

FORERUNNER

Hurricane Ian: Response, Recovery, and Building a Path to Resilience

December 5, 2023

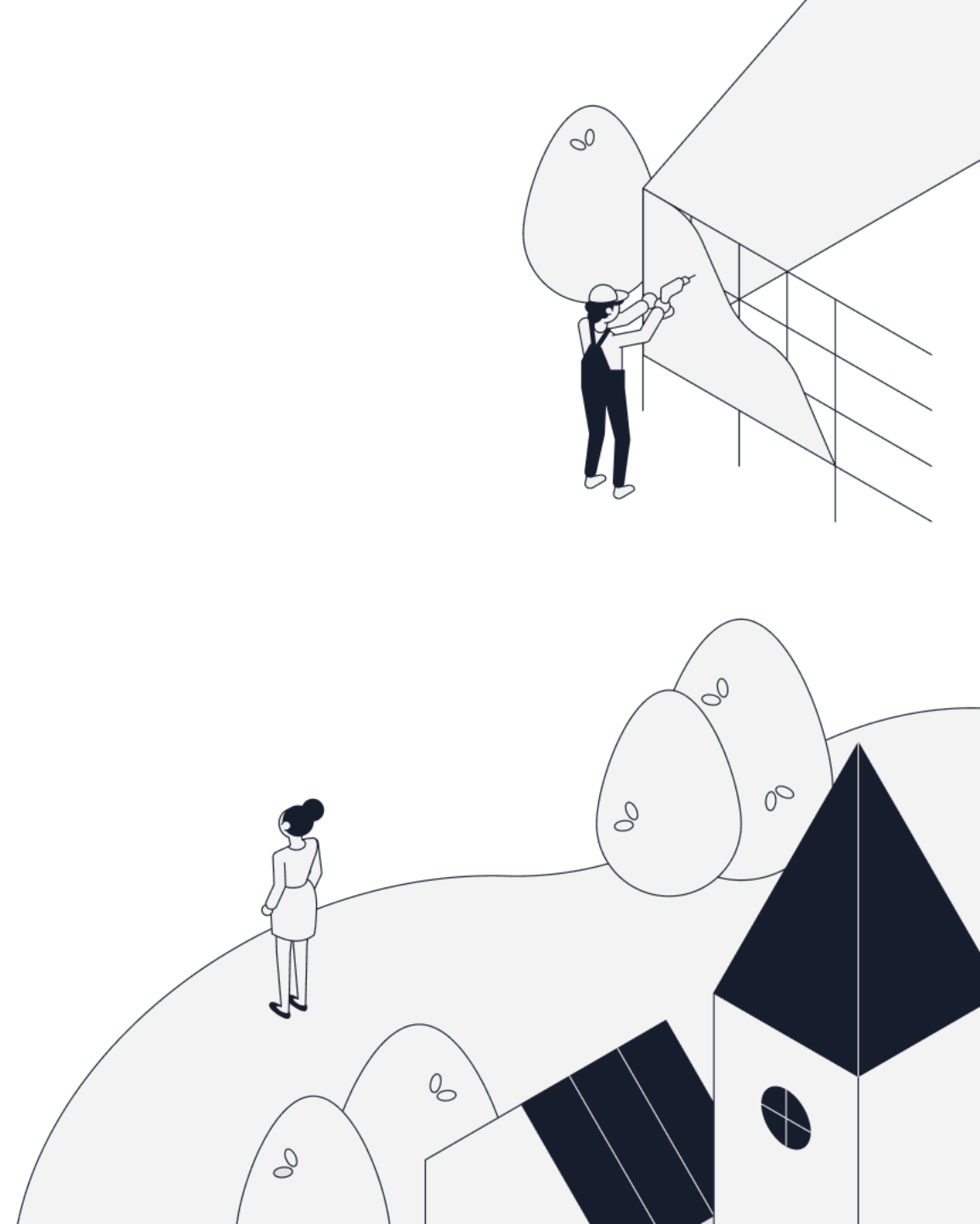
withforerunner.com



WELCOME

Housekeeping

- This presentation is being recorded
- The recording and presentation will be shared via email and posted on our blog
- Use the Q+A or the Chat to ask questions
- CFMs: Complete the post-attendance survey to receive your CEC. The CEC Certificate will be sent via email to you (and the list will be sent to ASFPM) next week



Agenda

- 1 **Introduction**
- 2 Hurricane Ian: Response, Recovery, and Building a Path to Resilience
- 3 Q+A

GOV. PARTNERS

We work with over
80 of the most at-risk
communities
throughout the U.S.



FDEM
Florida



Coral Gables
Florida



Pasco County
Florida



Clearwater
Florida



Jefferson Parish
Louisiana



Aventura
Florida



Miramar
Florida



Pompano Beach
Florida



Middletown
New Jersey



Manasquan
New Jersey



Belmar
New Jersey



Long Branch
New Jersey



Bay Head
New Jersey



Longport
New Jersey



Parkland
Florida



Harris County
Texas

PRODUCT

Our geospatial dashboard drives per-property insight.

FORERUNNER

The screenshot displays a web application interface for a geospatial dashboard. The top navigation bar includes a search bar with the placeholder text "Search for address" and a "Parcel ID: 0351050100090" field. Below the search bar, the address "141 Solano Prado, Coral Gables, FL 33156" is displayed. A "Share public profile" button and a "SI/SD Tracking" button are visible. The main content area is divided into tabs: "Overview", "Activity", "SI/SD", "Documents", and "Logs". The "Overview" tab is active, showing a "Warnings" section with a list of five items: "Lowest Floor does not conform to local regulatory standards", "Machinery does not conform to NFIP requirements", "Machinery does not conform to local regulatory standards", "Flood insurance requirement", and "Flood Zone changes". A "FIRM Info" section is also present, showing a table of flood zone information. The table includes columns for "Flood zone", "In Floodway", "In CBRS", "BFE", "Design Flood Elevation", and "Datum". The "Flood zone" is "AE", "In Floodway" is "No", "In CBRS" is "No", "BFE" is "12.0'", "Design Flood Elevation" is "13.0'", and "Datum" is "NGVD29". A "Parcel-level Info" callout is visible on the right side of the map. The map shows an aerial view of the property with a yellow dot indicating the location. A "Zone AE (EL 12 feet)" label is visible on the map. A "Property Warnings" callout is visible on the left side of the map.

Parcel ID: 0351050100090

141 Solano Prado, Coral Gables, FL 33156

Share public profile

SI/SD Tracking

Overview Activity SI/SD Documents Logs

Warnings

- Lowest Floor does not conform to local regulatory standards
- Machinery does not conform to NFIP requirements
- Machinery does not conform to local regulatory standards
- Flood insurance requirement
- Flood Zone changes

FIRM Info

| Flood zone | In Floodway | In CBRS | BFE | Design Flood Elevation | Datum |
|------------|-------------|---------|-------|------------------------|--------|
| AE | No | No | 12.0' | 13.0' | NGVD29 |

Parcel-level Info

Zone AE (EL 12 feet)

Property Warnings

Agenda

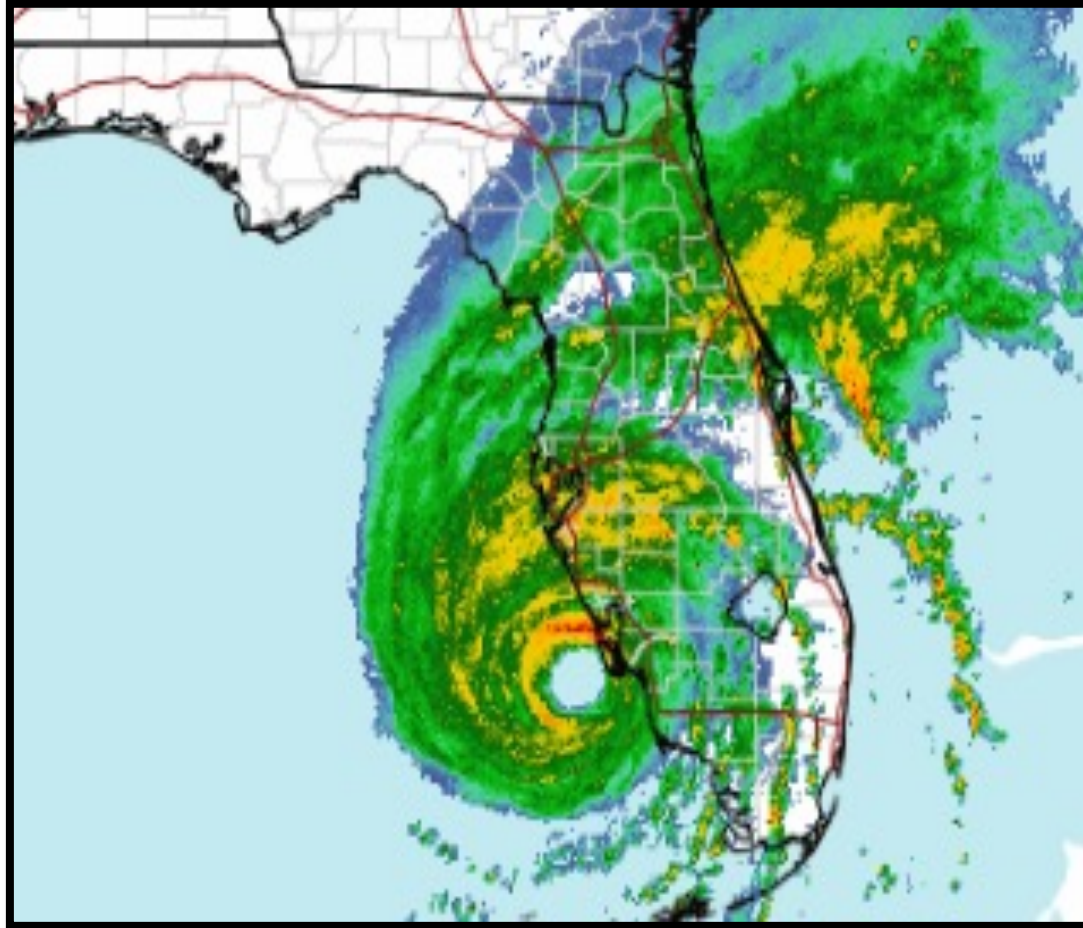
- 1 Introduction
- 2 Hurricane Ian: Response, Recovery, and Building a Path to Resilience**
- 3 Q+A



Billie Jacoby

CFM, CRS Coordinator
Lee County Department of
Community Development

Hurricane Ian 2022



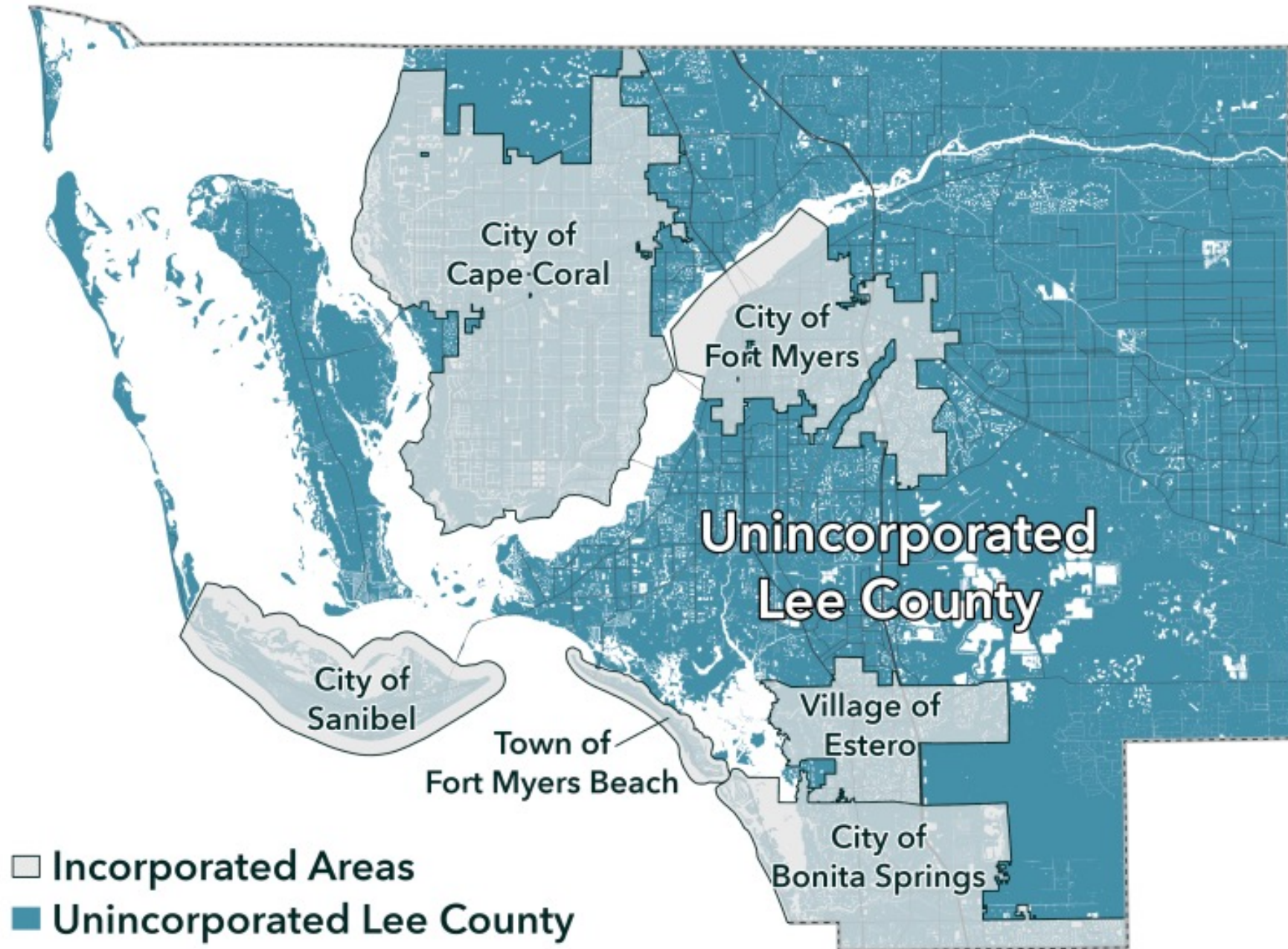
Lee County

Lee County, Florida



Vacation hotspot

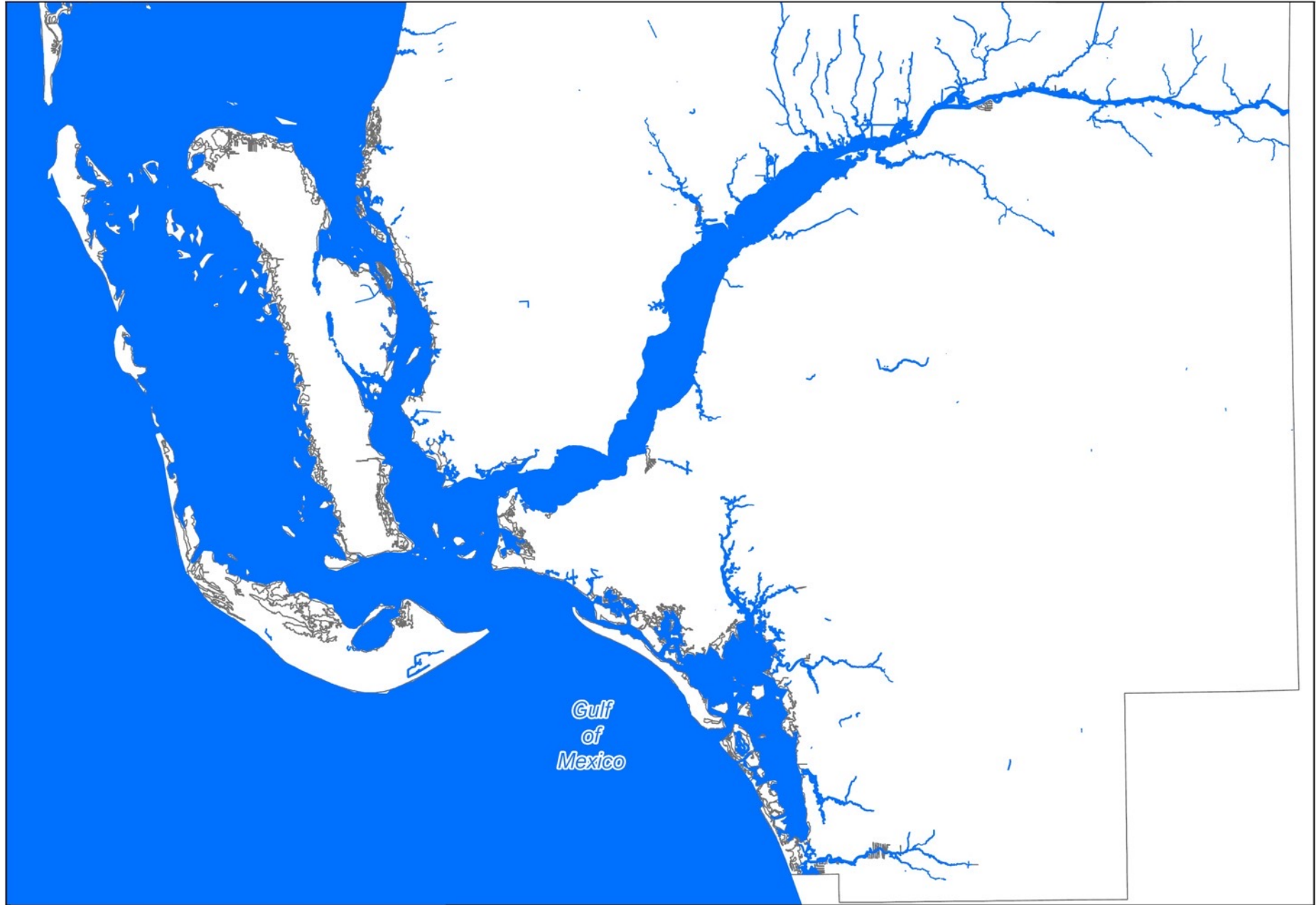




Split into 7 jurisdictions.

Coastal, riverine and barrier island community.

Caloosahatchee River



Hurricane Ian made landfall in Lee County, Florida on Sept. 28, 2022, as a Category 4 storm with a wind speed of 155 mph.

Recently, Hurricane Ian has been retroactively upgraded to a Category 5 (160 mph) storm prior to landfall.

(National Hurricane Center report (https://www.nhc.noaa.gov/data/tcr/AL092022_Ian.pdf).

The landfall intensity in SW Florida is maintained as a Category 4 (155 mph).

All jurisdictions received some type of damage in the form of river/creek/canal flooding, storm surge or wind damage.

Initial damage assessments show Ian caused more than \$7.3 billion in damage to residential and commercial structures in Lee County as a whole.



Figure 11. Series of still images and the approximate local times from a remote camera that recorded a timelapse video of storm surge inundation and destruction in Fort Myers Beach. Credit: Max Olson.

11-Foot-Plus Storm Surge



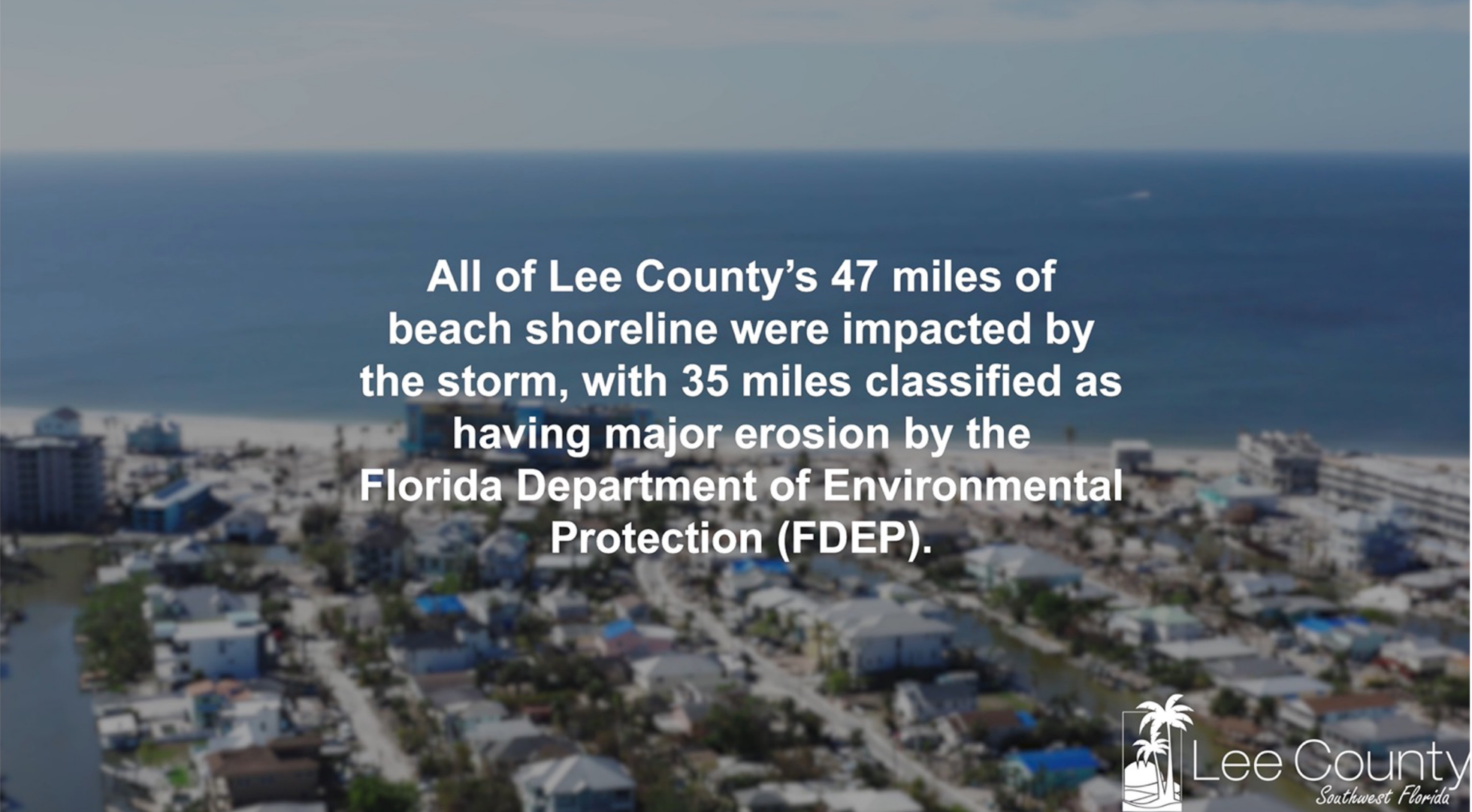
Lee County
Southwest Florida



Lee County
Southwest Florida

10 million cubic yards of debris



An aerial photograph of a coastal town, likely in Lee County, Florida. The foreground shows a dense residential area with many houses and some commercial buildings. A body of water, possibly a canal or river, is visible on the left side. In the background, a wide beach stretches along the coastline, meeting the ocean. The sky is clear and blue.

All of Lee County's 47 miles of beach shoreline were impacted by the storm, with 35 miles classified as having major erosion by the Florida Department of Environmental Protection (FDEP).



Lee County
Southwest Florida

Matlacha and Pine Island









Fort
Myers
Beach

Times
Square

Before



Fort
Myers
Beach

Times
Square

After



Sanibel Causeway



Sanibel Causeway before and after



(a)



(b)

Imagery courtesy of the NOAA Remote Sensing Division at <https://storms.ngs.noaa.gov/storms/ian/index.html#17/26.47970/-82.02219>

















**Storm surge potentially
reached more than
25 miles inland up the
Caloosahatchee River.**

Downtown Fort Myers Caloosahatchee River







18 miles upriver



Coastal A Zone: Areas with potential for breaking waves and erosion during the base flood.

Example of Coastal A
Zone erosion.

Structure resides 16
miles up the
Caloosahatchee River.



Coastal A Zone wave damage interior





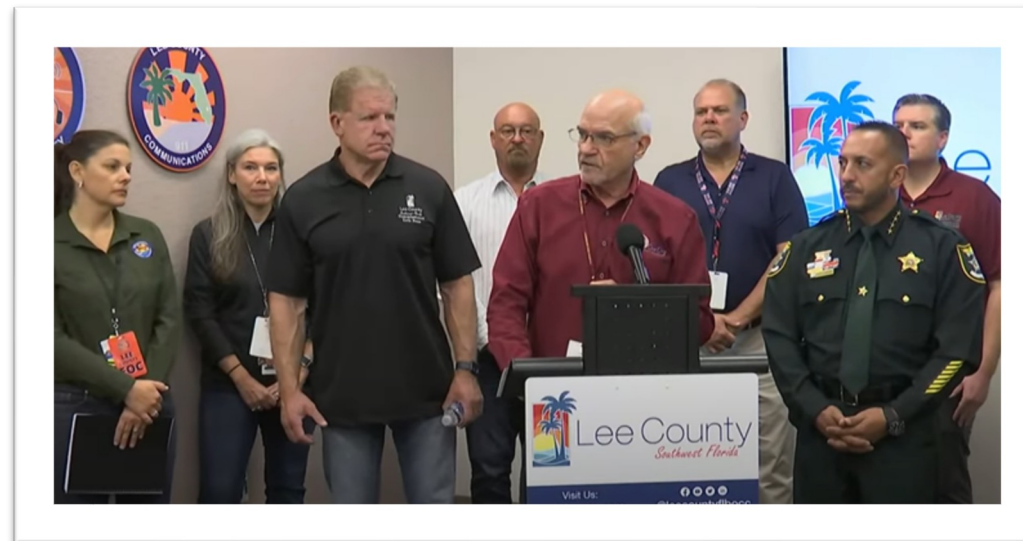






Response

Outreach/Communications



Damage assessment 2 days after the storm

Data translated to a GIS interactive map

Other entities contributed to data points



Lee County Hurricane Ian Damage Assessments

Initial Damage Assessments

Total Estimated Loss

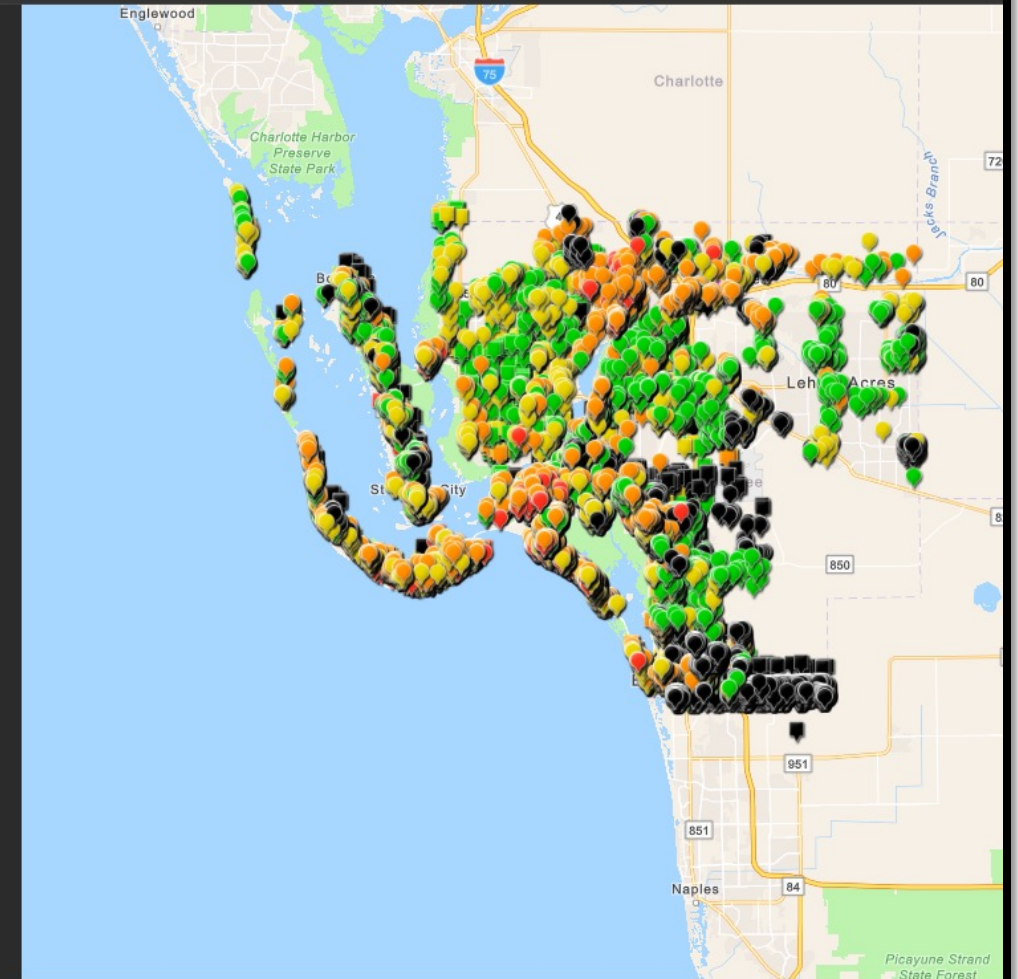
Destroyed
\$535,654,432

Major
\$3,755,601,230

Minor
\$2,103,501,376

Affected
\$977,704,280

Total
\$7,372,464,318



University of South Florida, County of Collier, FDEP, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Residential

Commerical

All

- Worked closely with our Emergency Management Division Team
- Operational adjustments were made to focus on storm damage repair assessments only
- A Hurricane Ian landing page was created by our Public Information Office (PIO)
- PIO pushed out information regarding the 50% rule and information regarding improvements/repairs and permits. (Including what did and did not require a permit)
- All non-Ian related projects put on backburner
- Permitting lobby and phone hours were extended.
- Permitting office temporarily altered construction permitting and inspections for rebuilding/renovating.
- Staff has always performed Substantial Improvement/Substantial Damage reviews as standard practice even under sunny skies. After the storm we fine tuned our procedures to process large quantities post-disaster reviews.
- A remote office was established on Pine Island. More recently, scheduled transportation has been provided to and from the Permitting office.
- Emergency recovery permitting procedures were implemented. All efforts ensured those with hurricane damage were given priority.
- Staff referred to the Florida Post-Disaster Toolkit for Floodplain Administrators (last updated by the FDEM State Floodplain Management Office) 2020
- Staff referred to the SI/SD Desk Reference FEMA P-758 (May 2010)

Hurricane Ian Landing page



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Debris Removal



Click here for

Operational Adjustments



Click here for

Recovery Resources

Latest News

Upcoming Events

Lee County Community Development returns to Monroe Street office to continue Emergency Building, Driveway and Right Of Way (ROW) Permitting operation post-Hurricane Ian



Lee County
Southwest Florida

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Hurricane Guide

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[Parks Progress Map](#)

HURRICANE IAN RECOVERY UPDATES

Lee County offices and operations are open, although some locations remain unavailable for typical operation due to storm damage or are in use as a recovery site. For additional details go to [Operational Adjustments](#).


Resilient Lee Recovery Task Force

In response to the massive and widespread devastation caused by Hurricane Ian,




Progress Report landing page


[Ilan Progress Report](#) [Housing](#) [Public Works](#) [Debris](#) [Parks & Beaches](#) [FEMA Individual Assistance](#) [SBA Assistance Applications](#) [Glossary](#)



Ilan Progress Report




Hurricane Ian's Impact on Lee County

Watch on  YouTube

Hurricane Ian made landfall in Lee County on Sept. 28, 2022, as a Category 4 storm with a wind speed of 155 mph. It was the largest hurricane to make landfall here and is the fifth largest storm in U.S. history. Initial damage assessments show Ian caused more than \$7.3 billion in damage to residential and commercial structures. It impacted every county beach, all county parks, every traffic signal and generated an estimated 10 million cubic yards of debris, with 6 million of that collected roadside in unincorporated areas. The storm left more than 130,000 in need of housing assistance.

About this site

This site is dedicated to updating you on the post-Ian fiscal needs, progress and opportunities with our state and federal partners as the county continues to move forward after the storm.



City of Cape Coral

Lessons learned

- Ordinance updates
- Emergency Management perspective: evacuations
- Record keeping
- More photos
- Flexibility with damage assessment assignments

<https://www.youtube.com/watch?v=3ASbbOPwYR8>

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Thank you!

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