

HURRICANES

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From National Oceanic and Atmospheric Administration

Overview:

- Florida's Hurricane History
- Family and Farm Disaster Planning
- Shellfish Harvest Area Closures
- Post Hurricane Shellfish Plant Inspection
- Disaster Recovery Information

Safeguarding the public and supporting Florida's agricultural economy.

Hurricane Facts

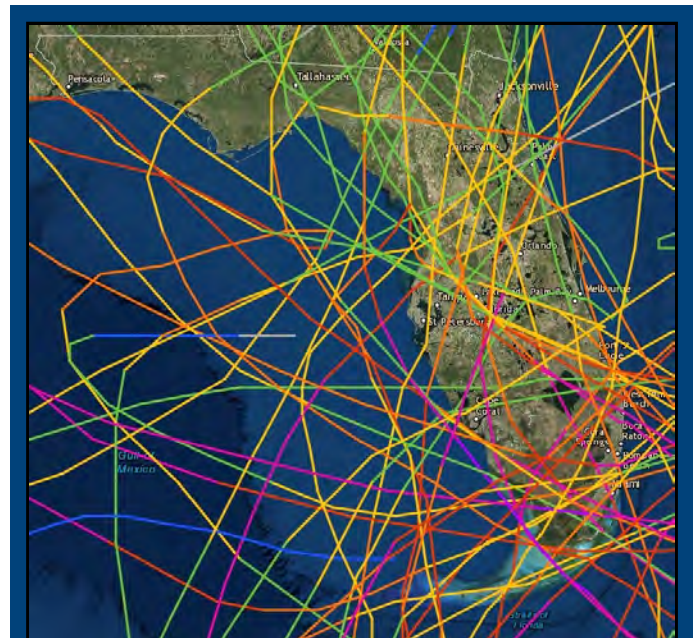
- The official Atlantic hurricane season is from June 1 to Nov. 30. These dates encompass 97 percent of tropical hurricane activity.
- There were 884 hurricanes in the Atlantic basin from 1851-2016, an average of 5.4 per year.
- September is the most active month of hurricane season, representing 39 percent of total hurricane occurrence from 1851-2016.
- 40 percent of all U.S. hurricanes have hit Florida.
- 83 percent of Category 4 or higher hurricanes have hit either Florida or Texas.
- Approximately 90 percent of hurricane fatalities occur in water related incidents, with 49 percent occurring from storm surge.
- Hurricane Irma is now Florida's costliest hurricane to date, with an estimated \$58 billion in economic losses.

Florida's Hurricane History

Florida leads the nation in direct hurricane hits for the period 1851 to 2010. Florida experienced 37 major hurricanes (category 3 or greater) during this period versus the next highest states: Louisiana (20), Texas (19), and North Carolina (13).

Forty percent of all U.S. hurricanes hit Florida, with 83 percent of Category 4 or higher hurricanes striking either Texas or Florida. The threat of major hurricanes increases from west to east as the hurricane season progresses each year. As such, Texas and Louisiana are the prime targets for early season hurricanes, while the east coast of Florida is most likely to be impacted in October each year. Regardless of this trend, September remains the peak of hurricane season with as many major hurricane landfalls as October and August combined. The earliest hurricane to strike Florida was Alma on June 9, 1966, while the latest to strike Florida occurred November 30, 1925, near Tampa.

Eight of the top ten costliest hurricanes in U.S. history have impacted Florida. The state's population is increasing an average of 1.6 percent annually, with 1.3 million more residents from 2010-2016. As Florida's population continues to expand, projected at 25 million by 2030, the economic impacts from hurricanes are also increasing. Population growth is predominantly occurring less than 50 miles from a coastline,



Path of each hurricane that made landfall in Florida from 1915-2015.
Figure Credit: National Oceanic and Atmospheric Administration

further exacerbating the potential economic damage. For example, all three hurricanes making U.S. landfall in 2008 made the top 30 list of costliest hurricanes in U.S. history, despite none of them being major hurricanes at landfall.

Fortunately, due to an increase in hurricane forecast and warning systems and preparation planning, the number of fatalities per hurricane is in decline. The perpetual threat of hurricanes in Florida, in combination with the state's growing population and economy, emphasizes the importance of wise business planning and storm preparedness.

Information from NOAA Technical Memorandum NWS NHC-6 (NHC.NOAA.gov/pdf/nws-nhc-6.pdf)



Shellfish Harvest Areas Closures During a Hurricane

When a hurricane warning is issued by the National Weather Service, division staff temporarily close shellfish harvest areas (SHA) included in the warning at sunset.

These precautionary emergency closures are in anticipation of storm surge, heavy rainfall and power outages at waste water treatment plants that could contaminate SHAs with surface water runoff.

If the hurricane does not strike the area and the anticipated damage does not occur, then SHAs will be immediately reopened the following day at sunrise.

However, if SHAs are impacted, division staff will systematically collect water samples and shellfish meat samples for testing to reopen SHAs and ensure a safe and wholesome product can enter the marketplace.

Shellfish Harvest Area closure information is available from each of the division's offices or by visiting: FreshFromFlorida.com/Business-Services/Aquaculture/Shellfish-Harvesting-Area-Classification/Area-Information.

For more information about SHA closures, please contact the division by phone at (850) 617-7600 or by email at aquaculture_web@FreshFromFlorida.com



Family and Farm Disaster Planning

**Discuss the type of hazards that could affect your farm and family.
Know your vulnerability to storm surge, flooding and wind.**

- ✓ Develop standard operating procedures for preparing for a hurricane and maintaining your facility when without critical services.
- ✓ Test emergency backups systems (ex. generators, auxiliary oxygen systems) and secure extra fuel supplies if possible.
- ✓ Place your farm on a priority reactivation list with your utility, fuel or oxygen supplier.
- ✓ Post up-to-date contact information for all employees, and make sure everyone knows how and when to call 911.
- ✓ Check your farm's insurance coverage.
- ✓ Take photos of facility, machinery and inventory for records.
- ✓ Secure outdoor objects that may become a hazard during high winds.
- ✓ Determine escape routes from your home or farm and places to meet.
- ✓ Stock non-perishable emergency supplies and a disaster supply kit.
- ✓ Use a NOAA weather radio and replace its battery every six months.
- ✓ The Federal Emergency Management Agency (FEMA) provides a wealth of information on preparation and recovery from hurricanes.
Find information specific to your area at: DisasterAssistance.gov/

Stopping Price Gouging during Emergencies

During a state of emergency the State of Florida may invoke a price-gouging statute. This statute makes it illegal to charge excessive or exorbitant prices for essential items, including shelter, gasoline, food, water, ice, lumber or generators, unless the increases in the amount charged are attributable to additional costs incurred by retailers.

Individuals or businesses found to have engaged in price gouging face fines of up to \$1,000 per violation, or up to a maximum fine of \$25,000 per day.

The Department encourages residents who witness what they believe are price gouging incidents to report it at once to his department's price-gouging hotline:

1 800 HELP FLA (435-7352)

Post Hurricane Shellfish Plant Inspection

After a hurricane the following actions are implemented to determine whether shellfish processing plants are capable of producing wholesome products. Division staff calls the plants that have been impacted by the storm. If contact is made, staff determines if there was: loss of power, the length of time power was lost, the type and amount of product on hand, the measures taken to insure temperature abuse has not occurred (i.e. ice, portable generators, refrigerated vehicles or trailers), the integrity of water supply, the extent of facility damage, the extent of storm surge and length of time for repairs. Plant management will be informed what actions will be necessary before processing can resume. Staff will then follow up with an in-person inspection as soon as practical.

If no phone contact can be established, staff will conduct an on site inspection as soon as it is safe to do so. Special attention is given to structural integrity, water supply, cooling systems, and ice production. Plant management will then be informed what actions will be necessary before processing can resume.

When processing plants have extensive damage, the processing certification license may be suspended. The Department notifies the U. S. Food and Drug Administration as to the status of processing plants listed on the Interstate Certified Shellfish Shipper List.

USDA
Farm Service
Agency Offices

State Office (Gainesville):
352-379-4500

County Offices

- Alachua, Bradford: 352-376-7414
- Baker, Duval, Nassau: 904-266-0088
- Bay, Washington: 850-547-2850
- Brevard, Osceola: 407-847-4201
- Broward, Palm Beach: 561-792-2727
- Calhoun, Franklin, Gulf, Liberty: 850-674-8388
- Charlotte, Lee, Collier: 239-997-7331
- Citrus, Sumter: 352-793-2651
- Clay, Flagler, Putnam, St. Johns: 386-328-5051
- Columbia, Union: 386-752-8447
- DeSoto, Hardee, Manatee, Sarasota: 863-773-4764
- Dixie, Gilchrist: 352-463-2358
- Escambia: 850-675-6696
- Gadsden: 850-627-6365
- Glades, Hendry: 863-946-1031
- Hamilton: 386-362-2681
- Hernando, Pasco: 352-588-5211
- Highlands: 863-763-3345
- Hillsborough, Pinellas: 813-752-1474
- Holmes: 850-547-2850
- Indian River, Martin, St. Lucie: 772-461-4546
- Jackson: 850-526-2610
- Lafayette, Taylor: 850-973-2205
- Lake, Orange: 352-742-7005
- Leon, Jefferson, Wakulla: 850-997-2072
- Levy: 352-463-2358
- Madison: 904-973-2205
- Marion: 352-732-7534
- Miami Dade, Monroe: 305-242-1197
- Okaloosa: 850-682-2416
- Okeechobee: 863-763-3345
- Polk: 863-533-2051
- Santa Rosa: 850-675-6696
- Seminole, Volusia: 386-985-4037
- Suwannee: 386-362-2681
- Walton: 850-892-3712



Farm Disaster Recovery Information

After a Presidential Disaster Declaration is signed, individuals and farms should contact the Federal Emergency Management Agency (FEMA) at 800-621-3362 or FEMA.gov/individual-disaster-assistance to apply for assistance and receive a FEMA application number. Once an application is processed, further assistance will be available at Disaster Recovery Centers. Federal, state and local representatives will be available at the Centers to assist with recovery. The following programs may be available to assist your aquaculture business with recovery efforts.

Small Business Administration offers low interest loans to individuals and businesses for refinancing, repair, rehabilitation or replacement of damaged property (real and personal). For more information see: SBA.gov/loans-Grants/see-what-SBA-offers/SBA-loan-programs/disaster-loans.

Disaster Unemployment Assistance is for individuals not covered by regular state or private unemployment insurance. Individuals may be eligible for unemployment benefits that can be provided until an individual is re-employed or up to 26 weeks after the major disaster is declared (whichever is shorter). For more information, see: Benefits.gov/benefits/benefit-details/597.

Farm Service Agency offers low interest disaster loans to farmers, ranchers and agricultural operators for physical or production losses. Loans of up to 80 percent of actual production loss or 100 percent of the actual physical loss, with a maximum indebtedness of \$500,000, may be made to the tenant or owner. For more information, see: FSA.USDA.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/2017emergency_loan_program_oct2017.pdf.

Noninsured Crop Disaster Assistance Program provides financial assistance to producers of non-insurable crops to protect against natural disasters that result in lower yields or crop losses or prevents crop planting. Eligible aquacultural species are: any species of aquatic organism grown as food for human consumption; fish raised as feed for fish that are consumed by humans; ornamental fish propagated and reared in an aquatic medium. For more information, see: FSA.USDA.gov/Programs-and-Services/Disaster-Assistance-Program/Noninsured-Crop-Disaster-Assistance/Index

Florida Department of Insurance provides assistance and information to resolve insurance claims. For more information, see: FLOIR.com/Office/HurricaneSeason/hurricaneresourcepage.aspx.

Emergency Assistance for Livestock, Honeybees and Farm-Raised Fish Program provides emergency assistance to eligible producers of livestock, honeybees and farm-raised fish. For more information see: FSA.USDA.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/2018/elap_fact_sheet_april2018.pdf

Internet

Small Business Administration:

SBA.gov/

USDA Farm Service Agency:

FSA.USDA.gov/

Federal Emergency Management Agency:

FEMA.gov/

FEMA Disaster Assistance

DisasterAssistance.gov/

Florida Department of Agriculture and Consumer Services:

FreshFromFlorida.com/

Florida Division of Emergency Management:

FloridaDisaster.org/

FL Mosquito Control Directory

FreshFromFlorida.com/Business-Services/Mosquito-Control

Telephone

Agency for Workforce Innovation (unemployment claims): 800-204-2418

American Red Cross:

800-RED CROSS (1-800-733-2767)

American Red Cross Food, Shelter, and Financial Assistance:

866-GET-INFO (866-438-4636)

Construction Industry Licensing Board: 850-487-1395

FDACS, Division of Consumer Services (price gouging and fraud):

800-HELP-FLA (800-435-7352)

Department of Children and Families

(Disaster Food Stamp Hotline):

800-342-9274

Department of Financial Services (insurance complaints and assistance):

800-22-STORM (800-227-8676)

Florida Emergency Information Hotline: 800-342-3557

Salvation Army (donation hotline):

800-SAL-ARMY (800-725-2769)

FL Mosquito Control Information

850-617-7971