

Tropical Update



5:45 PM EDT

Thursday, September 26, 2024

Helene Is Now a Category 3 Major Hurricane and Is Likely to Be An Extremely Dangerous Category 4 Hurricane At Landfall

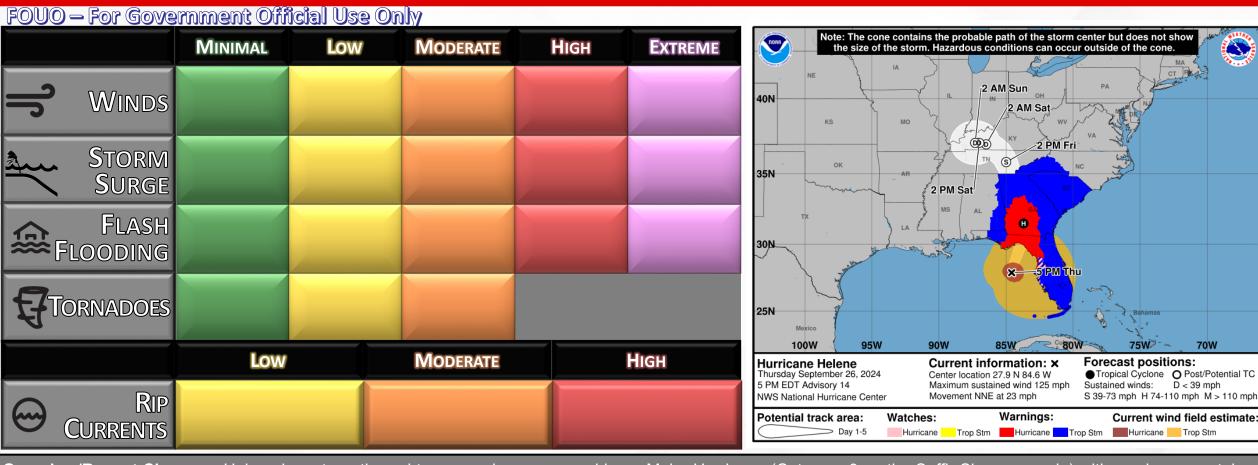
Damaging Hurricane Winds and Catastrophic Storm Surge Expected To Begin In the Florida Big Bend This Evening

This update is intended for government and emergency response officials, and is provided for informational and situational awareness purposes only. Forecast conditions are subject to change based on a variety of environmental factors. For additional information, or for any life safety concerns with an active weather event please contact your County Emergency Management or Public Safety Office, local National Weather Service forecast office, or visit the National Hurricane Center website at www.hurricanes.gov.



Major Hurricane Helene

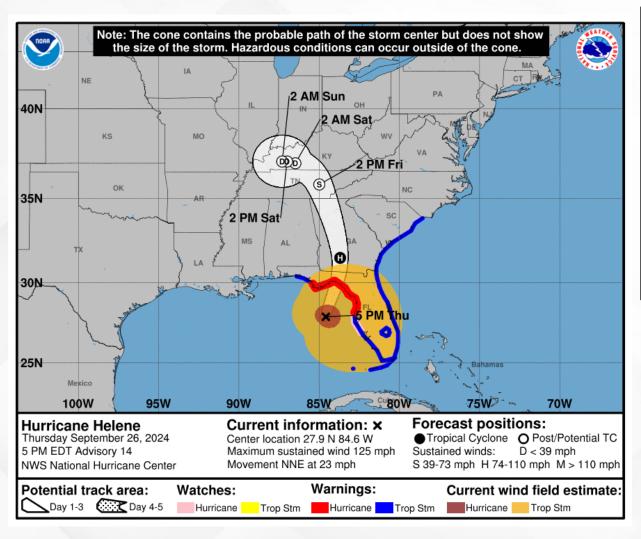
5:00 PM EDT Thursday: Florida Threats & Changes Since Last Packet



Overview/Recent Changes: Helene has strengthened to a very dangerous and large Major Hurricane (Category 3 on the Saffir-Simpson scale) with maximum sustained winds now near 125 mph and higher gusts. As of the 5:00 PM EDT, Major Hurricane Helene is located about 130 miles west of Tampa, Florida and 175 miles south of Tallahassee, Florida and moving north-northeastward at 23 mph. A continued fast motion to the north-northeast is expected through landfall in the Florida Big Bend this evening. After landfall, Helene is expected to turn northwestward and slow down over the Tennessee Valley on Friday and Saturday. Additional strengthening is expected, and Helene will likely be an extremely dangerous Category 4 hurricane at landfall. Weakening is expected after Helene moves inland, but the fast forward speed will allow strong, damaging winds, especially in gusts, to penetrate well inland. Helene is a very large hurricane, and tropical storm-force winds extend outwards up to 310 miles and hurricane-force winds extend outward up to 60 miles from the center. There have been no changes made to the existing watches and warnings across Florida.



Major Hurricane Helene From the National Hurricane Center (NHC)



- Location: 130 miles W of Tampa, Florida; 175 miles S of Tallahassee, Florida
- Maximum Sustained Winds: 125 mph; Category 3
- Current Movement: NNE at 23 mph

A continued fast motion to the north-northeast is expected through landfall in the Florida Big Bend this evening. After landfall, Helene is expected to turn northwestward and slow down over the Tennessee Valley on Friday and Saturday. Additional strengthening is expected, and Helene will likely be an extremely dangerous Category 4 hurricane at landfall.

Weakening is expected after Helene moves inland, but the fast forward speed will allow strong, damaging winds, especially in gusts, to penetrate well inland. Helene is a very large hurricane, and tropical storm-force winds extend outwards up to 310 miles and hurricane-force winds extend outward up to 60 miles from the center.



Doppler radar and aircraft data indicate that the eyewall is now completely closed and the eye has become more circular and is clearing out. Aircraft data also indicate that the inner core has contracted significantly today while the tropicalstorm-force winds have expanded.



Current Tropical Wind Watches/Warnings

As of 5:00 PM EDT Thursday



Hurricane Warning:

Jackson, Calhoun, Gulf, Gadsden, Liberty, Franklin, Leon, Wakulla, Jefferson, Madison, Taylor, Hamilton, Suwannee, Lafayette, Columbia, Gilchrist, Dixie, western Alachua, Levy, western Marion, coastal Citrus, coastal Hernando, coastal Pasco

• Tropical Storm Warning:

Walton, Holmes, Washington, Bay, Baker, Nassau, Duval, Union, Bradford, Clay, St. Johns, eastern Alachua, Putnam, Flagler, eastern Marion, Volusia, inland Citrus, Sumter, Lake, Seminole, Brevard, Orange, inland Hernando, inland Pasco, Pinellas, Hillsborough, Polk, Osceola, Indian River, Manatee, Hardee, Highlands, Okeechobee, St. Lucie, Martin, Glades, DeSoto, Sarasota, Charlotte, Palm Beach, Hendry, Lee, Collier, Broward, Miami-Dade, Monroe

Hurricane Watches:

Inland Citrus, inland Hernando, inland Pasco, Pinellas, coastal Hillsborough, coastal Manatee, coastal Sarasota

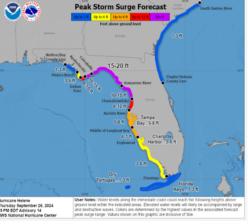


Key Messages for Hurricane Helene Advisory 14: 5:00 PM EDT Thu Sep 26, 2024



- 1. A catastrophic and deadly storm surge will occur along portions of the Florida Big Bend coast, where inundation could reach as high as 20 feet above ground level, along with destructive waves. If you live in this area and were told to evacuate by local officials, your opportunity to do so is almost over. There is also a danger of life-threatening storm surge along the remainder of the west coast of the Florida Peninsula.
- 2. Potentially catastrophic hurricane-force winds are expected within the eyewall of Helene and will spread inland over portions of northern Florida and southern Georgia when Helene makes landfall in the Florida Big Bend region this evening. Persons in these areas should be prepared to take shelter in the interior portion of a well-built structure and remain sheltered until after hazardous conditions pass. You may need to remain sheltered after the storm due to downed trees and power lines, as well as flooding, in the area.
- 3. Damaging wind gusts will penetrate well inland over portions of Georgia and the Carolinas tonight, particularly over the higher terrain of the southern Appalachians. Residents in these areas should be prepared for the possibility of long-duration power outages. If you use a generator after the storm, be sure it is placed outside at least 20 feet away from doors, windows, and garages to avoid deadly carbon monoxide poisoning.
- 4. Catastrophic and life-threatening flash and urban flooding, including numerous significant landslides, is expected across portions of the southern Appalachians through Friday. Considerable to locally catastrophic flash and urban flooding is likely for northwestern and northern Florida and the Southeast through Friday. Widespread significant river flooding and isolated major river flooding are likely.





For more information go to hurricanes.gov



Threats & Impacts From the National Weather Service

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Storm Surge

ksonville

- Widespread deep inundation, with storm surge flooding greatly accentuated by powerful battering waves. Structural damage to buildings, with many washing away. Damage greatly compounded from considerable floating debris. Locations may be uninhabitable for an extended period.
- Near-shore escape routes and secondary roads washed out or severely flooded. Flood control systems and barriers may become stressed.
- Extreme beach erosion. New shoreline cuts
- Massive damage to marinas, docks, boardwalks, and piers. Numerous small craft broken away from moorings with many lifted onshore and stranded.

Wind



- Structural damage to sturdy buildings, some with complete roof and wall failures. Complete destruction of mobile homes. Damage greatly accentuated by large airborne projectiles. Locations may be uninhabitable for weeks or months.
- Numerous large trees snapped or uprooted along with fences and roadway signs blown over.
- Many roads impassable from large debris, and more within urban or heavily wooded places. Many bridges, causeways, and access routes impassable.
- Widespread power and communications outages.

Flooding



- Extreme rainfall flooding may prompt numerous evacuations and rescues.
- Rivers and tributaries may overwhelmingly overflow their banks in many places with deep moving water. Small streams, creeks, and ditches may become raging rivers. Flood control systems and barriers may become stressed.
- Flood waters can enter numerous structures within multiple communities, some structures becoming uninhabitable or washed away. Numerous places where flood waters may cover escape routes. Streets and parking lots become rivers of raging water with underpasses submerged. Driving conditions become very dangerous. Numerous road and bridge closures with some weakened or washed out.

Tornadoes



- The occurrence of scattered tornadoes can hinder the execution of emergency plans during tropical events.
- Several places may experience tornado damage with a few spots of considerable damage, power loss, and communications failures.
- Locations could realize roofs torn off frame houses. mobile homes demolished, boxcars overturned, large trees snapped or uprooted, vehicles tumbled, and small boats tossed about. Dangerous projectiles can add to the toll.

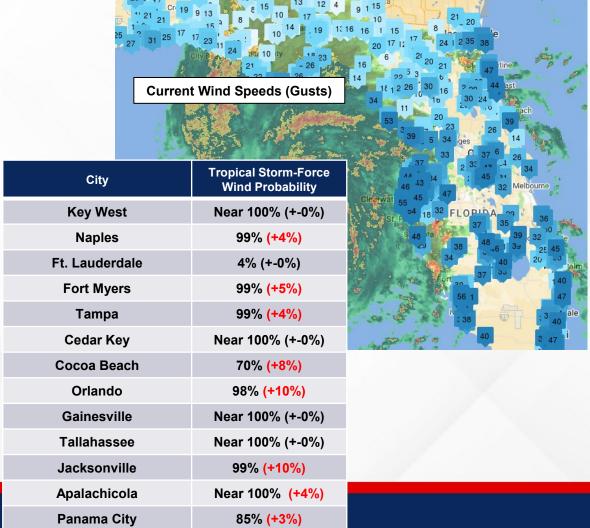


Tropical Storm-Force Wind Probabilities

Major Hurricane Helene



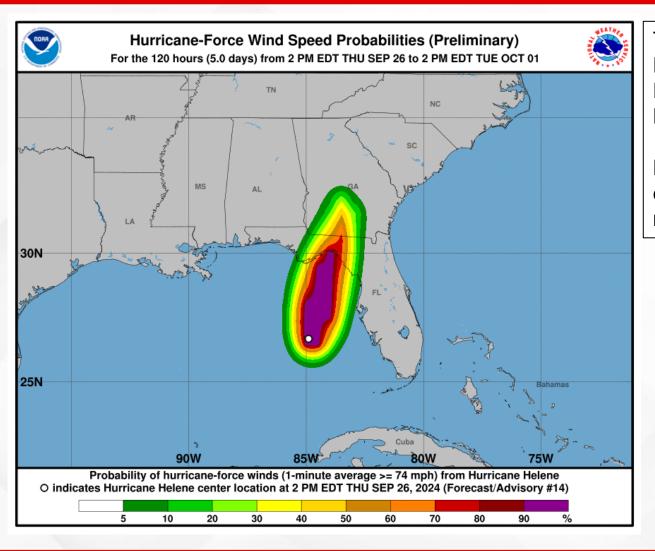
Conditions will continue to deteriorate from south to north throughout the state this afternoon and evening as Helene advances northward over the Gulf of Mexico.





Hurricane-Force Wind Probabilities

Major Hurricane Helene



The additional strengthening and intensification of Hurricane Helene will allow for hurricane-force winds throughout the Florida Big Bend and extending along the Panhandle as well as Nature Coast and along the West-Central Florida coast.

Damaging and life-threatening hurricane-force winds, especially in gusts, will penetrate will inland over portions of northern Florida tonight.

Hurricane-Force Wind Probability		
0%		
4%		
50%		
16%		
0%		
31%		

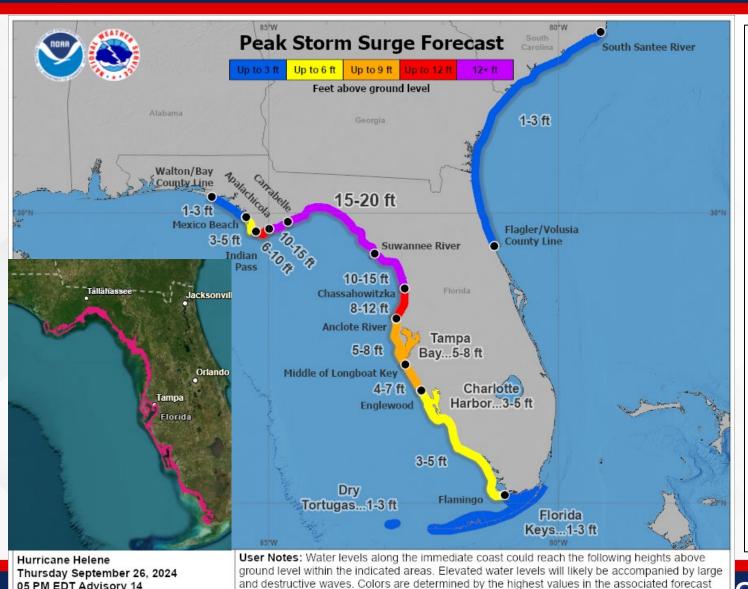


05 PM EDT Advisory 14

NWS National Hurricane Center

Current Storm Surge Watch

As of 5:00 PM EDT Thursday



peak surge range. Values shown on this graphic are inclusive of tide.

Catastrophic and life-threatening storm surge can be expected along the Florida Big Inundation above normally dry ground could reach as high as 20' along with destructive wave action. Given the large radii and wind footprint of Helene, storm surge will be able to travel a significant distance inland, and especially within coastal river systems and basins. There is a danger of lifethreatening storm surge along the West Coast of Florida.

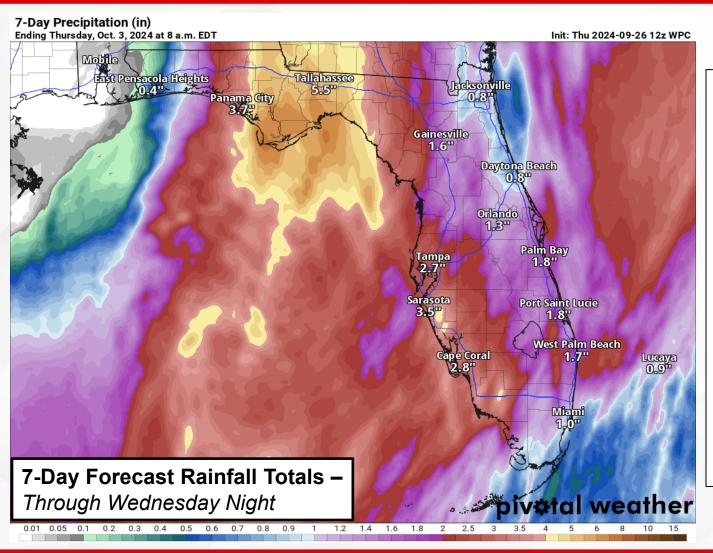
Storm Surge Warnings extend along the entire Florida Gulf Coast to coastal Gulf County.

- 15-20' of storm surge can be expected from Carabelle to the Suwannee River; 10-15' from Carabelle to Apalachicola and the Suwannee River south to Chassahowitzka.
- 8-12' of storm surge is forecast for the Nature Coast to the Anclote River, with 5-8' along the West-Central Florida Coast including Tampa Bay.



Rainfall Totals – Next 7 Days

From the Weather Prediction Center (WPC)

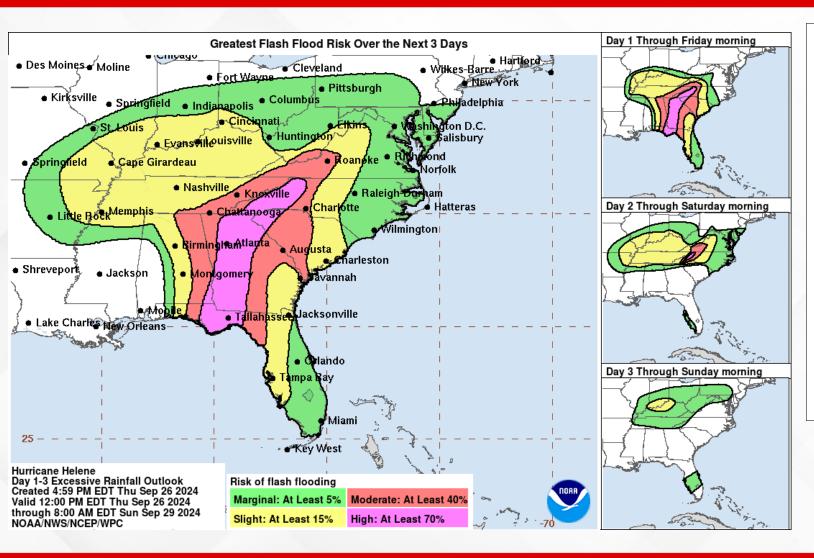


- As Helene moves northward to northnortheastward today, tropical moisture will push northward through the state and rainbands from the system will bring multiple rounds of heavy rainfall nearly statewide throughout the day.
- Widespread rainfall totals of 2-4" can be expected across the state through the next 7 days, with locally higher totals upwards of 6-10" along the Panhandle and immediate Gulf Coast. Localized instances upwards of 12-15" cannot be ruled out along portions of the western coastal Big Bend.



Flash Flood Outlooks

From the Weather Prediction Center (WPC)



As Hurricane Helene approaches the northeastern Gulf of Mexico and approaches the Florida Big Bend today, tropical downpours can be expected nearly statewide due to the large size of this system. The Weather Prediction Center (WPC) is outlooking a rare High Risk (level 4 of 4) for Flash Flooding across the eastern Panhandle through the Big Bend with a Moderate Risk (level 3 of 4) stretching across the central Panhandle and Suwannee Valley today, and a Slight Risk (level 2 of 4) across the rest of the Panhandle and along the eastern I-10 corridor and south through the I-75 corridor along the West Coast. A Marginal Risk (level 1 of 4) extends statewide as hazards will likely extend well away from the center. Regardless, tropical downpours and multiple rounds of rainfall may be possible that lead to instances of flash flooding as the system moves into the southeastern Gulf of Mexico, especially with potentially training showers and thunderstorms over the same areas and moving onshore. There is a Marginal Risk (level 1 of 4) for Flash Flooding along West-Central and Southwest Florida on Friday and across Central Florida Saturday as well.

Understanding WPC Excessive Rainfall Risk Categories

MARGINAL SLIGHT **MODERATE** HIGH No Area/Label (SLGT) (MRGL) (MDT) (HIGH) Flash floods are Isolated flash Scattered flash Numerous flash Widespread flash generally not floods possible floods possible floods likely floods expected expected. Localized and Mainly localized. Most Severe, widespread primarily affecting vulnerable are urban flash flooding. Areas places that can areas, roads, small that don't normally streams and washes. experience rapid runoff with heavy Isolated significant flooding, could, Lives flash floods possible. and property in @NWSWPC areater danger.



Flood Watch

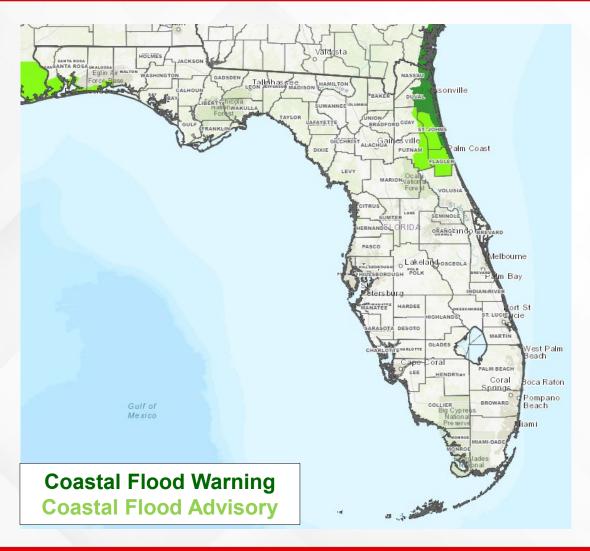
From the National Weather Service (NWS)



- Flood Watches are in place across nearly the entire state as tropical downpours associated with Hurricane Helene could bring instances of localized flooding.
- Moderate to heavy rainfall is expected with this system, which could lead to instances of localized flash flooding.
- With recently saturated grounds and soils, additional heavy rainfall across low-lying/poor drainage areas could exacerbate the potential for localized flooding.
- As well, with elevated water levels along the coast and extending into rivers and creeks along the coast due to storm surge, heavy rainfall over surrounding areas could slow the rate of heavy rainfall depositing into system and running off towards the gulf waters. This may also exacerbate potential flooding concerns.



Coastal Flooding Continues From the National Weather Service (NWS)



A Coastal Flood Warning is in effect along the Florida Keys until tonight as major saltwater flooding of 1-3' above normally dry ground with isolated locations up to 4' are possible, especially near and during times of high tide from Hurricane Helene.

Coastal Flood Warnings are in effect along the Florida Northeast Coast as saltwater flooding of 1-3' is possible, with locally higher totals upwards of 4' due to winds from Hurricane Helene.

Coastal Flood Advisories are in place along the western Panhandle as minor coastal flooding near and during times of high tide from Hurricane Helene.

Due to compounding effects of lingering runoff from recent heavy rainfall, onshore flow, and recent high astronomical tides (King tides) courtesy of the recent Full Moon, minor coastal flooding can be expected along the St. Johns River through the middle of the week. A Coastal Flood Advisory remains in effect throughout the basin and along the Intracoastal Waterway and Atlantic Coast.

Minor beach erosion cannot be ruled out at times near and during times of high tide along the East Coast, especially for vulnerable beaches.

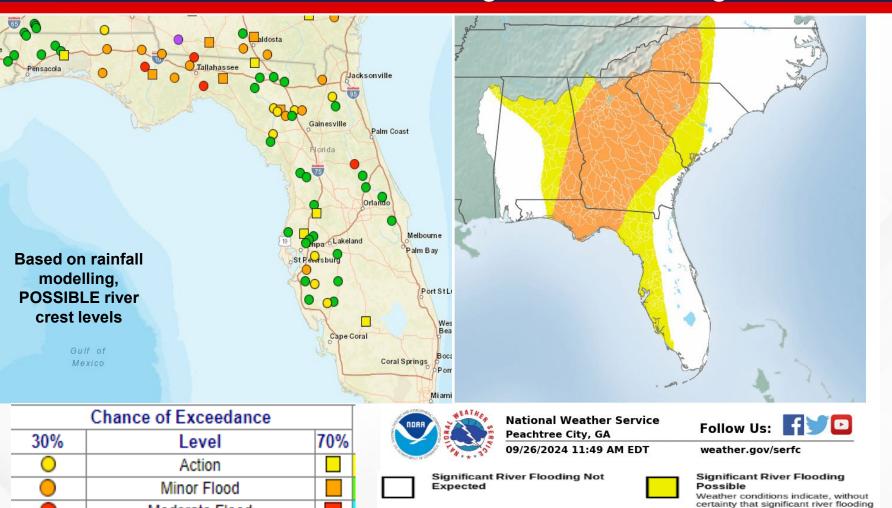


Moderate Flood Major Flood

= less than 30% chance of reaching Action level

Riverine Flooding

Chance of River Flooding Based on Range of Forecast Rainfall



Significant River Flooding Likely

signficant river flood conditions can be

Weather conditions indicate that

Rivers. creeks/streams. and waterways across North Florida are already running above normal for this time of year. Computer forecast models are indicating the potential for minor to moderate flooding mainstems along several and branches including the Apalachicola, Ochlockonee, Santa Fe, Myakka, Manatee, and Alafia by next week. Major flooding cannot be ruled out along rivers that see locally higher rainfall totals realized across local and upper portions of the basins.

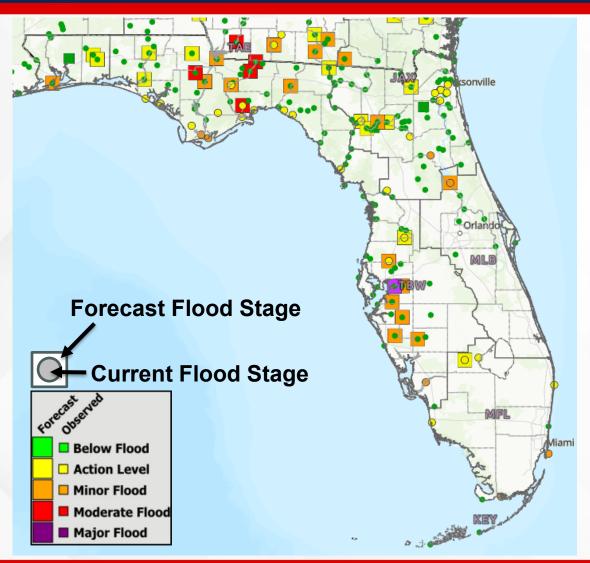
Riverine flooding will be closely tied to which basin receives the greatest swath of rainfall. Trends will continue to be monitored.

Significant River Flooding Occurring Significant river flooding is occurring at this time



Current & Forecast River Conditions

From the National Weather Service



River Flood Warnings remain in effect in the St. Johns River at Astor as water levels are holding steady within minor flood stage just below the line for moderate flood stage due to trapped tides within the river basin. Water levels are forecast to hold relatively steady along the line of minor to moderate flood stage in the next few days in response to heavy rainfall across the basin and elevated tides and ocean swells preventing these waters from discharging. Additional forecast points along the St. Johns River are forecast to remain near or within Action Stage (bank-full) due to recent heavy rainfall over the area; however, river flooding is not anticipated at this time. Tidal portions of the lower St. Johns River could fluctuate in between Action and minor flood stage due tide fluctuations. A River Flood Warning has been issued for the Alafia River at Riverview near US 301 as major flooding is forecast due to tidal fluctuations and anticipated storm surge associated with Hurricane Helene. Additional River Flood Warnings have been issued across the Big Bend, Northern Peninsula, and West-Central Florida ahead of water level rises from heavy rainfall anticipated with Helene. Riverine flooding will be closely tied to which basin receives the greatest swath of rainfall. Trends will continue to be monitored. For more details. please visit the River Forecast Center.

River Flood Warnings

From the National Weather Service

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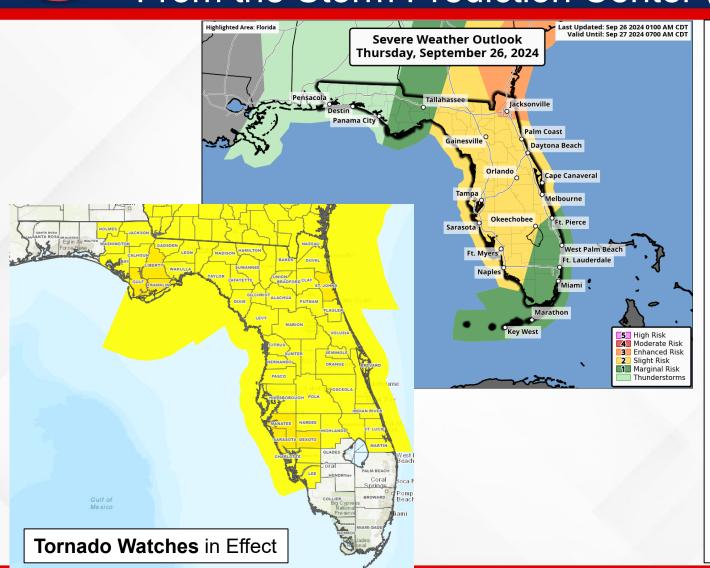
River Guage	County(ies) Affecte	Current Level	Crest Level	Record Leve	Status 🔽	Crest Da	Warning Expire
Alafia River at Riverview near US 301	Hillsborough	Below: 3.03 ft	Major: 8.00 ft	6.60 ft	Rising	26-Sep	1045 EDT 27-Sep
Chipola River near Altha (CR-274)	Calhoun	Below: 12.23 ft	Moderate: 27.30ft	33.50 ft	Rising	28-Sep	Until Further Notice
Little Manatee River near Wimauma at US-301	Hillsborough	Below: 5.74 ft	Minor: 13.10 ft	20.10 ft	Rising	28-Sep	Until Further Notice
Manatee River near Myakka Head at SR-64	Manatee	Below: 5.11 ft	Minor: 12.10 ft	20.90 ft	Rising	28-Sep	0424 EDT 29-Sep
Ochlockonee River near Bloxham (SR-20)	Leon, Liberty, Wakulla	Action: 17.99 ft	Minor: 21.60 ft	32.60 ft	Rising	28-Sep	0630 EDT 30-Sep
Ochlockonee River near Concord (CR-12)	Gadsden, Leon	Below: 28.76 ft	Moderate: 42.60 ft	45.70 ft	Rising	29-Sep	Until Further Notice
Sopchoppy River near Sopchoppy	Wakulla	Action: 21.16 ft	Moderate: 33.94 ft	36.80 ft	Rising	27-Sep	Until Further Notice
St. Johns River at Astor	Volusia, Lake	Minor: 2.88 ft	Minor: 2.90 ft	4.70 ft	Steady	Crested	Until Further Notice
St. Mary's River near Macclenny	Baker, Nassau	Below: 5.01 ft	Minor: 12.00 ft	24.40 ft	Falling	27-Sep	1400 EDT 27-Sep

For more details on the hydrographs as well as impact statements, click the links for each river gauge.



Tropical Tornadoes

From the Storm Prediction Center (SPC)



- An Enhanced Risk (level 3 of 5) for Severe Weather is being outlooked in far Northeast Florida today with a Slight Risk (level 2 of 5) across the Northern Peninsula southward to Lake Okeechobee and a Marginal Risk (level 1 of 4) along the Big Bend, Southeast Florida, and the Keys.
- Isolated tropical tornadoes are possible within outer bands of Hurricane Helene today and Thursday as outer rainbands from Helene extend along the Peninsula and Big Bend Coast.
- The greatest tropical tornado threat will exist along and to the east of the eventual path.
- Tornado Watches #683 and #685 are in effect across North and Central Florida until 8:00 PM EDT and 10:00 PM EDT/9:00 PM CDT, respectively this evening. Several tornadoes are likely as conditions will become increasingly favorable for tornadoes across the Peninsula as Helene strengthening and continues moving north-northeastward.



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Major Hurricane Helene:

- Helene has strengthened to a very dangerous and large Major Hurricane (Category 3 on the Saffir-Simpson scale) with maximum sustained winds near 125.
- As of the 5:00 PM EDT, Major Hurricane Helene is located about 130 miles west of Tampa, Florida and 175 miles south of Tallahassee, Florida and moving north-northeastward at 23 mph.
- A continued fast motion to the north-northeast is expected through landfall in the Florida Big Bend this evening.
- After landfall, Helene is expected to turn northwestward and slow down over the Tennessee Valley on Friday and Saturday.
- Additional strengthening is expected, and Helene will likely be an extremely dangerous Category 4 hurricane at landfall.
- Weakening is expected after Helene moves inland, but the fast forward speed will allow strong, damaging winds, especially in gusts, to penetrate well inland.
- Helene is a very large hurricane, and tropical storm-force winds extend outwards up to 310 miles and hurricane-force winds extend outward up to 60 miles from the center.
- Hurricane Warnings have been issued for the following counties: Jackson, Calhoun, Gulf, Gadsden, Liberty, Franklin, Leon, Wakulla, Jefferson, Madison, Taylor, Hamilton, Suwannee, Lafayette, Columbia, Gilchrist, Dixie, western Alachua, Levy, western Marion, coastal Citrus, coastal Hernando, coastal Pasco
- Hurricane Watches have been issued for the following counties: Inland Citrus, inland Hernando, inland Pasco, Pinellas, coastal Hillsborough, coastal Manatee, coastal Sarasota
- Tropical Storm Warnings have been issued for the following counties: Walton, Holmes, Washington, Bay, Baker, Nassau, Duval, Union, Bradford, Clay, St. Johns, eastern Alachua, Putnam, Flagler, eastern Marion, Volusia, inland Citrus, Sumter, Lake, Seminole, Brevard, Orange, inland Hernando, inland Pasco, Pinellas, Hillsborough, Polk, Osceola, Indian River, Manatee, Hardee, Highlands, Okeechobee, St. Lucie, Martin, Glades, DeSoto, Sarasota, Charlotte, Palm Beach, Hendry, Lee, Collier, Broward, Miami-Dade, Monroe
- Catastrophic and life-threatening storm surge can be expected along the Florida Big Bend. Inundation above normally dry ground could reach as high as 20' along with destructive
 wave action. Given the large radii and wind footprint of Helene, storm surge will be able to travel a significant distance inland, and especially within coastal river systems and
 basins.
- There is a danger of life-threatening storm surge along the West Coast of Florida.
 - Storm Surge Warnings extend along the entire Florida Gulf Coast to coastal Gulf County.
 - 15-20' of storm surge can be expected from Carabelle to the Suwannee River; 10-15' from Carabelle to Apalachicola and the Suwannee River south to Chassahowitzka.
 - 8-12' of storm surge is now forecast for the Nature Coast to the Anclote River, with 5-8' along the West-Central Florida Coast including Tampa Bay.

The next briefing packet will be issued on Thursday night. For the latest information, please visit the National Hurricane Center website.

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Florida Outlook:

- Hurricane Helene will be a significant multi-hazardous event, bringing the risk for life-threatening storm surge, dangerous to catastrophic winds, catastrophic to life-threatening flash flooding, and isolated tropical tornadoes to the Florida Gulf Coast.
- Widespread showers and thunderstorms within Helene's outermost influence are continuing to move from south to north throughout the Florida Peninsula, with additional rounds of more widespread rainfall likely to arrive this morning.
- Tropical storm-force winds will mostly likely arrive to the Nature Coast, coastal Big Bend, and Panhandle this afternoon, reaching I-10 corridor this afternoon into this evening.
 - Destructive to potentially catastrophic hurricane-force winds are expected within the eyewall of Helene when it makes landfall in the Florida Big Bend this evening.
 - Damaging and life-threatening hurricane-force winds, especially in gusts, will penetrate well inland over portions of northern Florida this evening and into tonight.
- Significant rainfall totals will also accompany this system, despite its fast forward speed. Catastrophic to life-threatening rainfall and flooding cannot be ruled out and there is now a **High Risk (level 4 of 4) for Flash Flooding** across the Eastern Panhandle and Big Bend with a **Moderate Risk (level 3 of 4)** through the Central Panhandle and Suwannee Valley.
 - Widespread rainfall totals of 4-8" can be expected, with higher totals of 10-12" likely. Localized amounts of 12-15" cannot be ruled out.
 - Flood Watches have been raised nearly statewide, from the central Florida Panhandle through the remainder of the Florida Peninsula.
 - · Widespread minor to moderate river flooding is likely.
- An Enhanced Risk (level 3 of 5) for Severe Weather is being outlooked in far Northeast Florida with a Slight Risk (level 2 of 5) across the Northern Peninsula southward to Lake Okeechobee and a Marginal Risk (level 1 of 4) along the Big Bend, Southeast Florida, and the Keys for a few tropical tornadoes possible in outer rainbands.
 - Tornado Watch #683 is in effect across North and Central Florida until 8:00 PM EDT this evening, and Tornado Watch #685 has now been issued for North Florida until 10:00 PM EDT/9:00 PM CDT this evening.
 - Rainbands associated with Hurricane Helene will continue to move through this area throughout the day; as wind fields strengthen as the hurricane moves northward, the environment will become increasingly favorable for tropical tornadoes.

The next briefing packet will be issued on Thursday night. For the latest information, please visit the National Hurricane Center website.



Tropical Update



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Created by:

Melissa James, Assistant State Meteorologist

Melissa.James@em.myflorida.com

State Meteorological Support Unit

Florida Division of Emergency Management

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