

Floodplain Management

Making the Case for a No Adverse Impact (NAI) Approach


THERE'S THE FLOODPLAIN. NOW WHERE DO WE GO FROM HERE?

Disclaimer

This presentation is neither intended to be, nor may it be taken as legal advice. For legal advice, consult with an attorney licensed to practice in your jurisdiction and demonstrating expertise in applicable subject matter.

Statements of fact and opinions expressed are those of the presenters individually and, unless expressly stated to the contrary, are not the opinion or position of the Association of State Floodplain Managers.

What Keeps You Up at Night?

- Are you afraid of being sued for a takings?
- Are you worried about your liability for enforcing standards, or not enforcing standards?
- Do you think you have enough legal standing to take an enforcement action?
- Are your standards good enough? Do citizens complain to local officials about flooding in areas that were properly permitted?

Key Points

- **You may be as likely to be sued for permitting risky development as you are for preventing it.**

- **You are your community's first and last line of defense against tomorrow's flood disaster.**

City, county face lawsuit by Farmers Insurance for April 2013 flooding

Recommend 109 24

Posted: Apr 21, 2014 5:55 PM CDT
Updated: Apr 26, 2014 5:55 PM CDT

By Larry Yellen, FOX 32 News Legal Analyst - bio | email



Common Law Liability

- Under common law, no landowner—public or private—has the right to use his/her land in a way that substantially increases flood or erosion damages on adjacent lands.
- Liability lawsuits are commonly based upon one of four causes of action:
  - Negligence
  - Nuisance
  - Trespass
  - Law of Surface Water

Common Law Liability

- Negligence
  - What is the “standard of care” for reasonable conduct? Evolving from a FPM perspective
  - The standard of conduct is that of a reasonable person in the circumstances
  - This is the primary legal basis for public liability for:
    - Improper design of flood control structures
    - Improperly prepared or issued warnings
    - Inadequate processing of permits

Legal Research Findings

- Most successful suits against communities result from actions such as inadequate construction or maintenance of public infrastructure (dams, levees, roads, and bridges) that increase flood damages on private lands.
- "Act of God" defense is less and less convincing. Even rare floods are predictable. As are residual risks from levees and dams.
- If a community permits development that meets code standards, but results in an adverse impact, there may be liability. Prohibiting reasonable development may be a regulatory "taking." Negotiating development in the absence of standards may be "arbitrary and capricious."

What about the NFIP?

- Under the minimum NFIP standards, properly permitted development allows:
  - Floodwaters to be diverted onto other properties
  - Channel and conveyance areas to be reduced
  - Valley storage to be filled
  - Changes in water velocities
- In general if the permitted development results in an adverse impact, your community may be liable!

What Constitutes a Taking?

- Physical occupation of private land
- Regulation that “goes too far”
- Permit condition 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

Legal Research Findings

- No cases found where a landowner prevailed in a regulatory takings suit against a community's denial of use, where the proposed use would have had substantial offsite impacts or threatened public safety.
- Courts have broadly supported restrictive regulations for high risk flood areas based upon public safety, nuisance prevention, public trust and other concerns.

Beverly Bank v. Illinois Department of Transportation

- Illinois Supreme Court upheld state regulation prohibiting residential structures in 100-year floodway
- State argument focused on protecting health and welfare including
  - Risk to first responders
  - Risk to property owners who would be stranded
  - Increased expenditure of public funds

Avoiding a Taking

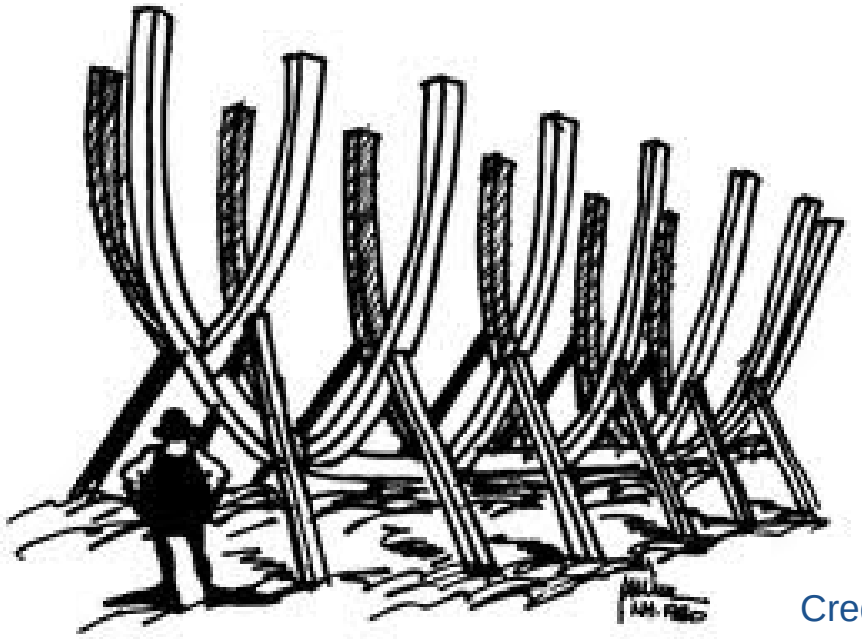
- Clearly Relate Regulation to Preventing Harm. (Gove)
- Avoid interfering with owner's right to exclude. (Loretto)
- Avoid denial of all economic uses. (Lucas)
- Consider Transferable Development Rights or similar residual rights and uses to retain economic value. (Penn Central)
- Demonstrate relationship between permit condition and harm avoided. (Koontz)

Key Points

- **You may be as likely to be sued for permitting risky development as you are for preventing it.**
- **Take a "No Adverse Impact" approach to flooding issues to reduce liability and minimize takings claims.**
- **You are your community's first and last line of defense against tomorrow's flood disaster!**

Resources

www.floods.org > publications and policy papers > legal papers



Credit given to the Natural Hazards Observer and Rob Pudim for all illustrations in this presentation



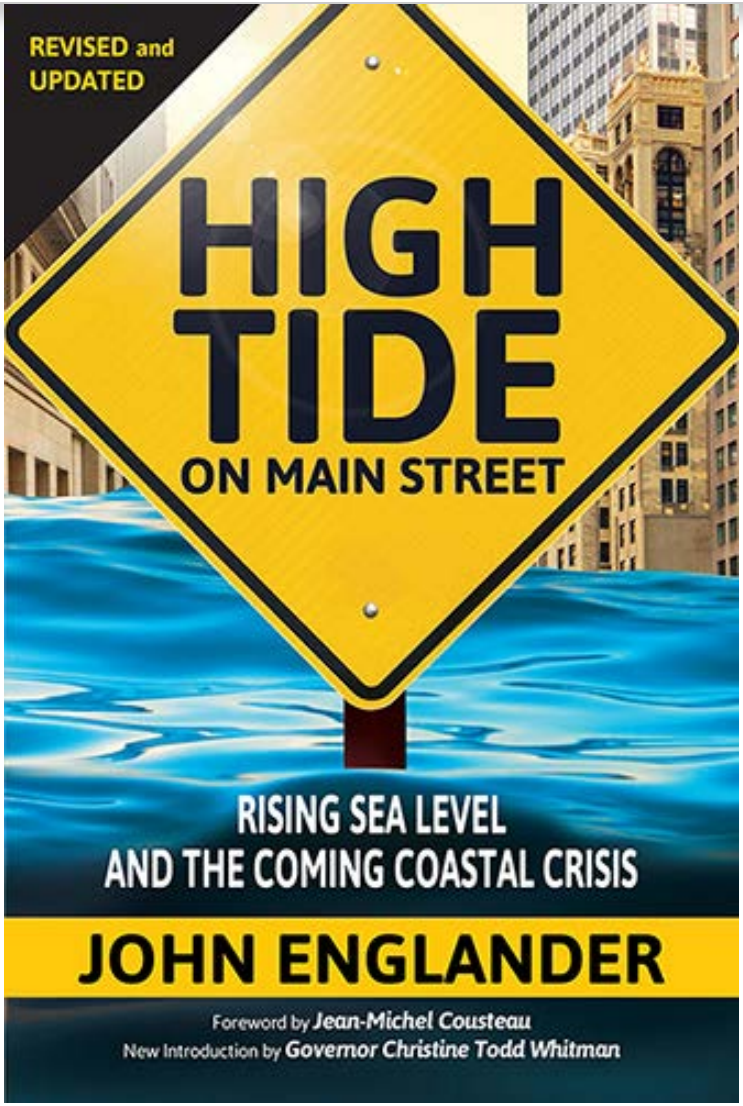
Florida Floodplain Management

Peril of Flood legislation

and

Post-Disaster Redevelopment Plans

HIGH TIDE ON MAIN STREET—John Englander (2012)



SUNKEN CONDOS—Donald Fagen (2012)



Super Storm Sandy (2012)



Peril of Flood Act/Regulations/Requirements

May 21, 2015—Governor signs Laws of Florida Chapter 2015-69: An act relating to the peril of flood.

Amended Florida Statutes chapters:

- 163 regarding requirements of Coastal Management elements in local government Comprehensive Plan
- 472 regarding processing of Elevation Certificates; and
- 627 regarding “Flexible” Flood Insurance

Coastal management element F.S. §163.3178

163.3178 Coastal management.—

(1) The Legislature recognizes there is significant interest in the resources of the coastal zone of the state. Further, the Legislature recognizes that, in the event of a natural disaster, the state may provide financial assistance to local governments for the reconstruction of roads, sewer systems, and other public facilities. Therefore, it is the intent of the Legislature that local government comprehensive plans restrict development activities where such activities would damage or destroy coastal resources, and that such plans protect human life and limit public expenditures in areas that are subject to destruction by natural disaster.

Coastal management element F.S. §163.3178

(2) Each coastal management element required by s. 163.3177(6)(g) shall be based on studies, surveys, and data; be consistent with coastal resource plans prepared and adopted pursuant to general or special law; and contain:

Coastal management element F.S. §163.3177(6)(g)

- (6)(g) For those units of local government identified in s. 380.24, a coastal management element, appropriately related to the particular requirements of paragraphs (d) [Conservation] and (e) [Recreation and Open Space] and meeting the requirements of s. 163.3178(2) and (3). The coastal management element shall set forth the principles, guidelines, standards, and strategies that shall guide the local government's decisions and program implementation with respect to the following objectives:

Florida Coastal Management Act

380.21 Legislative Intent.

380.24 Local government participation.—

* * *

Such units of local government shall be eligible to receive technical assistance from the state in preparing coastal zone protection elements and shall be the only units of local government eligible to apply to the department for available financial assistance.

* * *

380.26 Establishment of coastal building zone for certain counties.

380.27 Coastal infrastructure policy.

* * *

Coastal management element F.S. §163.3177(6)(g)

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(3) [Ports]

Coastal management element F.S. §163.3177(6)(g)

(6)(g) . . . set forth the principles, guidelines, standards, and strategies that shall guide the local government's decisions and program implementation with respect to the following objectives:

- Maintain, restore, and enhance the coastal zone environment
- Preserve all species of wildlife and marine life.
- Protect all living and nonliving coastal zone resources.
- Avoid irreversible and irretrievable loss of coastal zone resources.
- Use ecological principles when permitting development.
- Limit public subsidies for development in coastal high-hazard areas.
- Protect human life against the effects of natural disasters.
- Ports
- Preserve historic and archaeological resources

Coastal management element F.S. §163.3177(6)(g)

(6)(g)10. At the **option** of the local government, develop an **adaptation action area** designation for those low-lying coastal zones that are **experiencing coastal flooding** due to extreme high tides and storm surge and are **vulnerable to the impacts of rising sea level**.

- Local governments that adopt an **adaptation action area may consider policies** within the coastal management element to improve resilience to coastal flooding resulting from high-tide events, storm surge, flash floods, stormwater runoff, and related impacts of **sea-level rise**.
- **Criteria** for the **adaptation action area** may include, but need not be limited to, **areas for which the land elevations are below, at, or near mean higher high water, which have a hydrologic connection to coastal waters, or which are designated as evacuation zones for storm surge.**

Coastal management element F.S. §163.3178

(2) Each coastal management element required by s. 163.3177(6)(g) shall be based on studies, surveys, and data; be consistent with coastal resource plans prepared and adopted pursuant to general or special law; and contain:

F.S. §163.3178(2)

(a) A land use and inventory

(b) An analysis of the environmental, socioeconomic, and fiscal impact of development and redevelopment proposed in the future land use plan, with required infrastructure to support this development or redevelopment, on the natural and historical resources of the coast and the plans and principles to be used to control development and redevelopment to eliminate or mitigate the adverse impacts on coastal wetlands; living marine resources; barrier islands, including beach and dune systems; unique wildlife habitat; historical and archaeological sites; and other fragile coastal resources.

(c) An analysis of the effects of water quality and quantity

(d) A component that outlines principles for hazard mitigation

(e) A component that outlines principles for protecting existing beach and dune systems and restoring altered systems.

Peril of Flood—F.S. §163.3178(2)(f)

(f) A redevelopment component that ~~which~~ outlines the principles that must ~~which shall~~ be used to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise. The component must:

1. **Include development and redevelopment principles, strategies, and engineering solutions that reduce the flood risk in coastal areas . . . from . . . related impacts of sea-level rise.**

2. **Encourage . . . the removal of coastal real property from [FEMA] flood zone designations.**

3. **Site development techniques and best practices [to] reduce [flood] losses flood insurance claims.**

4. **[C]onsistent with, or more stringent than, the Florida Building Code and [FEMA} flood regulations 44 C.F.R. part 60.**

5. **Construction seaward of the coastal construction control lines must be consistent with chapter 161.**

6. **Encourage local governments to participate in the NFIP CRS to achieve flood insurance premium discounts for their residents.**

Key Points

- **In addition to the existing statutory requirements for Coastal Management elements, a "redevelopment component" is required.**

- **Local governments who exercise the option to develop and designate adaptation action areas have additional latitude to tailor Comprehensive Plan policies to address coastal flooding.**

F.S. §163.3178(2)(f)— Post-Disaster Redevelopment Plans

Redevelopment component.

1. Development and redevelopment principles, strategies, and engineering solutions.

2. Incentives to remove real property from coastal flood zones.

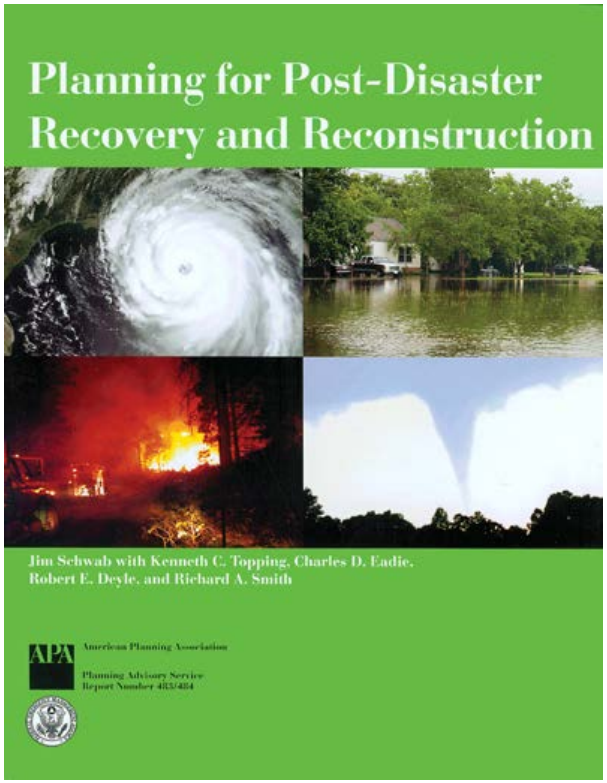
3. Site development techniques and best practices [to] reduce [flood] losses flood insurance claims.

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5. Construction seaward of the coastal construction control lines must be consistent with chapter 161.

6. Incentives for local governments to participate in the NFIP CRS to achieve flood insurance premium discounts for their residents.

APA PLANNERS ADVISORY SERVICE (PAS) TEXTS





STATE OF FLORIDA PDRP GUIDE



STATE OF FLORIDA PDRP GUIDE

Chapter 1. Getting Started

- What is a Post-Disaster Redevelopment Plan?
- Why Should My Community Develop a PDRP?
- Different Approaches to Plan Development
- Key Ingredients for Plan Success

Chapter 2. Planning Process

- Initiating the Process
- Getting Buy-In
- Capacity Assessment
- Vulnerability Analysis
- Facilitating Input

Chapter 3. Plan Topics

- Land Use
- Housing
- Economic Redevelopment
- Infrastructure and Public Facilities
- Health and Social Services
- Environment

Chapter 4. Implementation Considerations

- Pre-Disaster Implementation
- Post-Disaster Implementation
- Financing Implementation
- Including the Public in Implementation
- **References and Resources 121**

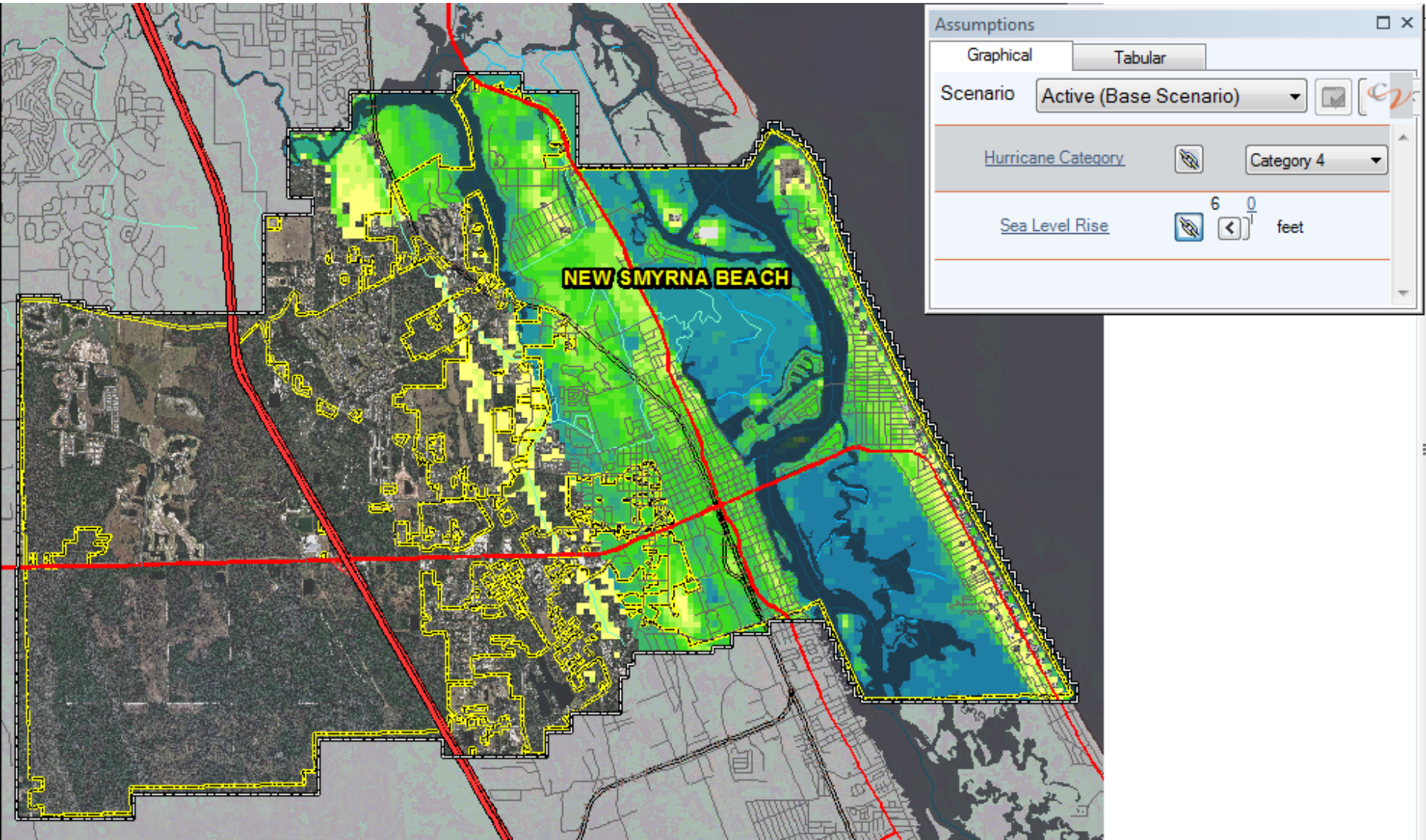
STATE OF FLORIDA PDRP GUIDE



So Tell Me Something I Don’t Know. . .

Adapting to Rising Tides

New Smyrna Beach: 3 feet of SLR Category 4 Storm Surge inundation



Stormwater Control: Concrete and Engineering



Stormwater Control: Design with Nature



COMPARISONS





Bishan Park – aerial view



Master Plan Concepts - parametric analysis

Layered Mobilities - Gulf of Mexico Drive as multi-modal civic greenway

Connections and Centralities - Directly linked to the mainland with mobility independence and nodal identity.

Modified Ecologies - enhancing access to nature amenities and human encounters with ecologically responsive development.

Cross-connecting Places - Gulf to Bay linkages through vibrant activity centers

Longboat Key 2101 - Strategic priorities for a Longboat Key Masterplan

Badjao – over water





Learning from Stiltsville



Floating on the water



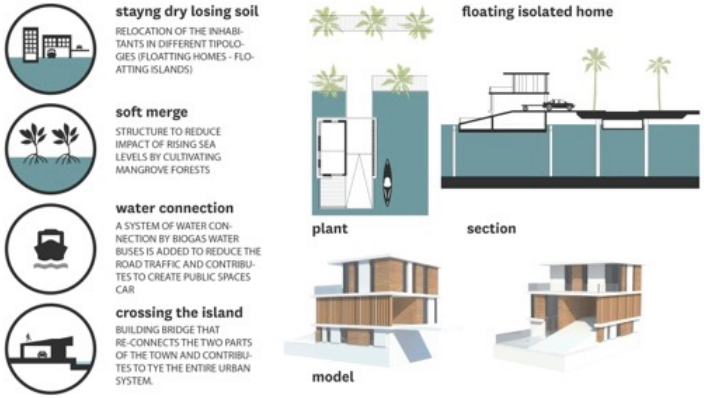
Floating during flooding



Floating during flooding







Resiliency Through Floating

Permanence of Historic Grid

Silvia Aloisio

The project is located in the north area of the island, between Longbeach and Whitney Plaza, where a historic settlement will be effected by sea level rise. This area does not need to be abandoned. Instead, it can strategically grow to provide coastal protection, introducing a new type of resilient settlement that will address sea level rise. The proposed operation implies the relocation of the inhabitants in different residential floating typologies that will form a new piece of the town that extends itself into the canal. This can happen by maintaining the existing road grid and binding it to the urban fabric of the Key while preserving the identity of the place. The new residential typology is designed to simplify the relationship of the residence with the water through the introduction of an open room as a boat ramp for small boats that links the street directly with the canal. To defend the island from the threat of sea level rise, it is also planned to create soft marshes by the mangrove islands that, according to new scientific research, could potentially accumulate and build soil. The new mangroves could be installed as modular structures that, growing, could become a spectacular public waterfront park. This project includes the redesign of Whitney Plaza, as a new public venue with shops, restaurants, an inner square, a multilevel parking structure and a garden bridge that links this leisure and commercial point with the beach and becomes a landmark for the north entrance of the island.

Movable homes

Movable homes

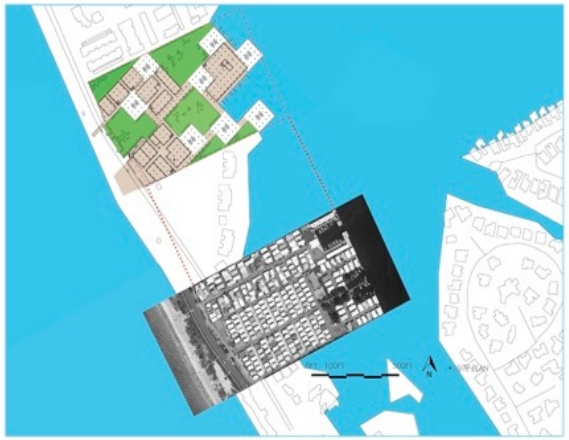




Resilient Podium Community







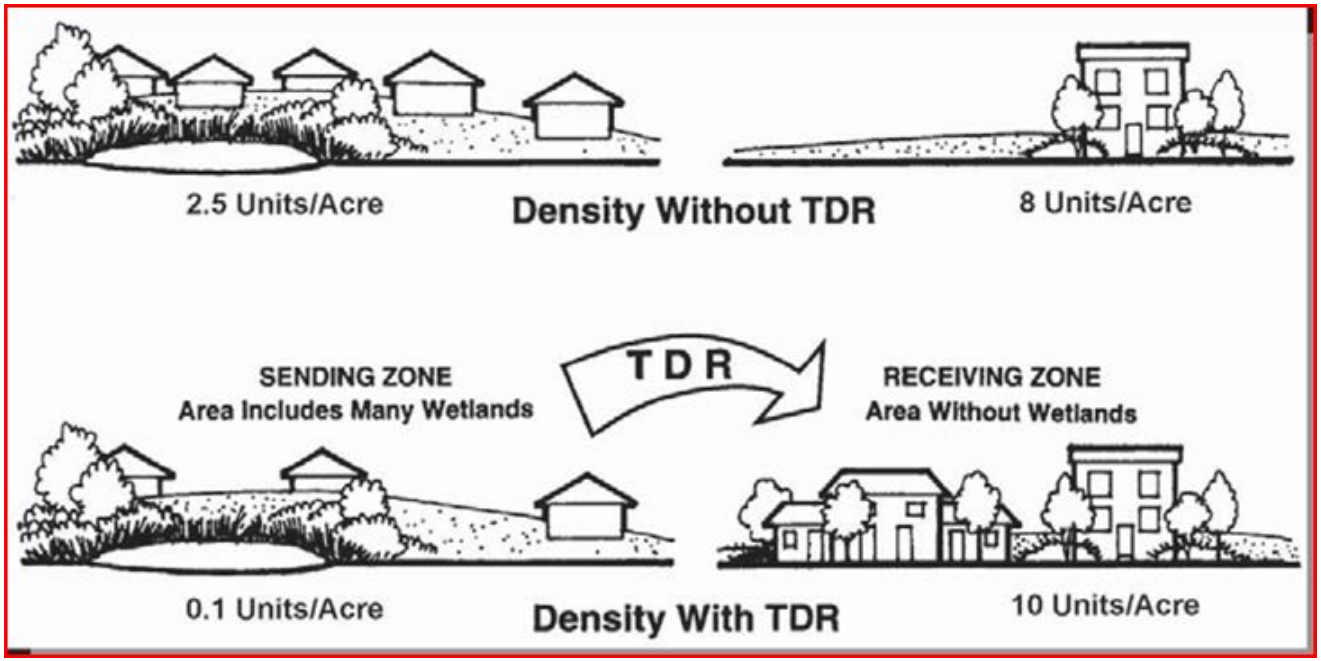
Resilient Podium Community

Density and View-Integrated Complex

Di Hu

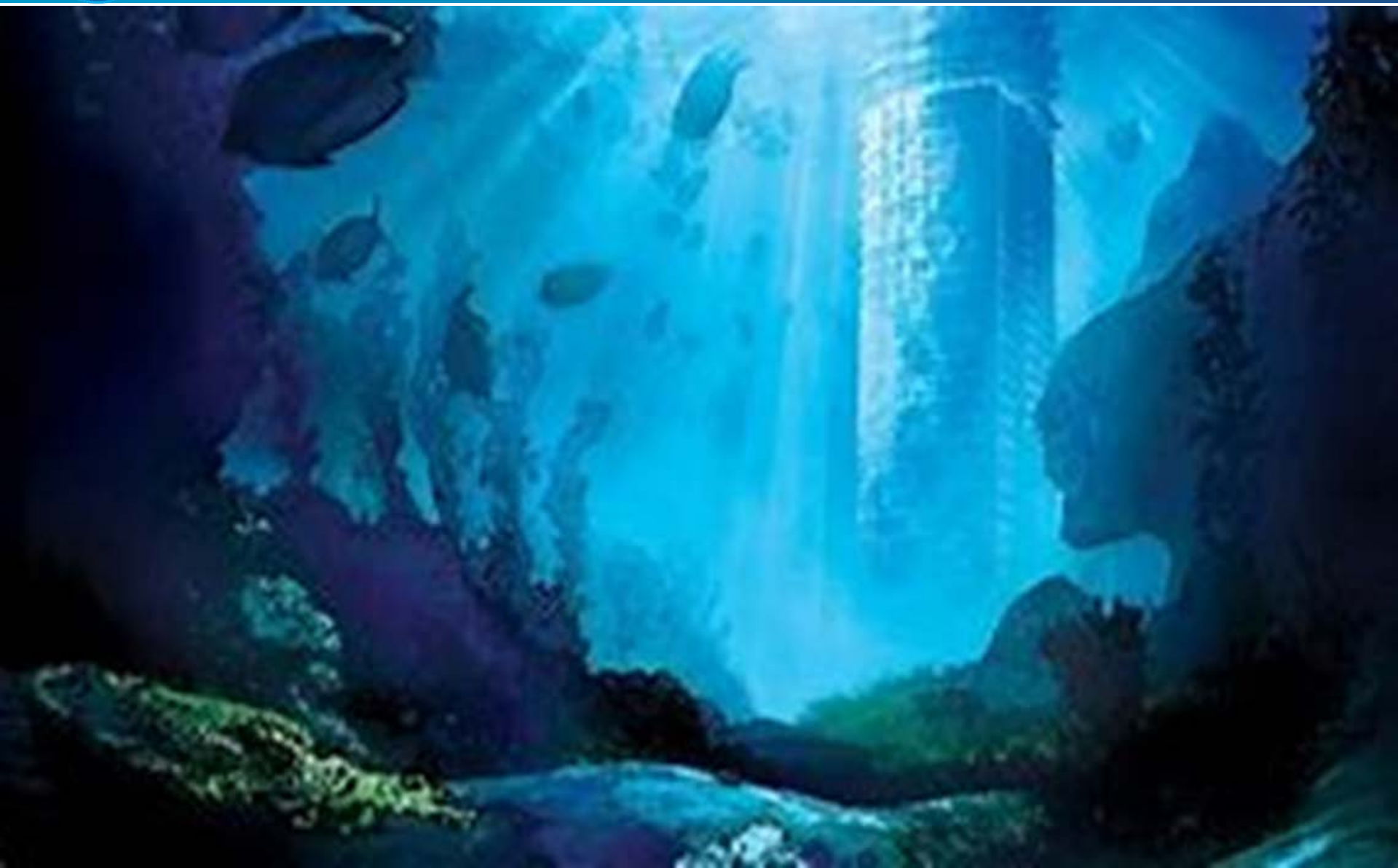
The project is located on the site of the Manufactured home community. It proposes its substitution. Houses in this area are vulnerable and crowded. For providing better living conditions and more public space to residents, a new community sense is created. The site is located in the middle portion of Longboat Key. The proposed high rise buildings will give residents a chance to get views of both the gulf side and bay side because the distance between two sides in this area is quite minimal. High rise buildings can achieve a density that helps produce more public space. To deal with sea level rise, the new public ground floor is lifted up to level two. The space on the ground will be used for entertainment, relaxation and parking. The platform will be as new ground after sea level rise. There is a bridge stretched out from the platform that will offer people a way to reach the beach directly crossing over Gulf of Mexico Drive. On the bay side, the project proposes a marina for the residents' navigation purposes. The high rise components of the project are designed following the "8 queens puzzle" in chess to arrange all 8 buildings to make sure they will not shade each other and get the best views. The number of residential units will depend on market potential for different size typologies, and on code permitting regarding permissible heights. As determined in the project, it is composed by 480 residential units, providing an increase of 50% in residential numbers.

Transferring development to safer locations



Under Water





UNIVERSITY OF FLORIDA RESILIENT COMMUNITIES INITIATIVE (UFRCI)

UF | FRCI
Florida Resilient Communities Initiative

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Mission:

The College of Design, Construction and Planning (DCP) and the Program for Resource Efficient Communities (PREC) in the Institute for Food and Agricultural Sciences (IFAS) are engaged in collaborative efforts related to creating and sustaining local communities and regions faced with various threats, including natural hazards and resource constraints, as well as market hazards resulting from public and private actions. The concept of resiliency encompasses the capacity to overcome adversities through a combination of preplanning and post-disaster mitigation, typically based upon the development of community resiliency plans and a network of local stakeholders committed to implementing recovery and sustainability strategies.

Website: http://frci.dcp.ufl.edu/

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