

Hurricane Andrew's Path to Destruction

Hurricane Andrew is the second costliest hurricane and one of the most intense to ever hit the United States. Its name has been retired from future use.



Andrew's path to the United States. Courtesy NASA.

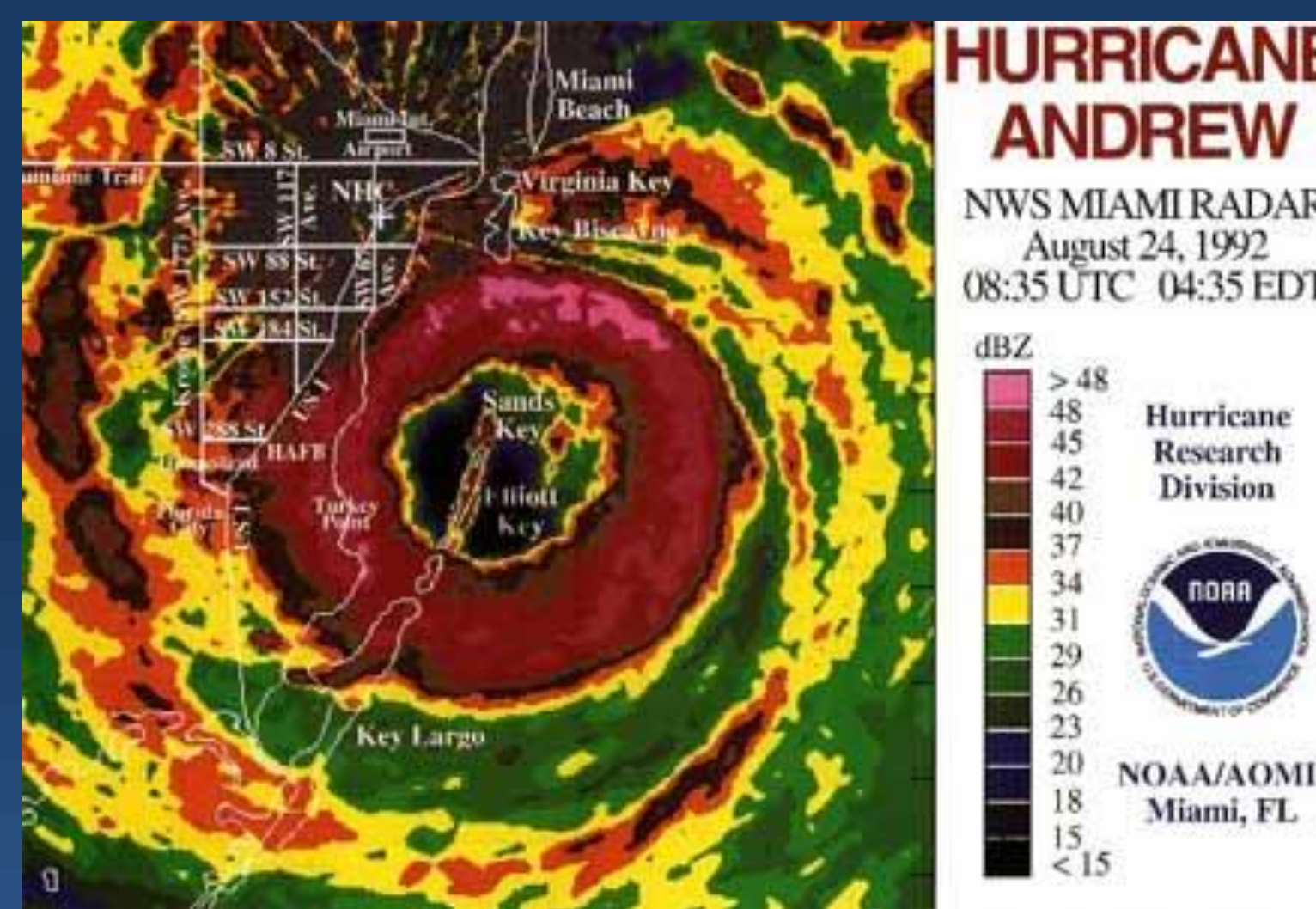
Impact on U.S.

- 1st Landfall: Aug 24, 1992, Homestead, FL
- Category: 5
- Wind: 175 mph
- Pressure: 922 mb
- Storm Surge: 17 ft
- 26 deaths directly
- 39 deaths indirectly
- 49,000 homes destroyed
- 108,000 homes damaged
- 2nd Landfall: Aug 26, south-central LA
- Damage: \$26.5 Billion (U.S. total)

Background

Hurricane Andrew was the first tropical cyclone of the season in 1992. Andrew began as a tropical wave off the west coast of Africa and grew into a tropical depression on August 16, 1992. It grew slowly as vertical wind shear almost caused it to dissipate in the Atlantic. It did not cause alarm until August 21, days before it hit, as the storm intensified. On August 22, Andrew, now a tropical storm, picked up speed, developed an eye, and was officially declared a hurricane. Andrew slammed into the Bahamas on August 23 as a Category 5 hurricane on the Saffir-Simpson Scale as south Florida residents prepared for the storm to come ashore.

Andrew hit Homestead, Florida early on August 24, causing devastation and an estimated \$25 billion in damage in Dade County. The worst of the storm narrowly missed Miami. Andrew was a fast moving storm, passing through Florida in just 3 1/2 hours. The storm continued into the Gulf of Mexico and hit a rural area of south-central Louisiana as a Category 3 hurricane on August 26. The storm then merged with a frontal system over the Mid-Atlantic states.



Radar image showing the eye and eyewall at landfall in Homestead. Courtesy NOAA/AOML.



Andrew's Path from Meteosat 3. Courtesy NOAA.

Saffir-Simpson Hurricane Wind Scale		
Category	Sustained Winds	Damage Done by Hurricane
1	74-95 mph	Damage to roof shingles, vinyl siding, gutters. Large tree branches snap, shallow rooted trees uprooted. Power lines and pole damage lead to power outages.
2	96-110 mph	Major damage to roof and siding. Shallow rooted trees snapped or uprooted. Almost total power outages expected.
3	111-129 mph	Well-built homes may have major damage or removal of roof decking, gable ends. Trees snapped or uprooted. Electricity, water unavailable.
4	130-156 mph	Well-built homes may have severe damage, may lose roof structure, exterior walls. Trees snapped, uprooted. Power lines down. Long-lasting power outages. Uninhabitable area.
5	157 mph or higher	Well-built homes destroyed, with roof failure and wall collapse. Fallen trees and power poles isolate residential areas. Long-lasting power outages. Uninhabitable area.

"Cars were damaged from roof debris. It looked like a bomb had gone off, it really did."
 -Doug Austin, National Public Radio

"When the hurricane first came, we prayed for our home landscaping. Then when the ceiling caved in, we started to pray for our house. When the roof blew off, we started praying our family would survive."
 -David Horenstein, Sun-Sentinel in Miami, FL

Lessons Learned

The biggest lesson that Hurricane Andrew taught Florida officials was that a new building code for houses was in order. New houses could not withstand the sustained winds from the hurricane, while older houses could. The Florida Building Code came from alterations to the International Building Code and now accounts for new wind standards. The roof and structure standards in Florida are now stronger as are windows and doors to protect from debris and wind. This Building Code now allows for residents to simply bunker in their houses instead of uprooting to a shelter.



Destruction in South Florida. Courtesy National Weather Service, Miami, FL.



Damage in South Dade County, FL. Courtesy Ray Fairall.



Destruction in Pinewoods Villa, FL. Courtesy NOAA.



Deering Estate in FL. Water marks from storm surge. Courtesy NOAA.