

Hurricane Ian

STORM DAMAGE ASSESSMENT

A study of the installation of manufactured/mobile homes and the effects of storm damage.



In this photo shot with a drone, shrimp boats lie grounded atop what was a mobile home park following the passage of Hurricane Ian on San Carlos Island in Fort Myers Beach, Fla., on Oct. 7.

Rebecca Blackwell/AP

Prepared by the

Manufactured Housing Section

Bureau of Dealer Services

Florida Department of Highway Safety and Motor Vehicles

MOBILE/MANUFACTURED HOME DAMAGE ASSESSMENTS FROM HURRICANE IAN

NOTE

The purpose of this report is strictly for the use of the Florida Department of Highway Safety and Motor Vehicles to determine the effectiveness of current department administrative rules governing the installation of mobile/manufactured homes.

All statistics reported here are from a sample of mobile homes inspected. In addition, due to debris, entry into some of the mobile homes observed was not possible to make more specific determinations. Consequently, any of the statistics reported here are estimates. There may be differences between what is reported here and determinations by local building departments, insurance companies or other government agencies

When reporting the number of homes "destroyed or non-repairable" the totals represent homes with severe roof damage to the point of the roof being blown from the home, one or more exterior walls being separated from the home or water completely penetrating the unit.

Department of Highway Safety and Motor Vehicles Division of Motorist Services Manufactured Home Section

Manufactured Home Damage Assessment After Hurricane Ian– September 2022

Hurricane Ian was a monstrous destructive Category 4 Atlantic hurricane that was the deadliest hurricane to strike the state of Florida since the 1935 Labor Day hurricane. Ian was the second major hurricane of the 2022 Atlantic hurricane season, with wind speeds at landfall of 150 miles per hour (mph) just 7 mph shy of a Category 5 classification, making it a tie for the fifth strongest storm ever to strike the United States.

Hurricane Ian made landfall in Cayo Costa, a barrier island west of Fort Myers, as a category 4 hurricane, early on September 28, 2022, followed by a second landfall near Punta Gorda. A catastrophic storm surge struck the west coast of Florida south of Tampa with over 20 inches of rain causing major flooding; Ian spent many hours slowly crossing Florida and emerged off the east coast as a tropical storm in the late morning hours of September 29, 2022.

Hurricane Ian caused more than 144 deaths in Florida with catastrophic damage and losses estimated to be in the billions. Much of the damage was from flooding brought about by a storm surge of 10–15 feet. The cities of Fort Myers, Cape Coral, and Naples were particularly hard hit. Millions were left without power in the storm's wake, and numerous inhabitants were forced to take refuge on their roofs. Sanibel Island and Pine Island were hardest hit by the storm surge, which destroyed numerous structures and damaged both the Sanibel Causeway and the bridge to Pine Island.

Hurricane Ian highlighted the vulnerability of older mobile homes, especially throughout Charlotte, Collier, DeSoto, Hardee, Lee, Sarasota, and Volusia counties. This manufactured home storm damage assessment survey was only able to cover a small portion of Charlotte, DeSoto, Lee and Sarasota counties due to the massive infrastructure damage from the storm, road closures, and inaccessibility to several areas.

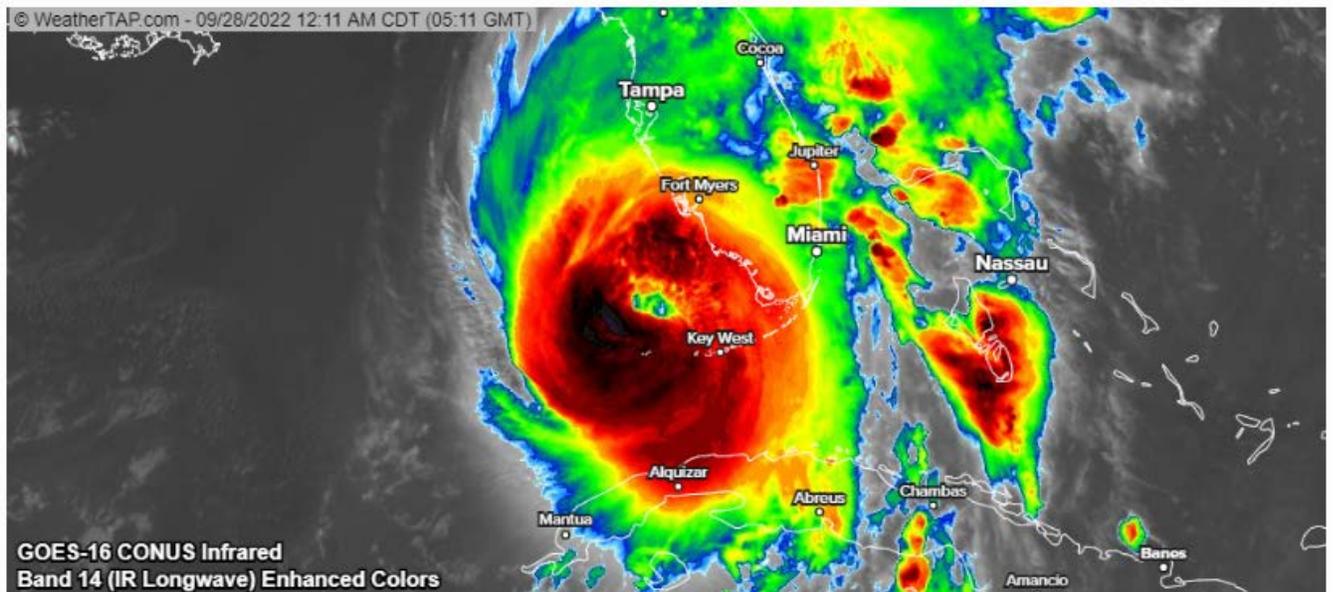
Manufactured homes in Florida are built to HUD criteria for Wind Zone II (wind speed 100 mph), Wind Zone III (wind speed 110 mph) and Exposure D (home within 1500 feet of the coastline).

During this limited storm assessment, three North Fort Myers' mobile home parks (Laurel Estates, Lake Arrowhead, and Serendipity) in Lee County were assessed that participated in the Mobile Home Tie Down Program (MHTDP) in 2021. Of the homes observed, none left their foundation with much of the damage (approximately 80%) due to carports and accessory buildings lifting off the home. Approximately 30% of those, the damage to the carports and accessory building caused part of the homes roof to be taken with it. Serendipity Mobile Home Park seemed to have the most damage and had the most "pre-HUD" homes.

In Charlotte and Sarasota counties Mobile Gardens along with all other parks in Englewood suffered significant damage. These parks consist mostly of older model and “pre-HUD” homes and is where most of the debris came from. Most of it was to the roofs, siding, sheds, and carports. In each park, especially Mobile Gardens (where half of the homes were obliterated by nine hours of high winds) some older homes remained standing along with the newer models. The ones that survived mainly had mortar skirting intact, no noticeable damage to their piers, stabilizer systems, and anchors.

Most of the homes assessed at Lake Suzy in DeSoto County were on a lot next to the park awaiting the installers to complete setup and installation. Some of the pictures show homes in the distance that were already setup and installed. They did not sustain damages except for carports, siding, and some missing shingles.

All counties in the track of Ian suffered widespread destruction due to wind, storm surge, and flooding.



The forecast calls for the storm to briefly become a Category 4 hurricane with winds over 130 mph before making landfall south of Tampa, between Sarasota and Fort Myers.

Laurel Estates, North Fort Myers



Located approximately 25 miles east of landfall.
Participated in Mobile Home Tie Down (MHTD) Program in 2021.
No homes observed in this park left their foundation.
Accessory buildings and carports damaged beyond repair.
Roof damage when carports lifted.
Current regulations require carports to be self-supported or home designed to carry the load.

Lake Arrowhead, North Fort Myers



Participated in Mobile Home Tie Down (MHTD) Program in 2021.

No homes observed in this park left their foundation.

Accessory buildings and carports damaged beyond repair.

Roof damage when carports lifted.

Serendipity MHP, North Fort Myers



New home set in circled area in red in left picture and above—performed as designed.



Pre-HUD homes complete loss.



Serendipity MHP appeared to have the most damage and had the most “pre-HUD” homes. Participated in Mobile Home Tie Down (MHTD) Program in 2021.

Mobile Gardens MHP and Holiday Estates MHP, Englewood



Piles of metal line the streets of the Holiday Estates MHP down the road from Mobile Gardens MHP in Englewood.

Some were left with nothing except a shed. Some have turned sheds into temporary housing. No further information available.

Alameda Isles, Englewood



Alameda Isles is a 55+ community. They have approximately 355 double-wide manufactured homes. Damage in this area consisted of roof, lanais, and carports being blown off. Five years ago, in September 2017, Hurricane Irma tore thru the park and damaged about 30 homes. Numbers for homes damaged from Ian is unavailable.

Lazy River Village Inc, North Port



Lazy River Village in North Port - Per sales office, this mobile home park has approximately 350 homes. Most of the damage seen was to older model home roofs with attachments.

Buttonwood Village, Punta Gorda



Freestanding carport design. The carport is gone but, it did not take the homes roof with it.



Newer set up performed well during the storm.



Another example of a self-supported carport.

Park Hill MHP & River Haven located on Alligator Creek



Newer set performed great.



Lost some vinyl siding.



The following pictures show self-supported, freestanding carports that withstood the storm.

Note: additional fasteners and diagonal bracing helped hold these carports.



Both porch and carport are repairable—this set is a prime example of why it is important carports/structures be free standing and self-supporting, unless home is designed to carry the load. Shows I.E. Host Beam, additional perimeter blocking, etc. used.

The Preserve, Lake Suzy



The above pictures show homes that were on a storage lot next to the park awaiting setup and installation—per the manager the floors were temporarily lot set with ground anchor at each 1 of the 4 corners (4 anchors per floor) they were exposed to 150+ mile/hour winds for several hours.



The above pictures show homes circled in red in the distance that were already setup and installed that did not sustain damages except for carport, siding, and missing shingles. The track marks in the sand indicate that this was in a cleanup process and show damaged homes being put in a pile.



Homes that were correctly anchored and mated only suffered cosmetic damage such as vinyl siding, trim, shingles, etc.





Pictures show roof, carport, or carport awning damage in and around Lake Suzy, Florida

