FLOODPLAIN AND STORMWATER MANAGEMENT

July 13, 2020

PART I: Floodplain Management

Coastal Flood Risk Study Background

Starting in the late 2000s, FEMA has been updating Flood Insurance Studies (FISs) and Flood Insurance Rate Maps (FIRMs) for the entire populated coastline of the country to provide improved flood hazard information to coastal communities.

Why the Coastal Flood Risk Study was updated

- Flood risk changes over time
- Previous surge analysis is 30 to 40+ years old
- Community risk is better defined through
  - Updated elevation data (topographic data and aerial imagery)
  - New climate data based on recent storms
  - More sophisticated mapping technologies

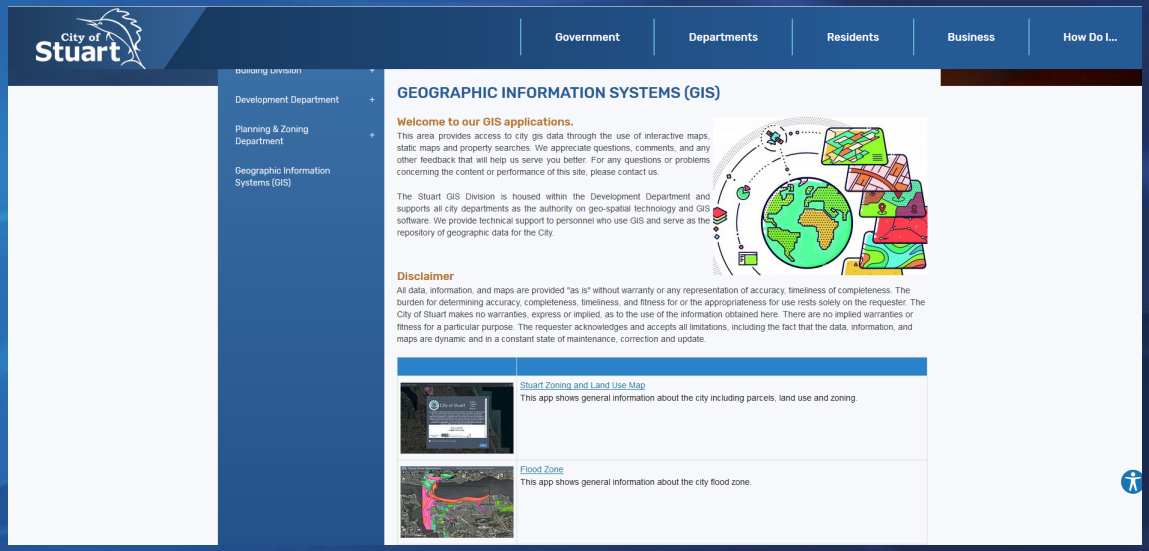
Flood Zones

- Zones are determined by FEMA to indicate risk for flooding:
  - High Risk – Special Flood Hazard Area (SFHA), identified as Zone A, Zone AE, Zone V, or Zone VE on FIRM
  - Moderate Risk – Identified as shaded Zone X on FIRM
  - Low Risk – Identified as unshaded Zone X on Firm

Revised Flood Insurance Rate Maps (FIRMs)

- Became effective on February 19, 2020
- Can be found on City of Stuart's Geographic Information Systems (GIS) website:

https://cityofstuart.us/493/Geographic-Information-Systems-GIS



STATE OF FLORIDA

DIVISION OF EMERGENCY MANAGEMENT

Ron DeSantis
Governor

Jared Moskowitz
Director

January 31, 2020

Mr. David Dyess, City Manager
City of Stuart
121 Southwest Flagler Ave
Stuart, FL 34994

RE: Transmittal and Closure of NFIP Community Assistance Visit (CAV) Report

Dear Mr. Dyess,

Thank you for the City's participation in the NFIP State Coordinating Office Regional Engagement (SCORE) CAV meetings, held December 9 through December 12, 2019, to discuss floodplain management practices, issues, and solutions. Using a three-tiered approach, the State Floodplain Management Office (SFMO) conducted floodplain tours of each community, hosted a six-hour plenary session, and met one-on-one with staff from each community to discuss the communities' floodplain management programs and compliance matters.

The City has addressed or resolved any matters of concern identified by the SFMO during the CAV process, and the SFMO's evaluation of the City's Floodplain Management Program confirms that the City effectively implements its floodplain management program. The State is pleased to close the CAV report. By copy of this letter, the SFMO advises FEMA that the City has a compliant floodplain management program and is deemed eligible to continue participating in the National Flood Insurance Program.

Should you have any questions regarding the Community Assistance Visit or report, please contact me or Shannon Riess at (850) 815-4513 or by email at Shannon.Riess@em.myflorida.com.

Sincerely,

Steve Martin

Steve Martin, CFM
NFIP State Coordinator and Floodplain Manager
Bureau of Mitigation

SM/mk
Attachment
cc w/attach: David Peters, Public Works Director, City of Stuart
Tim Voelker, PE, City Engineer, City of Stuart
Steve Nicolosi, Building Official, City of Stuart
FEMA Region IV, Floodplain Management and Insurance Branch (CIS)
Roy McClure, Natural Hazards Specialist, FEMA Region IV
Shannon Riess, State Floodplain Program Manager, SFMO

PART II: Stormwater Management

Road Design Criteria

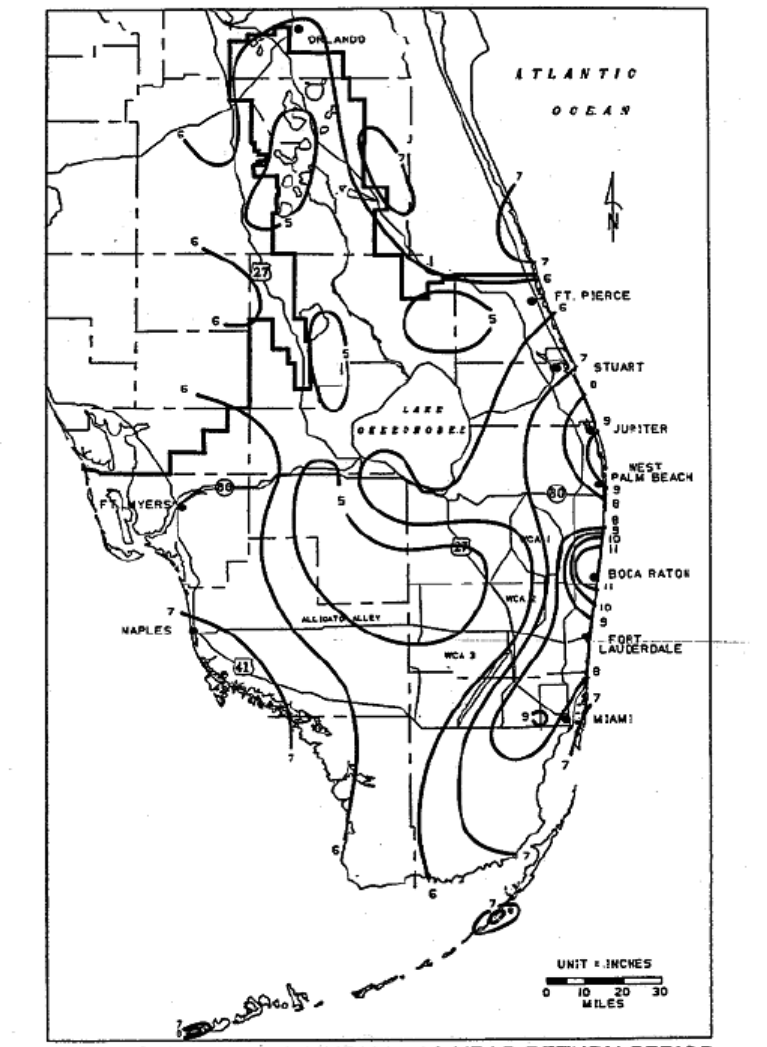


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD

- For local City roads, the design storm is the 10-year, 1-day event
- Approximately 6.8 inches for Stuart
- Set road crown at or above 10-year, 1-day storm event

Building Design Criteria

- For buildings, the design storm is the 100-year, 3-day event
- Approximately 14 inches for Stuart
- Set building finished floor at or above 100-year, 3-day storm event

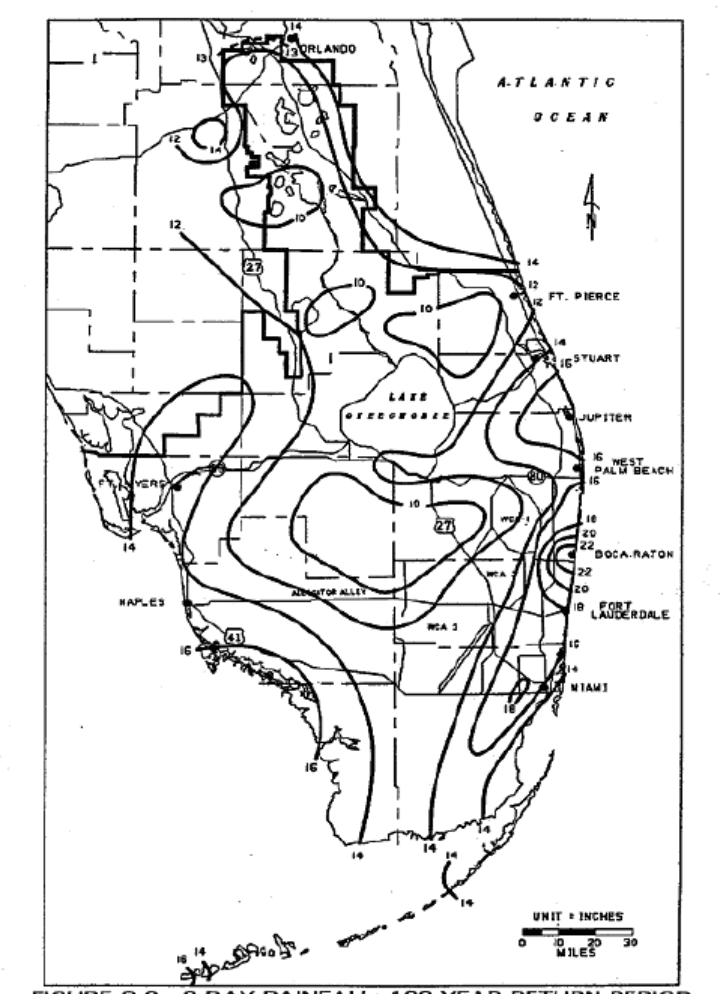
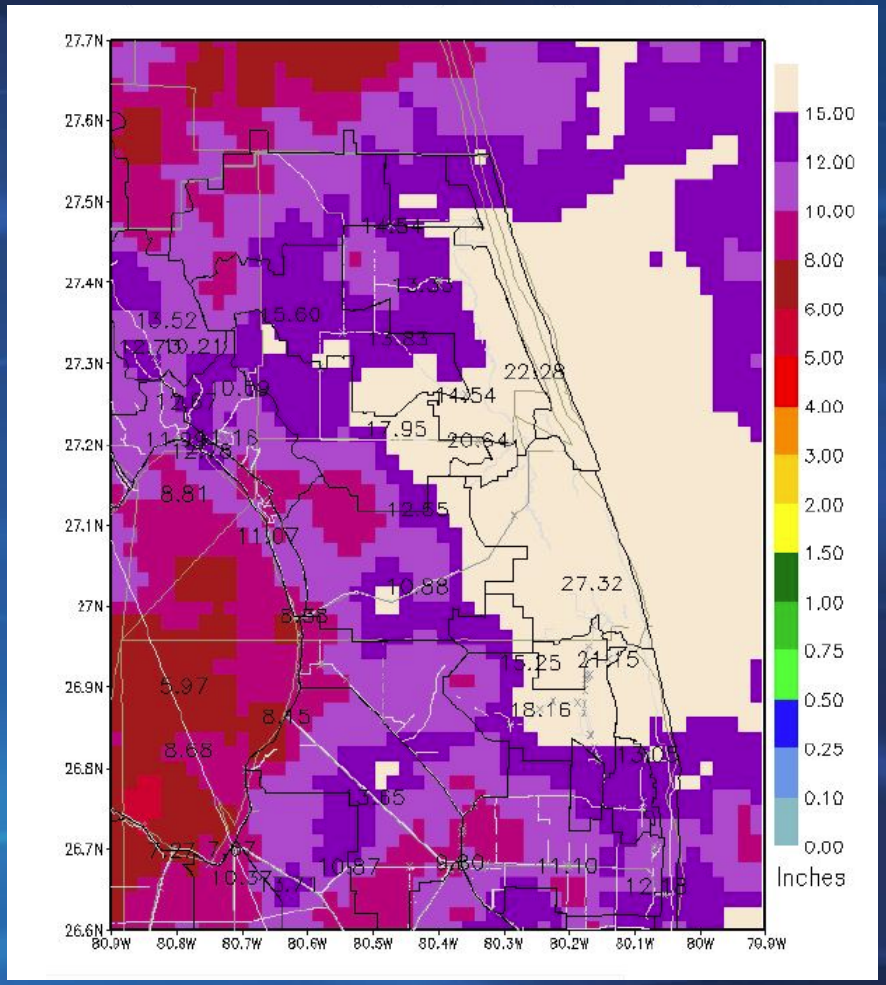


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD

Recent Rainfall



SFWMD 30 Day Rainfall – 20 + Inches for Stuart

May 11 to June 10, 2020

Localized Flooding – June 3, 2020



NW Fork Road



SE Flamingo Street



SW Dyer Drive



SE Mango Place

South Florida Water Management District

- Environmental Resource Permit Applicant's Handbook Volumes I & II specifies stormwater requirements
  - Water quality requirements
    - Volume shall be provided for the first inch of runoff from the developed project, or the total runoff of 2.5 inches times the percentage of imperviousness, whichever is greater
  - Water quantity requirements
    - Post-development discharge rates shall not exceed pre-development discharge rates

City of Stuart

- Section 6.03.00 of the Land Development Code specifies stormwater requirements
  - Water quality requirements
    - Same as SFWMD
  - Water quantity requirements
    - Same as SFWMD

Martin County

- Article 4 - Site Development Standards; Division 9 – Stormwater Management of the Land Development Regulations specifies stormwater requirements
  - Water quality requirements
    - More stringent than SFWMD & City of Stuart
    - Required treatment volume is three inches
  - Water quantity requirements
    - Same as SFWMD and City of Stuart

Suggested Path Forward

- Development Department to organize a workshop with local engineers, as well as, Martin County and SFMWD.
- Any proposed amendments by the workshop will be presented to the LPA and City Commission as an amendment to the Land Development Code.

QUESTIONS



THANK YOU