FEMA Coastal Flood Study Is Not an Evacuation Study

Example Evacuation Map

Example Preliminary FIRM
Why a New Coastal Flood Study?

- Current surge analysis is 30 to 40+ years old
- Topographic data from quad maps
- Overland modeling and mapping outdated
- Limited number of modeling transects (36)
- No LiMWA
Why a New Coastal Flood Study?

- Today’s flood risk is better defined
- More advanced and highly-resolved modeling methods
- Updated elevation data
- More modeling transects (now 218)
- Improvement in Geographic Information System (GIS) technologies for mapping
Validation Storms

- **Storms Selected:**
  - Hurricane Betsy (1965)
  - Hurricane David (1979)
  - Hurricane Andrew (1992)
  - Hurricane Georges (1998)
  - Hurricane Wilma (2005)

- Selected based on peak surge and available data
Overland Wave Analysis

- **CHHA VE** (Coastal High Hazard Area VE): Wave height ≥ 3 ft
- **Coastal A Zone AE**: 3 ft > Wave height ≥ 1.5 ft
- **LiMWA AE**: Wave height < 1.5 ft
- **LiMWA X**: BFE < 1 ft

**Legend:**
- BFE = Base Flood Elevation
- CHHA = Coastal High Hazard Area
- LiMWA = Limit of Moderate Wave Action
- SWEL = Stillwater Flood Elevation

- **Properly elevated (post-FIRM) building in CHHA**
- **Best practice - Elevated building in Coastal A Zone**
- **Improperly elevated (pre-FIRM) building**
- **Limit of SFHA**
- **Vegetated region**
- **Shoreline**
- **Beach face**
Overland Wave Analysis: Transects
Example FIRM
Limit of Moderate Wave Action (LiMWA)

- FEMA Procedure Memorandum No. 50, 2008 and Operating Guidance 13-13
- No Federal insurance regulatory requirement (at present) tied to LiMWA
- Florida Building Code now requires VE zone construction standards in areas defined by LiMWA or areas subject to waves greater than 1.5 feet
- CRS benefit for the requirement
Countywide Datum Conversion

Miami-Dade County, FL
DATUM CONVERSIONS

NAVD88 = NGVD29 - 1.52 ft

BFE
Ground Elevation

Flood Depth = 6 ft

10 ft 8.48 ft 4 ft 2.48 ft

0 ft NAVD88
0 ft NGVD29
1.52 ft
Hydrologic and Hydraulic Modeling for the following watersheds:

- Biscayne Canal Watershed (C-8): 28.8 mi²
- Snake Creek Canal Watershed (C-9 West): 17.0 mi²
- Royal Glades Canal Watershed (C-9 East): 23.4 mi²

Model results calculated for the 10%, 4%, 2%, 1%, 1% Plus and 0.2% annual chance events

Delivery consistent with FEMA’s Data Capture Standards
Preliminary Map Package

- Sent to each community (CEOs and FPAs)
  - Miami-Dade County: sent February 25, 2021

- Package included:
  - Preliminary Miami-Dade County FIRM Index panel
  - Preliminary FIRM panels for community
  - Preliminary Flood Insurance Study (FIS) report
  - Preliminary Summary of Map Actions (SOMA)
  - Digital data (Changes Since Last FIRM)

- 218 Preliminary FIRM Panels
Preliminary Map Package: CSLF Example (Panel 0454 and 0462)

Changes Since Last FIRM:
- No Zone Change
- 1% Annual Decrease
- Floodway Decrease
- Floodway Increase
- 1% Annual Increase
- 0.2% Annual Decrease
- 0.2% Annual Increase
Milestones and Schedule: Outreach Meetings

- **Discovery Meeting**
  - June 2014

- **Storm Surge Analysis Update Meeting**
  - April 2018

- **CCO Meeting**
  - 04/27/2021

- **Technical Update (Mesh Review) Meeting**
  - May 2016 & March 2017

- **Flood Risk Review Meeting**
  - Sept. 2019

- **Open Houses**
  - TBD
Miami-Dade County Coastal Study: Post Preliminary Processing

- Preliminary Maps Issued – February 25, 2021
- Consultation Coordination Officer (CCO) Meeting – April 27, 2021
- End of Appeal & Comment Period
- Letter of Final Determination
- Effective Maps

- Preliminary Phase
- Meetings
- 90-Day Appeal & Comment Period
- Resolve Appeals & Finalize Map Products
- 6-Month Compliance Period
Communities in Miami-Dade County will have a **90-day appeal period** for all changes to Special Flood Hazard Areas.

- SFHA changes will be published in the Federal Register
- SFHA changes will be published in your local newspapers twice within a 10-day period
- The second newspaper publication will begin the 90-day appeal period

**Appeals are for all SFHA changes**
What is An Appeal?

- The new or revised BFEs are believed to be scientifically or technically incorrect

- The BFEs are scientifically incorrect if:
  - The methodology used and assumptions made in the determination of the BFEs is inappropriate or incorrect

- The BFEs are technically incorrect if:
  - The methodology was not applied correctly or was based on insufficient or poor-quality data.
  - The methodology did not account for the effects of physical changes that have occurred in the floodplain.

- Must be certified by Professional Engineer and reviewed/approved by community
Communities in Miami-Dade County will also have a comment period.
Comments do not involve BFES.
Comments include, but are not limited to, the following:

- Channels Names and Locations
- Road Names and Locations
- Corporate Limit Changes
- Topographic Data

All other changes are considered Comments
Appeal Resolution Process

- During the appeal period process, FEMA will:
  - Acknowledge receipt of appeal(s)/comment(s) via letter(s) to CEO(s)
  - Send CEO(s) letter(s) to explain resolution of appeal(s)/comment(s)
  - Send communities updated FISs and FIRMs (if applicable).

FEMA will deny appeals and comments that are not adequately supported by data/information.
Letter of Final Determination (LFD) and Adoption/Compliance

- LFDs follow the appeal period and begin the 6-month adoption/compliance period.

- Adoption/compliance: communities adopt the new FIRM(s) into floodplain ordinances.

- FDEM or FEMA Region IV staff may contact communities and offer assistance with reviewing and updating their floodplain ordinances.

- If a compliant ordinance is not received before the FIRM effective date, the community will be suspended from NFIP.
Flood Map Tools

- FEMA Map Service Center
  - https://msc.fema.gov/portal/home
- Flood Map Changes Viewer
  - Flood Map Changes Viewer (arcgis.com)
Team Contact Information

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