

# Hurricane Season

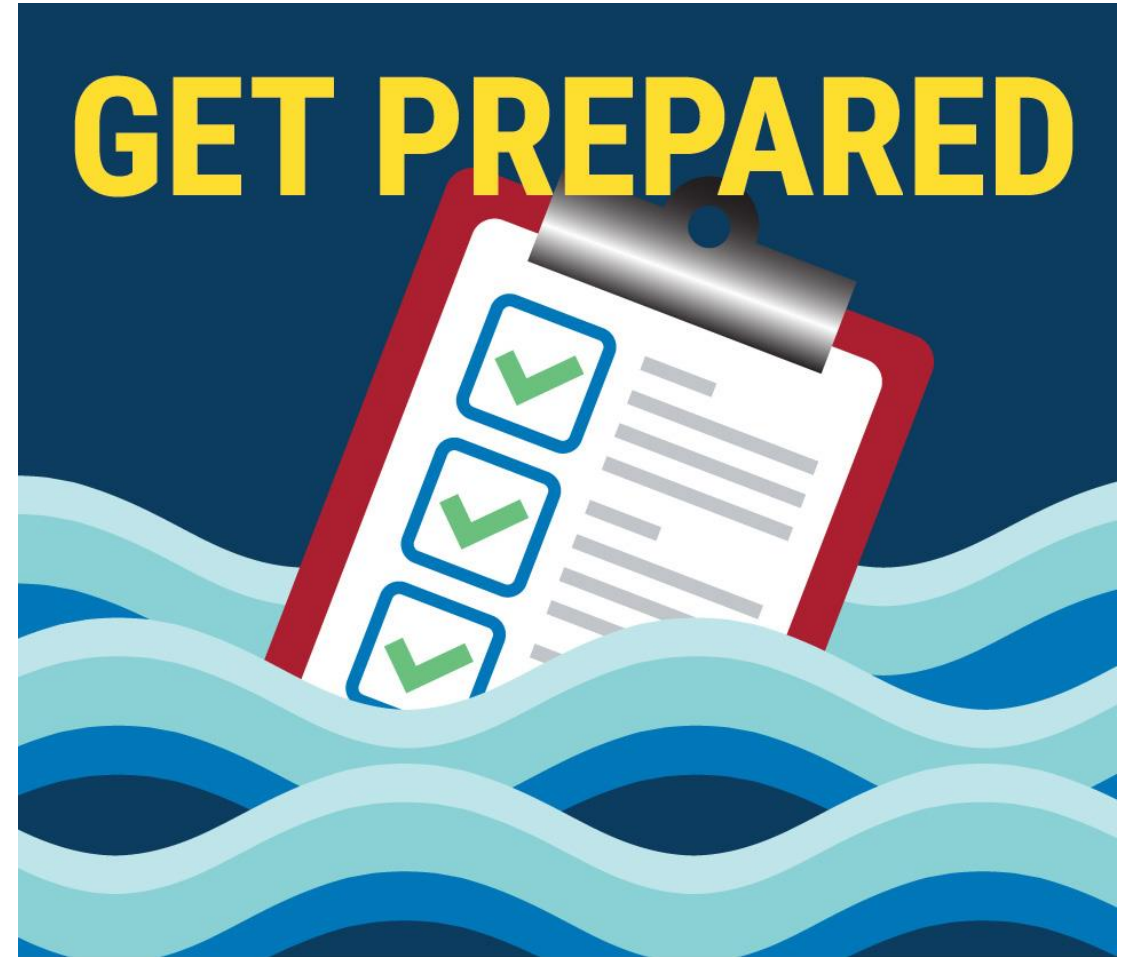
**Earlier: May**

**New: Category 6**



# Outreach

- **Annual Flood Awareness Proclamation**
- **Community Outreach**
  - Social Media
  - FPTV
  - Website
  - Mailers
- **Educational Opportunities**
  - Department Staff
  - Commissioner



FEMA



Visit [FloodSmart.gov](https://www.floodsmart.gov)

# **The Aftermath of a Catastrophic Hurricane**

**Life as we know it WILL change**

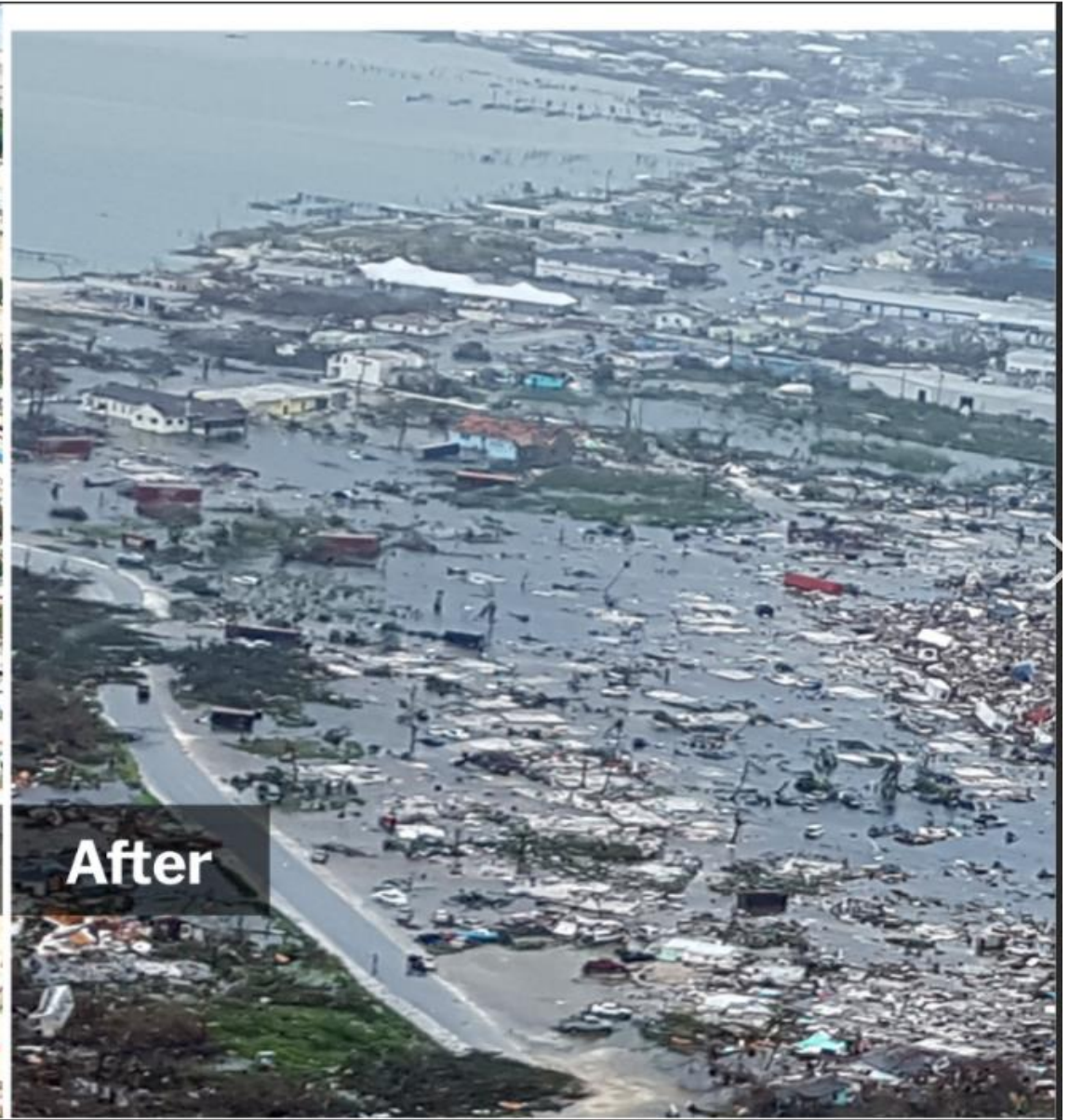
# **Abaco, Bahamas**

## **Hurricane Dorian - 2019**





Before



After

**MEXICO BEACH, FLORIDA**

**Hurricane Michael-2018**



COURTESY: NOAA

HURRICANE MICHAEL

# BEFORE AND AFTER THE STORM

MEXICO BEACH, FL







# **New Jersey**

## **Hurricane Sandy - 2012**



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# Post Disaster Management

- Assessments
- Permits
- Compliance



Hurricane Andrew



Hurricane Sandy

# Assessments



Sabal Chase – Fort Pierce 2017

# Support Resources



# Windshield Inspection



Abaco, Bahamas 2019

To determine Declaration of Emergency

# Damage Assessments



Hurricane Andrew

# Substantial Damage Determinations



THE SUNRISE CITY  
**FORT PIERCE**  
BUILDING DEPARTMENT *Florida*

## Notice of Potential Substantial Damage

Date: \_\_\_\_\_

Site Address: \_\_\_\_\_

The purpose of this letter is to inform you that a preliminary inspection of the structure at the above listed address has been completed. Due to the magnitude of the damage observed, it is highly likely that the structure **may** be deemed substantially damaged, per our local floodplain management regulations and the National Flood Insurance Program (NFIP), which is managed by the Federal Emergency Management Agency (FEMA).

The City of Fort Pierce has adopted floodplain management regulations for buildings within Special Flood Hazard Areas (SFHAs), that may require the above listed property to be brought into compliance with the FEMA, NFIP and local floodplain management regulations.

NFIP regulations define **substantial damage** as damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

### If you have received this notice, here's what to expect:

- A building may be substantially damaged by any cause, including fire, flood, high wind, land movement, or neglect. All costs to repair a substantially damaged building to its pre-damaged condition must be identified.
- To make the final substantial damage determination, the Building Department will compare the cost to bring the structure back to pre-damaged condition to the market value of the structure (excluding land, accessory structures and landscaping). If the resulting ratio equals or exceeds 50 percent of the market value of the structure before the damage occurred, the existing structure must be brought into compliance with the floodplain management requirements for new construction. If your structure needs to be brought into compliance, there will be several aspects that must be addressed in order to achieve compliance. The requirements will depend on several factors, including the flood zone of your property. The most significant compliance requirement will be that the lowest floor, as defined in the regulations, must be elevated to or above the design flood elevation (DFE), or in the case of a commercial structure, the structure may be dry floodproofed to the DFE.

# Substantial Damage Determinations



June 13, 2019

Xxxx  
XXXXX  
XXXXX

RE: xxxxxxx

To whom it may concern:

We have reviewed the recent submittal for a determination of substantial damage caused by the fire in 2017. As required by our floodplain management regulations and building code, we have determined that the work to repair the structure back to pre-damage condition **is below the substantial damage threshold**. This determination was based on a comparison of the cost estimate of the work required to restore the building to its pre-damage condition to the building value prior to the damage (using the Property Appraiser's website plus 20%).

Summary of Repair Costs/Substantial Damage Evaluation	
Building Value (using the Property Appraiser's website plus 20%)	\$30,120.00
Cost estimate of work (back to pre-damage condition)	\$13,900.00
Percent of building Appraised Value	46%

Please be advised that if you do any additional work such as renovations or upgrades; or if the actual cost to repair the damage exceeds the estimate submitted, a new substantial damage/improvement determination will need to be made. Construction activities that are undertaken without a proper permit are violations and may result in citations, fines or other legal action.

Sincerely,

Kristie Kirstein, CFM  
CRS Coordinator

Paul Thomas, CBO, CFM  
Building Official/Floodplain Manager

# Permits

**ABBREVIATIONS**

1. ALUMINUM  
2. BRICK  
3. CONCRETE  
4. GLASS  
5. IRON  
6. MASONRY  
7. METAL  
8. PLASTER  
9. STEEL  
10. STONE  
11. TERRAZZO  
12. WOOD  
13. ZEBRANO  
14. GRANITE  
15. MARBLE  
16. QUARTZ  
17. SOLID SURFACE  
18. CERAMIC TILE  
19. POLYURETHANE  
20. POLYMER  
21. POLYMER CONCRETE  
22. POLYMER MODIFIED  
23. POLYMER PORTLAND CEMENT  
24. POLYMER PORTLAND CEMENT  
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29. POLYMER PORTLAND CEMENT  
30. POLYMER PORTLAND CEMENT

**GENERAL NOTES**

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF FORT PIERCE BUILDING DEPARTMENT PERMITS AND ORDINANCES.  
2. THE PERMITTEE SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF FORT PIERCE BUILDING DEPARTMENT.  
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**dB**

City of Fort Pierce  
Building Department  
1000 W. US Highway 1  
Fort Pierce, FL 34946  
Phone: (888) 345-7273  
Fax: (888) 345-7274  
www.fortpiercefia.com

The City of  
Fort Pierce

City Engineer  
Building Department

Form #  
G-10

**CITY OF FORT PIERCE, FLORIDA**  
**BUILDING DEPARTMENT**  
**APPLICATION FOR BUILDING PERMIT**  
Building Department Project Manager

Property Address: \_\_\_\_\_ PERMIT # \_\_\_\_\_  
Parcel ID# \_\_\_\_\_ FBC (2000) 1<sup>st</sup> Edition  
Owner Name (Located on your lot) \_\_\_\_\_ PIN # \_\_\_\_\_  
Phone # ( ) \_\_\_\_\_  
Email Address \_\_\_\_\_  
Fax # ( ) \_\_\_\_\_

**\*Required Information**

Type of permit \_\_\_\_\_ # of plans submitted \_\_\_\_\_  
Description of Work \_\_\_\_\_ # of CD's submitted \_\_\_\_\_  
Call # ( ) \_\_\_\_\_

Architect \_\_\_\_\_  
Phone \_\_\_\_\_  
Engineer \_\_\_\_\_  
Plumber \_\_\_\_\_  
Fax ( ) \_\_\_\_\_  
Email Address \_\_\_\_\_

**\*CONTRACTOR/APPLICANT INFORMATION**

City License # \_\_\_\_\_ State License # \_\_\_\_\_  
Company Name \_\_\_\_\_ City/State \_\_\_\_\_  
Address \_\_\_\_\_ Zip \_\_\_\_\_  
Phone # ( ) \_\_\_\_\_  
Email Address \_\_\_\_\_  
Fax # ( ) \_\_\_\_\_  
Call # ( ) \_\_\_\_\_

**IDENTIFICATION**

**SYMBOLS**

1. EXISTING CONCRETE  
2. EXISTING MASONRY  
3. EXISTING METAL  
4. EXISTING WOOD  
5. EXISTING GLASS  
6. EXISTING IRON  
7. EXISTING ALUMINUM  
8. EXISTING ZEBRANO  
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**GENERAL MATERIAL LEGEND**

1. EXISTING CONCRETE  
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**APPLICABLE CODES**

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# Legal Authority of the Floodplain Administrator



**Section 109-25. - Duties and powers of the floodplain administrator**

(7) **Issue floodplain development permits** or approvals for development other than buildings and structures that are subject to the state building code, including buildings, **structures** and facilities **exempt from the state building code**, when compliance with this chapter is demonstrated, or disapprove the same in the event of noncompliance

**Section 109-26. - Permits**

(c) Buildings, **structures** and facilities **exempt from the state building code**. Pursuant to the requirements of federal regulations for participation in the National Flood Insurance Program (44 CFR 59 and 60), **floodplain development permits or approvals shall be required** for the following buildings, **structures** and facilities that are **exempt from the state building code** and any further exemptions provided by law, which are subject to the requirements of this chapter:

- (1) **Railroads** and ancillary facilities associated with the railroad.
- (5) Those structures or **facilities of electric utilities**, as defined in Florida State Statute 366.02, which are directly involved in the generation, transmission or distribution of electricity.

# Construction in the Right of Way



Moore's Creek

# Electric Utilities



Seaway Dr



South Ocean Dr @ Surfside Park

# Railroad and Ancillary Facilities



North Old Dixie Hwy - Railroad Bridge

# **Substantially Damaged Structures in the Special Flood Hazard Area**

**Must comply with current flood regulations**

# Residential Structures

Before



After



(Source: FEMA Publication 312)

# Commercial Structures



# Condos/Apartments

Hurricane Sandy 2012



Hurricane Irma 2017

# Consequences for Non-Enforcement of FEMA Regulations

1<sup>st</sup> The citizens could lose their 20% discount they get due to our CRS classification.

# Consequences for Non-Enforcement of FEMA Regulations

2<sup>nd</sup> The city could be placed on probation within the National Flood Insurance Program (NFIP), this could include the following:

- An annual fee could be assessed to all NFIP Flood Insurance policies

# Consequences for Non-Enforcement of FEMA Regulations

3rd The city could be suspended from the National Flood Insurance Program (NFIP), if this happens:

- No new NFIP flood insurance policies would be written
- No existing NFIP flood insurance policies would be renewed
- The City and citizens may lose post disaster assistance
- Citizens in the SFHA may no longer be eligible for federally backed loans like:
  - Fannie Mae loans
  - Freddie Mac loans
  - VA loans
  - FHA loan (Federal Housing Administration)

# Community Resiliency

Hurricane Sandy 2012



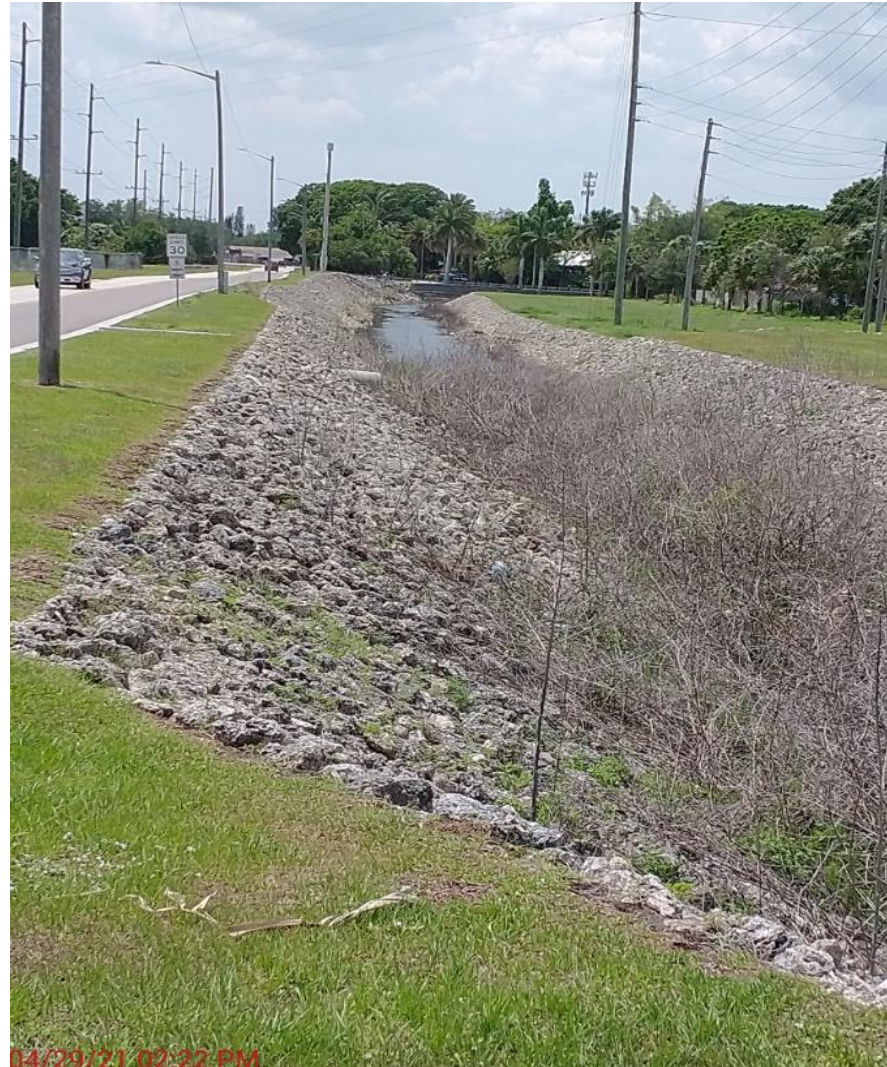


Mexico Beach 2018

# Blue Sky Flood



# Drainage/Infrastructure Modifications



Harden Canals

# Drainage/Infrastructure Modifications



Pump Stations

# Post Disaster Resiliency



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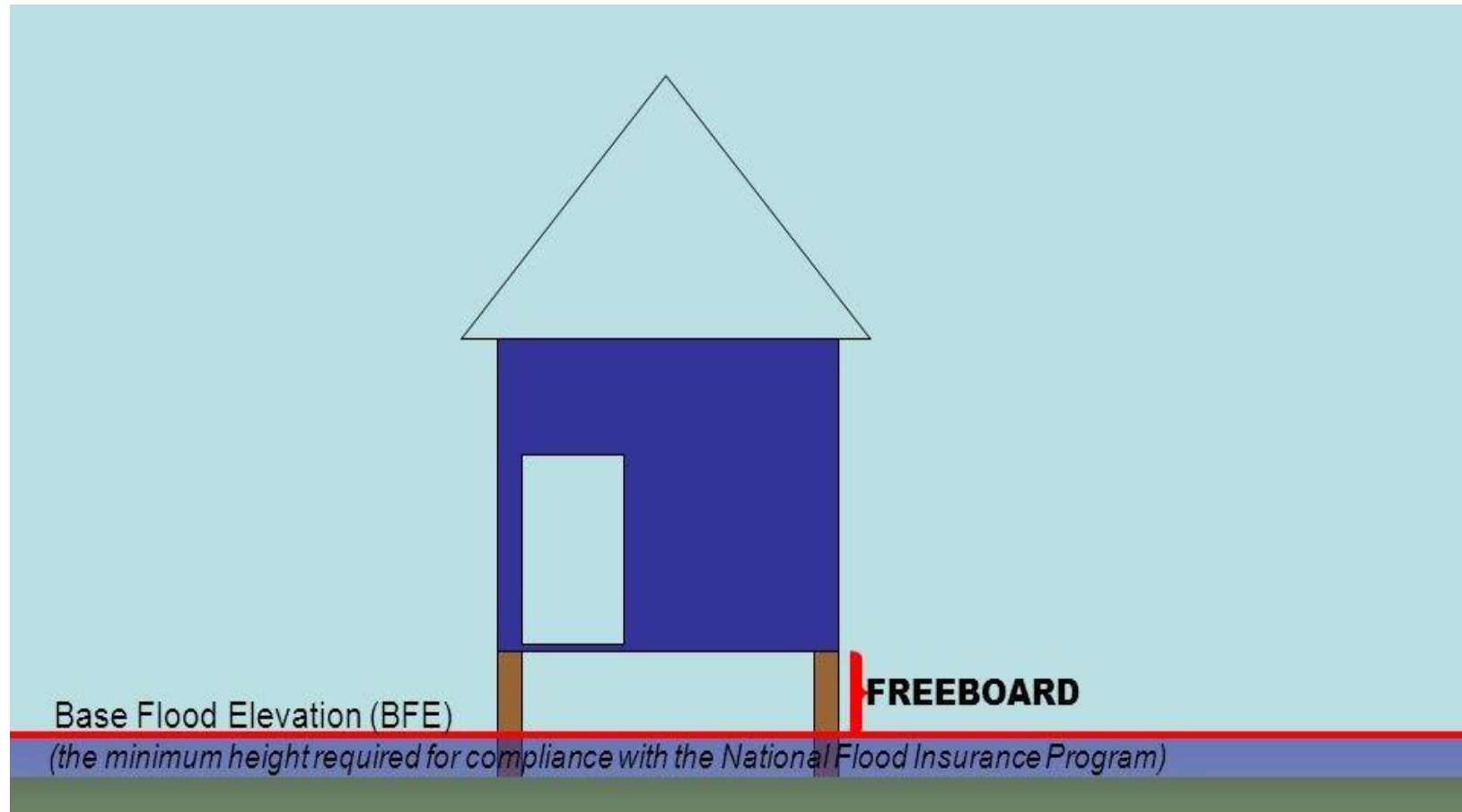
Require Stricter Building Requirements

# Stricter Building Requirements



Stemwall Construction

# Stricter Building Requirements



Higher Freeboard/Elevation

# Stricter Building Requirements

- Florida Product Approval V/S Miami Dade Product Approval



# **Proactive Mitigation Strategies**

# Sea Level Rise

## Seawall Ordinance



# Funding



# Tree Preservation



