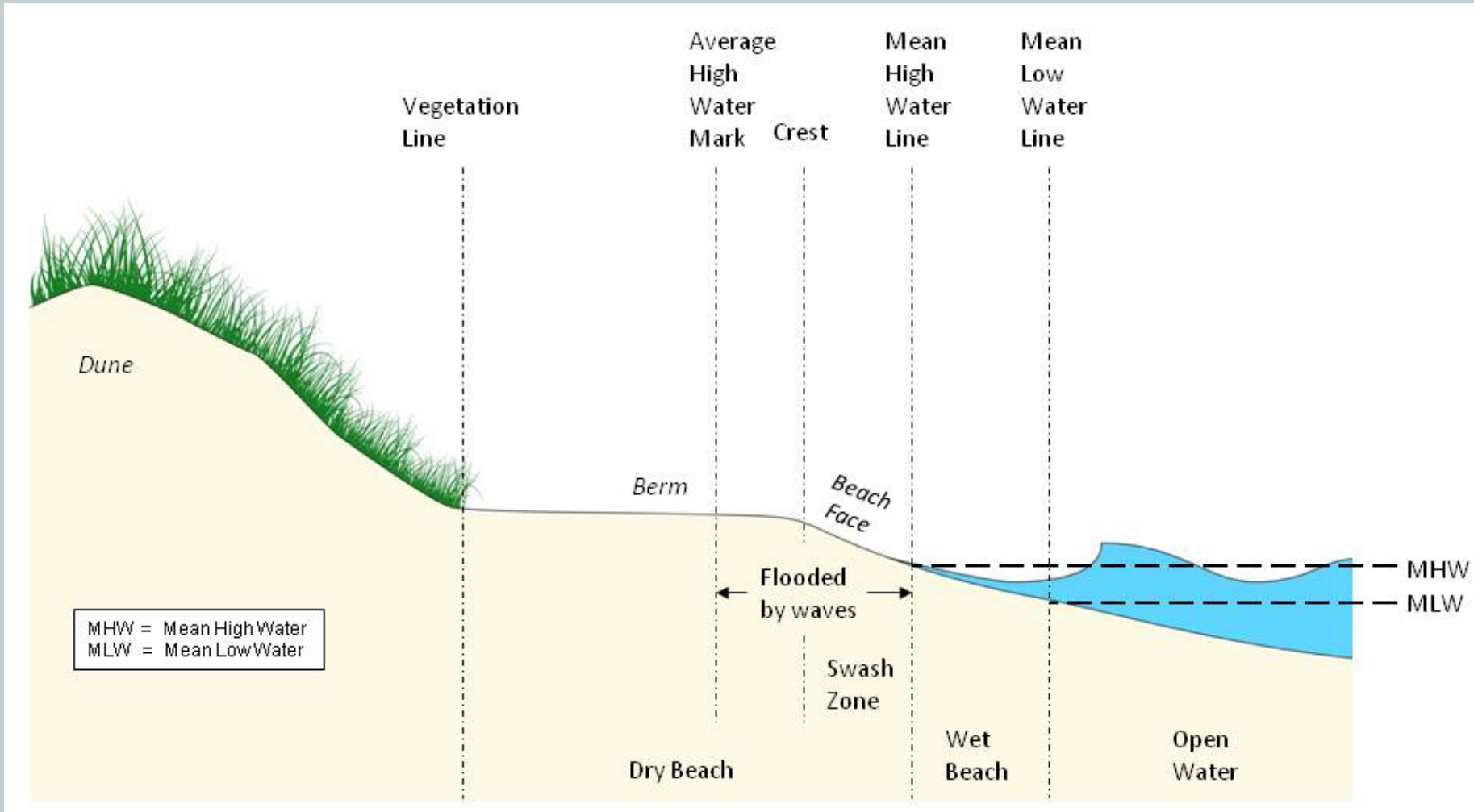
PUBLIC TRUST DOCTRINE

- State ownership of submerged lands held in trust for the public.
 - Of particular significance when planning for sea level rise
 - Also applies to riparian areas
- Can impact waterfront property boundaries
- Mississippi Public Trust Tidelands Act
 - Fixed waterfront boundaries along hardened shorelines; marsh properties continue to shift.

WATERS & LANDS IN PUBLIC TRUST





- Tidewaters to their farthest reaches
- Tidelands
 - In Mississippi, be aware of the Mississippi Public Trust Tidelands Act.
- Navigable-in-fact waters
- Permanently submerged lands
 - Unless previously conveyed to private hands by a Kings Grant (Spanish Land Grant – another common term in our area).
- Adjacent wetlands (varies widely among States)

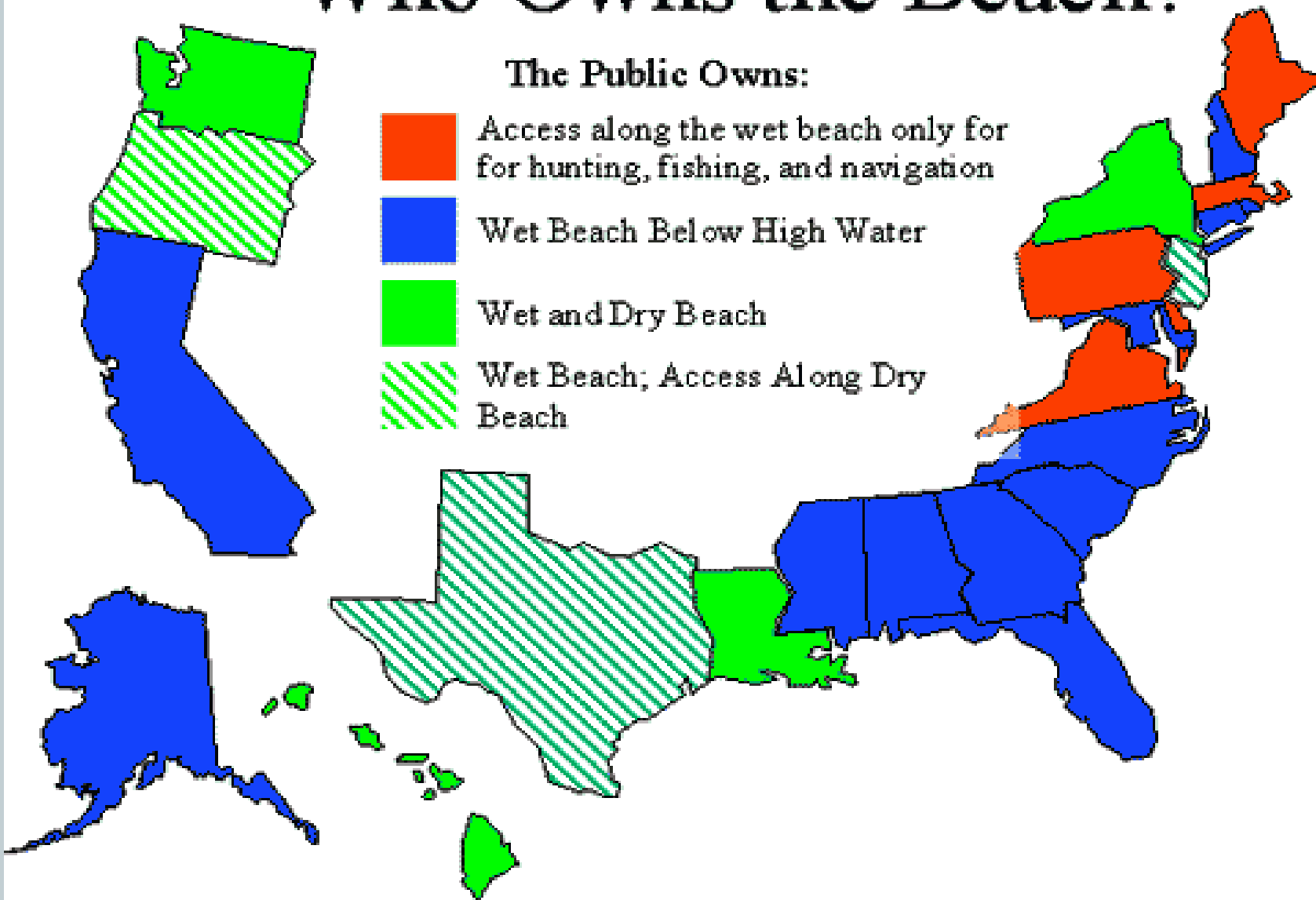
LEGAL ZONES OF A BEACH



Who Owns the Beach?

The Public Owns:

-  Access along the wet beach only for for hunting, fishing, and navigation
-  Wet Beach Below High Water
-  Wet and Dry Beach
-  Wet Beach; Access Along Dry Beach





LEGAL AUTHORITY FOR LOCAL FLOODPLAIN MANAGEMENT

Basic Principles Underlying Local Land Use Law

FEDERAL AUTHORITY

- **Tenth Amendment of U.S. Constitution:**
- The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are **reserved to the States** respectively, or to the people.
 - This is origin of state police power.
- Gives states authority to adopt laws for the betterment of the **public health, safety, morals and general welfare.**
 - States have delegated authority to local governments through zoning enabling statutes.

STATE DELEGATION TO LOCAL

- **Mississippi Municipal Home Rule Statute:**
 - Gives municipal governments the authority to control their own affairs, properties, and finances.
 - Authority to adopt local laws and ordinances to manage these areas.
 - Limitation: cannot be inconsistent with Mississippi Constitution or state statutory laws.
- **Mississippi Planning Authority:**
 - Local planning commissions are authorized, but not required, to develop comprehensive plans. No plan can be adopted until a public hearing is held.
 - Zoning Authority: governing authority of each municipality and county may, ..., **regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures or land.**
 - Miss. Code § 17-1-1 through § 17-1-39

A FEW OTHER LAWS AT PLAY

- **U.S. Constitution:**
 - Due Process – 14th Amendment
 - ***Takings – 5th Amendment***
 - Freedom Speech – 1st Amendment
- **Federal and State Case Law**
- **Other Federal Laws**
 - Religious Land Use and Institutionalized Persons Act
 - Americans with Disabilities Act
 - Federal Fair Housing Amendments of 1988
 - Telecommunications Act of 1996
 - Civil Rights Act of 1968, Section 1983

5TH AMENDMENT TO THE US CONSTITUTION

No person shall be ... deprived of life, liberty or property, without due process of law;

Nor shall private property be taken for public use without just compensation.



WHAT CONSTITUTES A TAKING?

- Physical occupation of private land
- Regulation that “goes too far”
- Permit condition that lacks a rational connection or “essential nexus” with a valid public purpose
- No “rough proportionality” between permit condition and impact of development
- Total deprivation of economic use
- Interference with “reasonable investment-backed expectations”
- Compensable taking may occur even when restriction is temporary
 - Called a “temporal taking” and value based on calculation of temporary loss

LANDOWNER RIGHTS DO HAVE LIMITS

- No right to be a nuisance
- No right to violate the property rights of others
 - Ex: Can't flood your neighbors property
- No right to be negligent
 - Can't manage your property in a way that could reasonably be expected to cause harm to others
- No right to violate laws of reasonable surface water use or riparian laws
 - Ex: Can't put a dam across a river that flows through your property
- No right to violate the public trust doctrine



DESIGN SMART: ADDRESSING POTENTIAL TAKINGS CLAIMS

A Look at Ways to Minimize the Risk of Takings Claims

LEGAL STANDARD

Land Use Laws Must Do Two Things:

- 1) Accomplish a legitimate public objective, and
(Public Health, Safety, Morals, and General Welfare)

- 2) Allow the landowner some economically viable use of the land.
(Does not have to be the landowners preferred use)

LEGITIMATE PUBLIC OBJECTIVE

- Broad authority – can encompass many things
- Identify the public objective you are pursuing through the ordinance
- Identify studies/research that supports the terms of your ordinance
 - For example, flood maps may justify building higher or not building in certain areas because that accomplishes the legitimate public purpose of protecting public health and safety.

LEGITIMATE PUBLIC OBJECTIVE & NO ADVERSE IMPACTS

REMEMBER THIS IS BROAD:

- Design standards that limit adverse impacts in floodways can fall within this category.
 - They protect public safety and general welfare!
- You are probably already doing some of these things.

EXAMPLES INCLUDE:

- Building Codes
- Freeboard
- Preserving natural floodplain functions
- Green Infrastructure and Living Shorelines
- Low Impact Development techniques to manage stormwater

LEGITIMATE PUBLIC OBJECTIVE

- Connect the dots in your ordinance
 - Including a preface or introductory statement that references the purpose you are accomplishing and the studies that back up this objective will further your cause should you find yourself in a legal dispute down the road; connect to the comprehensive plan as well.
- Remember Due Process!
 - You likely already hold public meetings and give the public the opportunity to comment on changes. This protects you from due process challenges down the road.

ECONOMICALLY VIABLE

- Does not mean that property owner gets to do whatever they want with property.
- Does mean that the property still holds some economic value.
- How to address:
 - Have variance provisions that can be used where the ordinance makes a property completely unbuildable.
- And remember that economic viability only applies to activities the property owner could legally undertake

ECONOMICALLY VIABLE

- US Supreme Court:
- A regulation that destroys “all economically beneficial or productive use” of the lots is a taking **unless** the state could show that **background principles of nuisance and property law** already prohibit the same uses.
- Back to the **public trust doctrine** (as a background principle of property law) and its role in shoreline management for sea level rise.

Lucas v. South Carolina Coastal Council



RECENT TRENDS

A Look at Recent Legal Challenges to
Stormwater Management and Coastal Development

WASTEWATER MANAGEMENT

- ***Boroujerdi v. City of Starkville*** (Miss. Feb. 12, 2015)
 - What is a city's liability for maintaining/operating wastewater management systems?
- Mississippi Tort Claims Act (MTCA)
 - Local government immune from liability when performing a discretionary function but not immune when performing ministerial function.
- So... is maintenance of city run stormwater system discretionary or ministerial?

WASTEWATER MANAGEMENT

- 2011 (City of Jackson v. Fortenberry):
 - MS Supreme Court held it stormwater discretionary
- 2013 (Little v. MDOT):
 - MS considers MTCA in road maintenance case.
 - Holds: if the function (road maintenance) is required by law, then it is a ministerial function
- 2015 (Boroujerdi):
 - Court finds that state and federal law require sewage maintenance
 - Therefore maintaining is ministerial
 - Meaning... city not exempt from liability – must perform maintenance (ie City cannot refuse to act if problem is known)

DUNE PROTECTION

- ***Borough of Harvey Cedars v. Karan*, 214 N.J. 384 (2013)**
 - The City began a large-scale public-works project to protect homes and business from storm-surge destruction by creating a barrier-wall of dunes connecting with other dunes to run the entire length of Long Beach Island
 - Exercised eminent domain authority where property owners did not voluntarily consent
 - Property owners sued because 22 foot high dune would block their view.
 - Successful at lower court level, appealed to NJ Supreme Court

DUNE PROTECTION

- ***Borough of Harvey Cedars v. Karan*, 214 N.J. 384 (2013)**
 - NJ Supreme Court held that while the dune may have reduced their property value by blocking the view, the dune may also have raised their property value by adding protection from storm surge.
 - In calculating whether the property owner suffered reduced property values (aka taking), the value ADDED by the dune protection had to be taken into consideration and might offset in property value diminution.

BULKHEADS & THE PUBLIC TRUST

- *Kiawah Development Partners v. South Carolina Dept. of Health and Environmental Control*, 2014 WL 6992119 (S.C. Dec. 10, 2014)
- Developer sought to install a bulkhead along the riverside of a barrier island to protect a new development from eroding banks.
- Town approved development plan – included 50 homes and 2 docks
- State denied permit for 2,783 foot long bulkhead that it found would permanently alter 2.5 acres of pristine tidelands

BULKHEADS & THE PUBLIC TRUST

- *Kiawah Development Partners v. South Carolina Dept. of Health and Environmental Control*
- The basic principle underlying the legal issues in this case is the public trust doctrine “which provides that lands below the high water line are owned by the State and held in trust for the benefit of the public.”
- Under the public trust doctrine, state tidelands can, in limited circumstances, be altered and still serve the public interest.
- But under South Carolina law, the public interest is generally best served when the tidelands are preserved in their natural state.

BULKHEADS & THE PUBLIC TRUST

- *Kiawah Development Partners v. South Carolina Dept. of Health and Environmental Control*
- The court, applying South Carolina law, found that the only one to benefit from the bulkhead was the developer of Kiawah and rejected an argument that the overall community would benefit financially from the development.
- Because the bulkhead would only benefit the developer at the cost of public trust tidelands, the court upheld the state agency's decision not to allow the bulkhead.
 - A smaller (250 foot) bulkhead was allowed that did not disturb a vast area of public trust tidelands.

LOCAL AUTHORITY & THE PUBLIC TRUST

- *Town of Nags Head, North Carolina*
- Local government used the public trust as basis for removal of beachfront homes after storm.
- Several waterfront homes objected to the application of the ordinance to their properties. Filled lawsuit when Town condemned the properties and ordered removal after a storm damaged the properties in 2009 by Hurricane Irene.

LOCAL AUTHORITY & THE PUBLIC TRUST

- The existence of any of the following conditions on any lot, whether improved or not, or other parcel of land within the corporate limits is hereby declared to be dangerous and prejudicial to the public health or safety and to constitute a public nuisance:
 - (i) *Storm or erosion damaged structures and resulting debris.* The existence of any of the following conditions associated with storm-damaged or erosion-damaged structures or their resultant debris shall constitute a public nuisance.
 - Damaged structure in danger of collapsing;
 - Damaged structure or debris from damaged structures where it can reasonably be determined that there is a likelihood of personal or property injury;
 - **Any structure, regardless of condition, or any debris from damaged structure which is located in whole or in part in a public trust area or public land.**

LOCAL AUTHORITY & THE PUBLIC TRUST

- *Town of Nags Head, North Carolina*
- State Supreme Court: questioned whether local governments had authority to implement the public trust; said that power was reserved to the state.
 - Threw the validity of the ordinance into question.
 - Lawsuits continued.
 - Town issued some building permits but work was very slow.
- But at the end of day: Case Settled Out of Court.
 - Homes will be removed.
 - Under the settlement agreement, all parties deny liability and no one admits fault.
 - Locals called it the “ghetto beach” because of the deteriorated state of the homes

THE “GHETTO BEACH”



The homes at Issue in North Carolina that the City wished to remove, locally referred to as the Ghetto Beach



A LIVING SHORELINE EXAMPLE

LIVING SHORELINES

- Living Shorelines are nature-based approaches to shoreline management.
- Apply elements of green infrastructure to shoreline erosion control.
- Can include a spectrum of techniques from all natural to hybrid approaches that include some natural and some hard design elements.
 - Appropriate design dependent on site suitability – wave action, fetch, other site specific conditions
- Work best in low energy areas like bays, bayous, and marshes.

Range of Approaches from Green to Gray

GREEN - SOFTER TECHNIQUES
Small Waves | Small Fetch | Gentle Slope | Sheltered Coast

HOW GREEN OR GRAY SHOULD YOUR SHORELINE SOLUTION BE?

GRAY - HARDER TECHNIQUES
Large Waves | Large Fetch | Steep Slope | Open Coast

LIVING SHORELINE

VEGETATION ONLY	EDGING	SILLS	BEACH NOURISHMENT ONLY	BEACH NOURISHMENT & VEGETATION ON DUNE
 <p>Roots hold soil in place to reduce erosion. Provides a buffer to upland areas and breaks small waves.</p> <p>Suitable For Low wave energy environments.</p> <p>Material Options</p> <ul style="list-style-type: none"> Native plants* <p>Benefits</p> <ul style="list-style-type: none"> Dissipates wave energy Slows inland water transfer Increases natural storm water infiltration Provides habitat and ecosystem services Minimal impact to natural community and ecosystem processes Maintains aquatic/terrestrial interface and connectivity Flood water storage <p>Disadvantages</p> <ul style="list-style-type: none"> No storm surge reduction ability No high water protection Appropriate in limited situations Uncertainty of successful vegetation growth and competition with invasive 	 <p>Structure to hold the toe of existing or vegetated slope in place. Protects against shoreline erosion.</p> <p>Suitable For Most areas except high wave energy environments.</p> <p>Vegetation* Base with Material Options</p> <p>(low wave only, temporary)</p> <ul style="list-style-type: none"> "Snow" fencing Erosion control blankets Geotextile tubes Living reef (oyster/mussel) Rock gabion baskets <p>Benefits</p> <ul style="list-style-type: none"> Dissipates wave energy Slows inland water transfer Provides habitat and ecosystem services Increases natural storm water infiltration Toe protection helps prevent wetland edge loss <p>Disadvantages</p> <ul style="list-style-type: none"> No high water protection Uncertainty of successful vegetation growth and competition with invasive 	 <p>Parallel to existing or vegetated shoreline, reduces wave energy and prevents erosion. A gapped approach would allow habitat connectivity, greater tidal exchange, and better waterfront access.</p> <p>Suitable For Most areas except high wave energy environments.</p> <p>Vegetation* Base with Material Options</p> <ul style="list-style-type: none"> Stone Sand breakwaters Living reef (oyster/mussel) Rock gabion baskets <p>Benefits</p> <ul style="list-style-type: none"> Provides habitat and ecosystem services Dissipates wave energy Slows inland water transfer Provides habitat and ecosystem services Increases natural storm water infiltration Toe protection helps prevent wetland edge loss <p>Disadvantages</p> <ul style="list-style-type: none"> Require more land area No high water protection Uncertainty of successful vegetation growth and competition with invasive 	 <p>Large volume of sand added from outside source to an eroding beach. Widens the beach and moves the shoreline seaward.</p> <p>Suitable For Low-lying oceanfront areas with existing sources of sand and sediment.</p> <p>Material Options</p> <ul style="list-style-type: none"> Sand <p>Benefits</p> <ul style="list-style-type: none"> Expands usable beach area Lower environmental impact than hard structures Flexible strategy Redesigned with relative ease Vegetation strengthens dunes and increases their resilience to storm events Provides habitat and ecosystem services <p>Disadvantages</p> <ul style="list-style-type: none"> Requires continual sand resources for renourishment No high water protection Appropriate in limited situations Possible impacts to regional sediment transport 	 <p>Helps anchor sand and provide a buffer to protect inland area from waves, flooding and erosion.</p> <p>Suitable For Low-lying oceanfront areas with existing sources of sand and sediment.</p> <p>Material Options</p> <ul style="list-style-type: none"> Sand with vegetation Can also strengthen dunes with: <ul style="list-style-type: none"> Geotextile tubes Rocky core <p>Benefits</p> <ul style="list-style-type: none"> Expands usable beach area Lower environmental impact Flexible strategy Redesigned with relative ease Vegetation strengthens dunes and increases their resilience to storm events Provides habitat and ecosystem services <p>Disadvantages</p> <ul style="list-style-type: none"> Requires continual sand resources for renourishment No high water protection Appropriate in limited situations Possible impacts to regional sediment transport
Initial Construction: ● Operations & Maintenance: ●	Initial Construction: ●● Operations & Maintenance: ●	Initial Construction: ●● Operations & Maintenance: ●	Initial Construction: ●●● Operations & Maintenance: ●●	Initial Construction: ●●● Operations & Maintenance: ●●

* Native plants and materials must be appropriate for current salinity and site conditions.

Initial Construction: ● = up to \$1000 per linear foot, ●● = \$1001 - \$2000 per linear foot, ●●● = \$2001 - \$5000 per linear foot, ●●●● = \$5001 - \$10,000 per linear foot
Operations and Maintenance (yearly for a 50 year project life): ● = up to \$100 per linear foot, ●● = \$101 - \$500 per linear foot, ●●● = over \$500 per linear foot

COASTAL STRUCTURE

BREAKWATER	GROIN	REVETMENT	BULKHEAD	SEAWALL
 <p>Offshore structures intended to break waves, reducing the force of wave action and encourages sediment accretion. Can be floating or fixed to the ocean floor, attached to shore or not, and continuous or segmented. A gapped approach would allow habitat connectivity, greater tidal exchange, and better waterfront access.</p> <p>Suitable For Most areas except high wave energy environments often in conjunction with marinas.</p> <p>Material Options</p> <ul style="list-style-type: none"> Grout-filled fabric bags Armorstone Pre-cast concrete blocks Living reef (oyster/mussel) if low wave environment Wood Rock* <p>Benefits</p> <ul style="list-style-type: none"> Reduces wave force and height Stabilizes wetland Can function like reef Economical in shallow areas Limited storm surge flood level reduction <p>Disadvantages</p> <ul style="list-style-type: none"> Expensive in deep water Can reduce water circulation (minimized if floating breakwater is applied) Can create navigational hazard Require more land area Uncertainty of successful vegetation growth and competition with invasive No high water protection Can reduce water circulation Can create navigation hazard 	 <p>Perpendicular, projecting from shoreline. Intercept water flow and sand moving parallel to the shoreline to prevent beach erosion and break waves. Retain sand placed on beach.</p> <p>Suitable For Coordination with beach nourishment.</p> <p>Material Options</p> <ul style="list-style-type: none"> Concrete/stone rubble* Timber Metal sheet piles <p>Benefits</p> <ul style="list-style-type: none"> Protection from wave forces Methods and materials are adaptable Can be combined with beach nourishment projects to extend their life <p>Disadvantages</p> <ul style="list-style-type: none"> Erosion of adjacent sites Can be detrimental to shoreline ecosystem (e.g. replaces native substrate with rock and reduces natural habitat availability) No high water protection 	 <p>Lays out the slope of a shoreline. Protects slope from erosion and waves.</p> <p>Suitable For Sites with pre-existing hardened shoreline structures.</p> <p>Material Options</p> <ul style="list-style-type: none"> Stone rubble* Concrete blocks Cast concrete slabs Sand/concrete filled bags Rock-filled gabion basket <p>Benefits</p> <ul style="list-style-type: none"> Mitigates wave action Little maintenance Indefinite lifespan Minimizes adjacent site impact <p>Disadvantages</p> <ul style="list-style-type: none"> No major flood protection Require more land area Erosion of adjacent unreinforced slopes Require more land area No high water protection Prevents upland from being a sediment source to the system 	 <p>Parallel to the shoreline, vertical retaining wall. Intended to hold soil in place and allow for a stable shoreline.</p> <p>Suitable For High energy settings and sites with pre-existing hardened shoreline structures. Accommodates working water fronts (eg: docking for ships and ferries).</p> <p>Material Options</p> <ul style="list-style-type: none"> Steel sheet piles Timber Concrete Composite carbon fibers Gabions <p>Benefits</p> <ul style="list-style-type: none"> Moderates wave action Manages tide level fluctuation Long lifespan Simple repair <p>Disadvantages</p> <ul style="list-style-type: none"> No major flood protection Erosion of seaward seabed Erosion of adjacent unreinforced sites Loss of intertidal habitat May be damaged from overtopping oceanfront storm waves Prevents upland from being a sediment source to the system Induces wave reflection 	 <p>Parallel to shoreline, vertical or sloped wall. Soil on one side of wall is the same elevation as water on the other. Absorbs and limits impacts of large waves and directs flow away from land.</p> <p>Suitable For Areas highly vulnerable to storm surge and wave forces.</p> <p>Material Options</p> <ul style="list-style-type: none"> Stone Rock Concrete Steel/vinyl sheets Steel sheet piles <p>Benefits</p> <ul style="list-style-type: none"> Prevents storm surge flooding Resists strong wave forces Shoreline stabilization behind structure Low maintenance costs Less space intensive horizontally than other techniques (e.g. vegetation only) <p>Disadvantages</p> <ul style="list-style-type: none"> Erosion of seaward seabed Disrupt sediment transport leading to beach erosion Higher up-front costs Visually obstructive Loss of intertidal zone Prevents upland from being a sediment source to the system May be damaged from overtopping oceanfront storm waves
Initial Construction: ●●●● Operations & Maintenance: ●●●	Initial Construction: ●●● Operations & Maintenance: ●●	Initial Construction: ●●●● Operations & Maintenance: ●●	Initial Construction: ●●● Operations & Maintenance: ●●	Initial Construction: ●●●● Operations & Maintenance: ●●●

GRAY CAN BE GREENER: e.g., "Living Breakwater" using oysters to colonize rocks or "Greenwall/Bowall" using vegetation, alternative forms and materials

LIVING SHORELINE LOCAL ORDINANCE

- Local governments have a range of options for protecting and managing their shorelines.
- Living shorelines can provide an alternative to hardened shorelines that provide the landowner with erosion control while still maintaining much of the natural functions by providing vegetated shorelines or a hybrid approach.
 - Great for fishing, water quality, etc.
- Living Shoreline Model Ordinance and drafting guide available at <http://masgc.org/publications/living-shorelines>
 - Boyd & Pace, “Coastal Alabama Living Shorelines Policies, Rules, and Model Ordinance Manual” (2013)
 - *Contact me if you are interested or having questions about the model ordinance!*

A FEW EXAMPLES

- Kent County, MD
 - KENT COUNTY, MD., CODE § 6-3.10
- Brevard County, FL
 - BREVARD COUNTY, FLA., CODE § 62-3661
- Honolulu County, HI
 - HONOLULU COUNTY, HAW., CODE § 23-1.8
- Kaua'i County, HI
 - KAUA'I COUNTY, HAW., CODE § 8-27.2



SAMPLE APPROACHES

KENT COUNTY, MARYLAND

- Requires property owners wanting hardened shoreline armor to demonstrate that a living shoreline is inappropriate for that site.
- Establishes criteria for evaluating the appropriateness of erosion control.
- KENT COUNTY, MD., CODE § 6-3.10 (2013)).

KAUA'I COUNTY, HAWAII

- Newly constructed structures cannot (1) adversely affect beach processes, (2) artificially fix the shoreline, (3) interfere with public access or public views along the shoreline, (4) impede natural processes and/or movement of the shoreline and/or sand dunes, or (5) alter the grade of the shoreline set back area.
- KAUA'I COUNTY, HAW., CODE § 8-27.2 (2013)



RECOMMENDED PRACTICES: CONDUCTING AN AUDIT

CONDUCT AN AUDIT

- Review any existing policies in place
- Clearly identify the new zoning objective
 - Look at other communities and various model ordinances – find an ordinance that suits your community (tailor to your needs – cookie cutter approach can cause problems)
- Compare to existing zoning
 - Any possible conflicts that need resolving?
- Potential Roadblocks
 - Any conflict with state or federal law? Mechanism in place for addressing taking concerns?
 - For instance, does it involve Impact Fees? Not allowed under MS law.
- Develop clear recommendations for achieving objectives

SUGGESTED COMPONENTS OF ORDINANCE

1. Statement of purpose:
 - Give reasons for why ordinance is being adopted.
2. Definitions:
 - Define terms relevant to the ordinance.
3. Scope:
 - Establish geographic applicability of ordinance.
4. Requirements:
 - Sets out the specifics of what the ordinance is requiring.

SAMPLE STATEMENT OF PURPOSE

- Kent County, MD
 - The purpose of this section is to encourage the protection of rapidly eroding portions of the shoreline in the County by public and private landowners.
 - When such measures can effectively and practically reduce or prevent shoreline erosion, the use of nonstructural shore protection measures shall be encouraged to conserve and protect plant, fish, and wildlife habitat.
- The purpose is to protect from erosion and conserve habitat.

DEFINE IMPORTANT TERMS

- Living Shorelines example:
- Brevard County, Florida:
 - Defines living shorelines as “erosion management techniques, such as the strategic placement of plants, stone, sand, and other structural and organic materials, that are used primarily in areas with low to moderate wave energy, and are designed to mimic natural coastal processes.”
- Clear definitions make it easier for regulators to enforce and easier to understand by property owners and developers.

Because at the end of day, no one wants to be in this situation.



Photo of August flooding in Baton Rouge, Louisiana

CONTACT INFORMATION

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