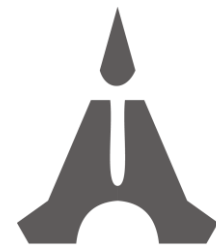


LEVERAGING SURVEY
TECHNOLOGY TO
RESTORE COMMUNITIES
IN THE WAKE OF
HURRICANE IAN
RESILIENCE





GRANT FICHTER, PSM

- Survey and Mapping Manager
- Surveying runs in the Family
- 24-year career all with AIM





ABOUT AIM

Group 2

- Project Development and Environment (PD&E) Studies

Group 3

- Highway Design – Roadway

Group 7

- Traffic Operations Design

Group 8

- Surveying and Mapping

Group 10

- Construction Engineering Inspection

Group 13

- Planning

Facts and Stats

- Family owned and operated for 43 years with ties to FDOT for all 43 of those years.
- Currently 165+ professionals and administrative staff
- Successfully completed over 10,000 projects
- Served over 75 public clients and 1,200 private sector clients

OFFICE LOCATIONS



Orlando

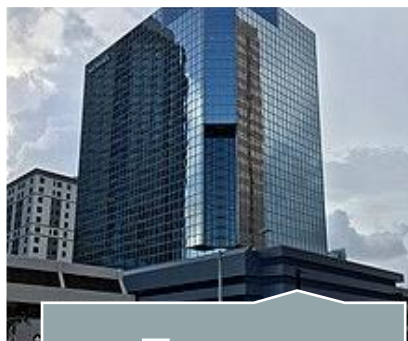


Bartow



Fort Myers

HEADQUARTERS



Tampa



RESILIENCE

SURVEY & MAPPING CAPABILITIES



- As-Built Survey
- Boundary Survey
- Construction Layout Survey
- Control Survey
- Hydrographic Survey
- Mean High Water Line Survey
- Quantity Survey
- Specific or Special Purpose Survey
- Pre and Post Construction Survey
- Topographic Survey
- Terrestrial Mobile and Static LiDAR
- Parcel / Easement Sketch and Descriptions
- Subsurface Utility Designation & Excavation
- Designating and Locating
- Maintained Right-of-Way Survey
- Expert Technical Witness
- Global Positioning System (GPS) Survey





SURVEY AND MAPPING

Hydrographic Survey

RESILIENCE

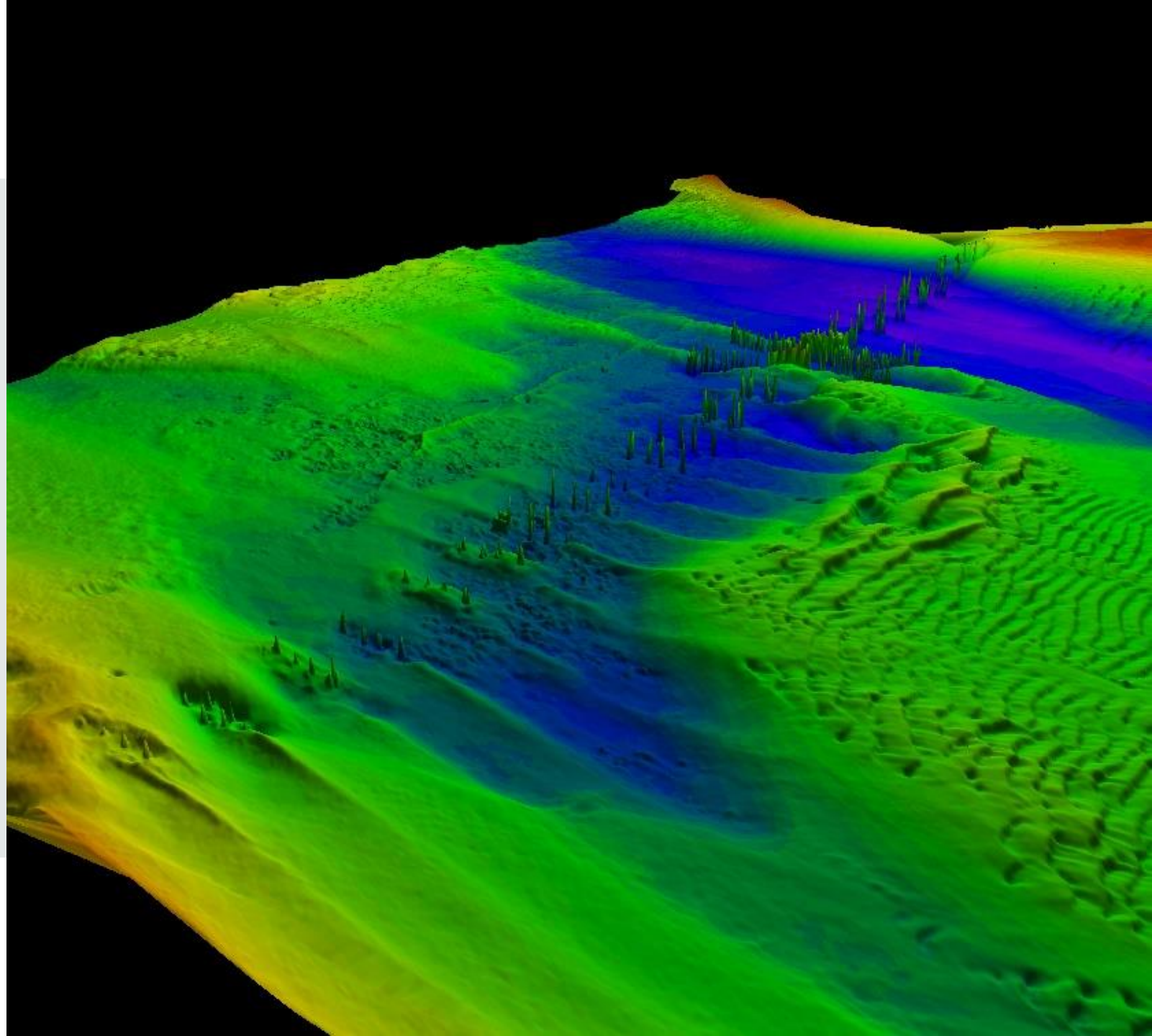
HYDROGRAPHIC SURVEY

- Multibeam Hydrographic Survey
- Bathymetric Mapping
- Magnetometry
- Side Scan
- Pre & Post Dredge Survey
- Dredging Volume Calculations
- Turbidity Testing
- Port/Harbor Maintenance Survey
- Beach Nourishment Survey
- River & Estuary Survey
- Beach & Canal Survey
- Navigation Condition Survey
- Emergency Post Storm Survey



HYDROGRAPHIC MULTI BEAM

Big Carlos Pass,
Fort Myers Beach





HURRICANE IAN

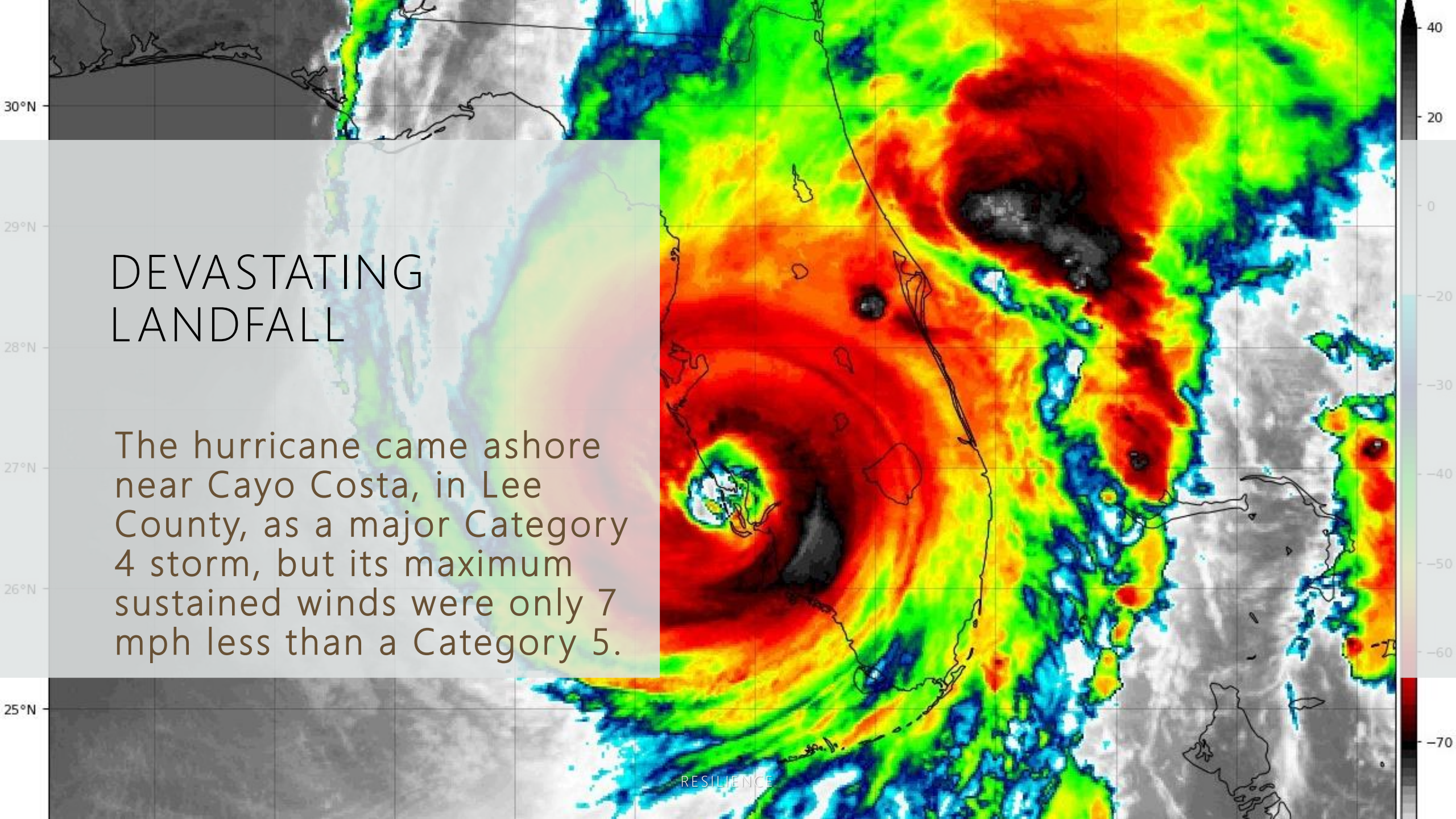
September 2022



DEVASTATING LANDFALL

The hurricane came ashore near Cayo Costa, in Lee County, as a major Category 4 storm, but its maximum sustained winds were only 7 mph less than a Category 5.

RESILIENCE



POST STORM



RESILIENCE

POST STORM



RESILIENCE

SURVEY RESPONSE TIMELINE

IAN LANDFALL

September 28, 2022

CREW ON SANIBEL

October 2, 2022

SURVEY RESULTS

Bridge piling report and
scour analysis
October 24, 2022

CALL FROM EMERGENCY
CONTRACT CONSULTANT

October 1, 2022

SEE BOTTOM

On the water
October 5, 2022



TASK OBJECTIVES

- Targets & control points
- Shoot components of bridge, still stable?
- Use See Bottom to assess channels for boat and barge access
- Use See Bottom to determine cracks, breaks or severed pilings in water, not visible to divers



RESILIENCE

CHALLENGES FACED

- Communication
 - Cell lines were down
 - Was able to communicate by email
 - Collecting data by use of radio signal rather than cell
- Mobilization risky
 - Debris on roads
 - Lack of gas
 - Boat ramps destroyed
 - Channel markers missing





WHAT WE LEARNED FOR FUTURE

- Purchase equipment with radio communication
- Fuel up vehicles and boats
- Don't leave critical equipment on the floor

THANK YOU

Grant Fichter, PSM

AIM Engineering & Surveying, Inc.

gfichter@aimengr.com



RESILIENCE