

Be Prepared

Forecasting what Mother Nature has in store for 2005

Hurricane season will never feel the same in Florida following last summer's incredible run of storms. Charley, Frances, Ivan, Jeanne—say no more.

But scientists are predicting another season of above-average activity this year. "You just have to understand that it could be another horrific season," says Major Michael Murray, director of Sanibel's Emergency Management Plan. "I know no one wants it, of course, and everyone's still fatigued from last year's season, but we can't let our guard down."

Not only was it beyond reason that four hurricanes would affect Florida within one season following a twelve-year hiatus since Hurricane Andrew, but the particulars of Hurricane Charley, the Category 4

storm that slammed Lee County's coast, defied scientific logic. "Charley went from a [Category] 2 to a [Category] 4 in three hours," says Robert Van Winkle, chief meteorologist with NBC2 in Ft. Myers. "It's a textbook case that will be studied for years to come. The eye of Charley was only about six miles wide at its smallest point....[T]hat's virtually unheard of with a hurricane—the eyes of Frances and Jeanne were thirty-five to forty miles wide."

Charley's tight, compact, fast-moving nature intensified its impact. Sanibel saw winds that reached 130 miles per hour, and winds of nearly 150 miles per hour were reported

by Barbara Linstrom-Arnold



If a mandatory evacuation is ordered for Southwest Florida this year, local emergency personnel expect people to take it more seriously than ever.

LARGE PHOTO COURTESY OF NOAA/NATIONAL CLIMATIC DATA CENTER; INSET BY LIZ NEWBARK



Robert Van Winkle of NBC2 in Ft. Myers uses computer programs and the station's Doppler radar to keep residents informed about approaching storms.

About 240 people stayed on Sanibel and Captiva during Charley, despite calls for mandatory evacuation. "If we even had a ten- to fifteen-foot storm surge, people who stayed would drown," says Murray. "And it would wipe out the causeway. It would be a much, much different scenario. We had no loss of life last year, and I know there are people who will stay no matter what and God bless them—seriously."

The 2005 Outlook

Prior to last summer, forty years had passed since Hurricane Donna hit Lee County. For most residents, Charley was their first hurricane. For old-timers like native Sam Bailey, it was a return to earlier days on Sanibel.

"I was only three years old when the hurricane of 1926 hit, but I remember it," says Bailey, who stayed in his family-run supermarket on Sanibel during Charley. He recalls the intense flooding from the hurricane of '35. And salt spray from high winds in the hurricane of '44 that killed hundreds of citrus trees. He even remembers the stories his dad told of the hurricane of 1910. "[But] as far as wind is concerned, Charley was the worst I've seen," he says.

Robert Van Winkle

Such anecdotal recollections as well as the historical record portend a much greater probability for hurricanes to be a part of Florida's future than they have been in the recent past. From 1928 to 1965, fourteen major hurricanes made landfall in Florida, five of those on the southwest coast. However, from 1966 until last summer, only one major hurricane—Andrew in 1992—made landfall in the Sunshine State.

Even science-based forecasters wonder if Florida's luck has run out. Phil Klotzbach, co-author with hurricane guru

PHOTOS BY NICK ADAMS IMPACTUK.COM



Bill Gray of the "Landfall Probability Report" for 2005, admits that logic can only go so far. "Forecasting in general is scientific, but there's also some intuition involved," he says. "The forecast isn't always going to work well, because you have fifty-four years of data that you're basing it on, and not every atmospheric realization has been seen in fifty-four years."

Klotzbach and Gray's annual predictions are based on statistical analysis going back to 1970. For this summer, projections as of press time are for thirteen named storms, seven hurricanes, and three major (Category 3 to 5) hurricanes. Those numbers together would account for a season of 135 percent activity—35 percent above normal. Klotzbach and Gray also predict that there is a 73 percent chance that a major hurricane will make landfall somewhere on the U.S. coastline in 2005.

At the outset of last summer, predictions called for a season of 145 percent activity. The end result was a season with an outlandish 230 percent activity. "Last season was almost

PHOTOS COURTESY OF THE FLORIDA ARCHIVES



Before Charley, 1960's Hurricane Donna was the last hurricane to hit Southwest Florida, affecting (clockwise from left) Naples, Ft. Myers, and Port Charlotte; 1992's Hurricane Andrew (above) was the last major hurricane to make landfall in Florida prior to 2004.

two and a half times a normal year," says Klotzbach. "The reason we didn't predict a more active season last year was, despite the fact that the Atlantic was very, very warm, we also had warm waters in the central Pacific. Not quite El Niño conditions, but fairly close, and in general that reduces tropical cyclone activity. However, the atmosphere didn't respond last year to those warm conditions in the Pacific until the month of October, so the August and September conditions were just about perfect for storms to develop."

Southwest Florida isn't off the hook after having experienced a landfall last year. "Having one last year doesn't affect the odds of having one this year," says Klotzbach. "It doesn't make it less likely or more likely; it's still the same as it was last year. But the odds of a storm hitting one spot on the coastline in any one year are very small."

Since 1995, forecasters believe that the Atlantic basin has entered an active cycle. "From 1970 to 1994, the average number of major hurricanes we had was 1.5 per year," says Klotzbach. "Since 1995, we've averaged 3.8 major hurricanes forming out in the Atlantic per year. So, it's gone up a lot."

Those same statistics have led forecasters to discount the theory that global warming is causing an increase in the instance of hurricanes. "Between 1970 to 1994, when the globe warmed considerably, Atlantic activity was way

"Charley was basically a big tornado."

at landfall in Port Charlotte. "Charley basically was a big tornado," says Van Winkle. "We didn't get a lot of storm surge because it was moving very quickly and it didn't have time to churn up the water enough....If Charley had been bigger and slower, you would still be picking up the pieces on Sanibel today."

Because of Charley's unique status, the damage from the storm was much different than what would have occurred if the predictions of a twelve- to eighteen-foot storm surge had been realized. "We really didn't get hit with a true Category 4 hurricane," says John Bates, fire chief on Captiva Island. "If there's another Category 4, we have to expect much, much worse conditions than with Charley. And the storm surge that comes with those stronger hurricanes would make a completely different situation out here for survivability."

Southwest Florida isn't off the hook after having experienced a landfall last year.

down. And although it's gone up since 1995, it's gone down somewhat in other basins where if global warming was to blame, you would also expect it to go up," Klotzbach explains. "Especially in the east Pacific, it's gone down, so global warming doesn't seem to be having any effect."

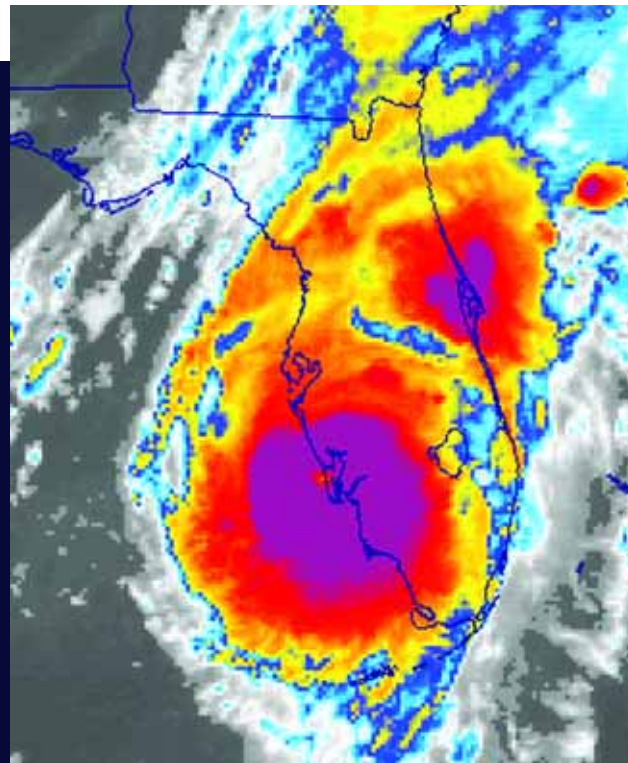
Tracking the Storms

Predicting the seasonal occurrence of hurricanes is one thing. Forecasting actual tropical activity and pinpointing landfall is another. The National Hurricane Center in Miami directs forecasting and the plotting of landfall.

"Getting a hurricane landfall pegged within about sixty miles...is a very good record, and that's what the hurricane center has right now," says NBC2's Van Winkle. "Just fifteen to twenty years ago, they couldn't get it closer than 150 miles, so it has improved."

However, as Charley proved, changes in the intensity of a hurricane can come completely out of the blue. "One thing that is still very evident is that intensity forecasting has a long way to go; we just don't know what causes these hurricanes to do that," admits Van Winkle. "There's no way to accurately predict it. It's just something that we have to deal with."

According to data compiled by the National Hurricane Center, the state of Florida has experienced twenty-seven



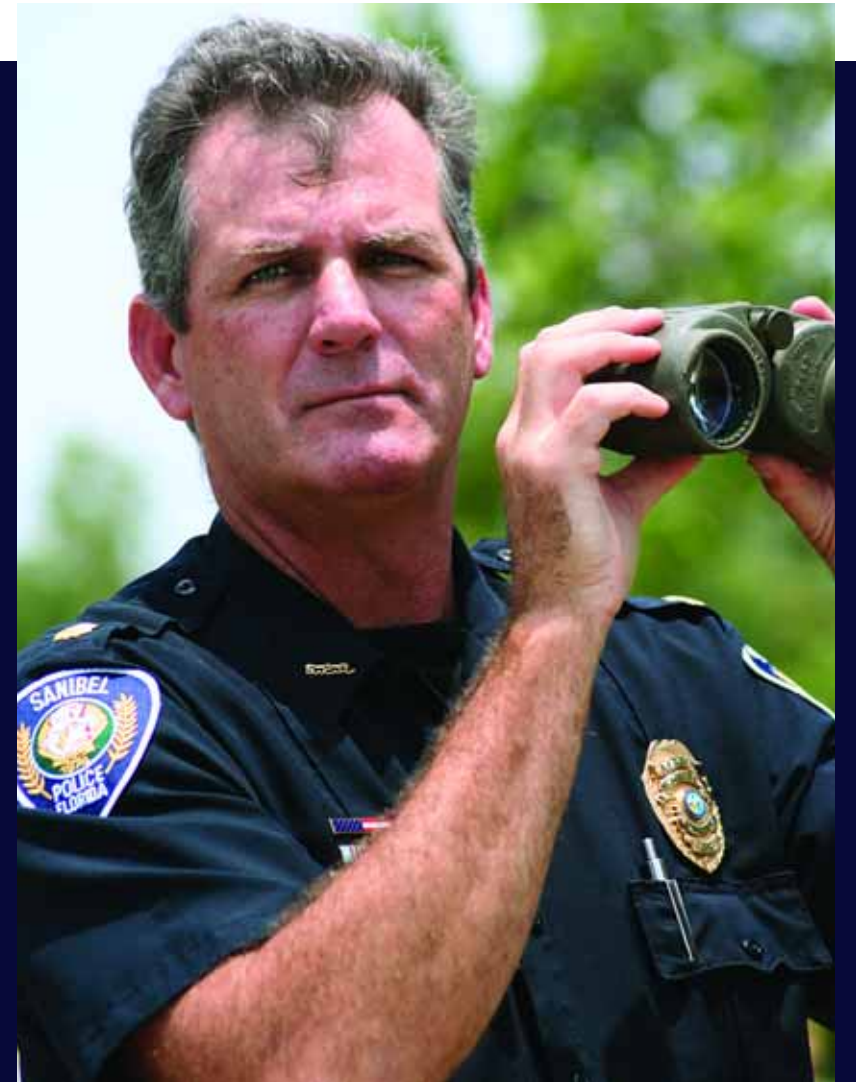
According to NBC2's Van Winkle, Hurricane Charley intensified from a Category 2 to a Category 4 storm in the span of three hours.

direct hits from major hurricanes since 1900, more than any other state. (Next on the list: Texas with sixteen, Louisiana with twelve, and North Carolina with eleven.) In terms of where in Florida those hits have occurred, the southeast side of the state leads with twelve hits, while the southwest coast falls just slightly behind with ten hits.

Given those statistics, it really is phenomenal that, until last summer, only one major hurricane had hit Florida since 1992. With all the activity in the '20s and '30s, it is also surprising that the Lee County coast went forty years after Hurricane Donna without a hit.



Captiva's fire chief John Bates (above) and Sanibel's Emergency Management Plan director Major Michael Murray (right) are working to ensure that Southwest Florida is prepared if a hurricane strikes again.



"We can't let our guard down."

Major Michael Murray

"The overall chances of another storm coming by us are pretty good," says Van Winkle. "It's time to be ready for an active year...Our season doesn't get going here until mid-August, even though the season officially starts June 1." Based on historical records, the earliest hurricane to have hit the state of Florida was Hurricane Alma, which struck Northwest Florida on June 9, 1966. The latest hurricane to have hit was an unnamed storm that made landfall on November 30, 1925 near Tampa.

Gearing up for the uncertainty of the 2005 season, Southwest Floridians are speculating on the chances of getting hit again. "It's always pure conjecture," says Steve Greenstein, executive director of the Sanibel-Captiva Chamber of Commerce. "We'd gone forty years without getting hit. So now conjecture runs the whole gamut from we're probably not going to get hit again for another forty years to we could get hit forty years in a row."

One thing is for sure following last summer: "It was a wake-up call for a lot of people," says Greenstein. "Everyone is very cognizant that they need to have procedures in order if and when a hurricane is scheduled to hit this area."

"I think it's terribly interesting that everyone is so interested in hurricane season this year," says Van Winkle. "I got here to Southwest Florida a couple years ago, and the apathy was just so thick you could cut it with a knife. No one seemed to care one way or the other...and we have been just as vulnerable in the last ten years as we are this year."

So in 2005, will Floridians endure the same onslaught of

four storms within a six-week period? "It would be highly unlikely that we would have a season again with as many hurricanes striking our state as we did last year," says Van Winkle. "That would really be a statistical anomaly, but the likelihood of one or two making it close is pretty good."

As for Sanibel native Bailey, he wouldn't be surprised to add a fifth hurricane to his lifetime of encounters. "I'm eighty-one, but I think I'll probably see one more," he says.

No one, however, expects the likes of Charley again. "No storm's the same," says the Captiva fire department's Bates. "Probably the next storm will be a water event with very little wind, and we'll have access problems and sand in the roads."

But the next time a mandatory evacuation is ordered for Southwest Florida's barrier islands, emergency personnel expect people to take it more seriously than ever. "You've got to be prepared to leave," says Sanibel's Emergency Management Plan director Murray. "It could be a whole different scenario than last summer."

Barbara Linstrom-Arnold is a freelance writer and adjunct instructor of writing at Florida Gulf Coast University.

Ready...Just in Case

After last summer, you can bet everyone has taken steps to be better prepared if another hurricane hits nearby. "Just be ready to go," says Major Michael Murray, director of Sanibel's Emergency Management Plan. "Have your kit with your insurance information and go."

Protecting yourself and your family is one thing. Protecting your property is another. In the wake of Hurricane Charley, more Lee County residents than ever have been installing hurricane shutters and glass as well as going all out with heavy duty roofing.

"We've had double our usual business," says Rick Collins, CEO of Ft. Myers-based Rolsafe

International, a leading manufacturer of hurricane shutters. "And it could have been triple or quadruple, but we want to maintain quality and do business in a timely manner."

"With all the hurricane products we had installed before Charley, we didn't lose any. We had a zero fail rate," says Kevin Munden, owner of Sanibel Glass & Mirror. "Now we're booked more than a year out for installations."

At the northern tip of Captiva Island, the 330-acre South Seas Resort took a major hit from Charley and suffered more damage than any other area property. The upscale resort, which is undergoing an extensive, \$120-million renovation, won't even reopen until Christmas

of this year.

According to Chris Van der Baars, general manager of South Seas, all of the new construction will meet current codes. "We saw through Charley that the new codes work; the damage wasn't to those properties," he says.

This summer, some five hundred contractors are on the property, installing hurricane glass and shutters and working to complete repairs prior to any hurricane activity this season. "There is absolutely nothing I can do about the direction of a hurricane," says Van der Baars. "What I am worried about is doing all we can do to protect these buildings in the most expeditious manner."

SATELLITE IMAGE COURTESY OF NOAA/NATIONAL CLIMATIC DATA CENTER

PHOTOS BY LIZ NEWKIRK