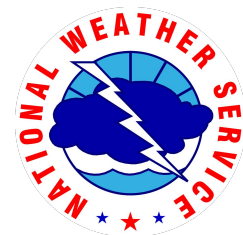




# SERFC's Hurricane Ian Experience

John Schmidt - Southeast River Forecast Center

SECART All-Hazards Workshop  
May 20, 2024  
Jacksonville, FL



Decision Support Briefing - Southeast River Forecast Center


## Key Points

- **Tropical Storm Ian is currently in the central Caribbean and is forecast to cross the Cayman Islands and western Cuba before turning NNE and impacting the Gulf Coast of Florida Thursday or Friday.**
- **Florida is very much still saturated from recent rains with many streams already in flood stage.**
- **Potential for moderate to major river flooding across much of Florida based on current guidance, though considerable uncertainty exists in Ian's forecast track at this point.**

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Latest forecast from NHC



lan is forecast to quickly intensify into a major hurricane as it moves across the western Caribbean and approaches the Cayman Islands and Cuba. As land interaction will be minimal, it will likely still be a major hurricane as it approaches the Gulf Coast of Florida.

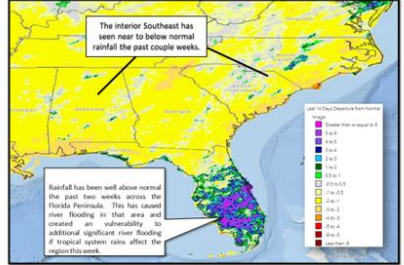
Quite a bit of track uncertainty still exists, largely due to uncertainties in the timing and depth of a trough expected to dig southward across the southeastern CONUS mid week. A deeper trough will result in a more eastward track, a shallower trough a more westward track.

Regardless, a significant wind, precipitation, and storm surge threat exists across essentially the entire Gulf Coast of Florida.

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### River Flood Vulnerability - Past Precipitation Anomalies



The interior Southeast has seen near to below normal rainfall the past couple weeks.

Rainfall has been well above normal the past few weeks across the Florida Peninsula. This has caused river flooding in that area and created an vulnerability to additional significant river flooding if tropical system rains affect the region this week.

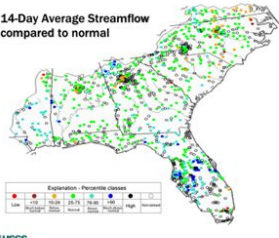
One of the few regions in the Southeast that continues to have saturated soils is unfortunately the central part of the Florida peninsula—precisely the region at high risk for impacts from T.S. Ian.

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### River Flood Vulnerability - Current Streamflow and Flooding

14-Day Average Streamflow compared to normal



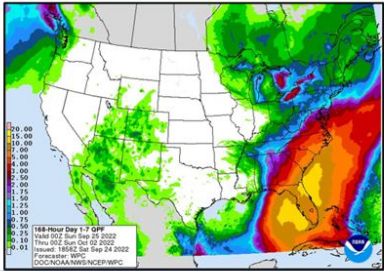
Streamflows remain normal to well above normal in many of the streamflows of the eastern Gulf Coast states. In Central Florida, river flooding is ongoing. Tropical impacts will only make the problem worse, likely sending many river gages into moderate or major flooding.

Legend:  
 Below Flood  
 Action Level  
 Minor Flood  
 Moderate Flood  
 Major Flood

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### 7-Day Precipitation Forecast



Here is the latest 7-Day expected rainfall from the NWS Weather Prediction Center. There still is much uncertainty with the track of Tropical Storm Ian and so there is much uncertainty with these rainfall forecasts.


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### River Flood Potential this week

7-Day River Flood Potential

- Minor to Moderate
- Moderate to Major



There is a large area of river flood threat at this time since the track of Ian remains uncertain. At this time, there is a wide area where rainfall could cause river flooding over the next 7 days. Nearly all of the Southeast has some threat of river flooding at this time. However, the area with the greatest vulnerability is the Florida Peninsula, especially West-Central Florida, where there is a risk for widespread moderate to major river flooding in that area if the current rainfall forecast verifies.

Note: Large threat area at this time due to uncertainty in the track.

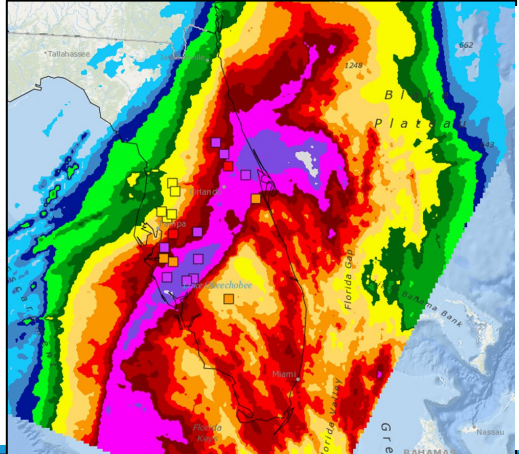
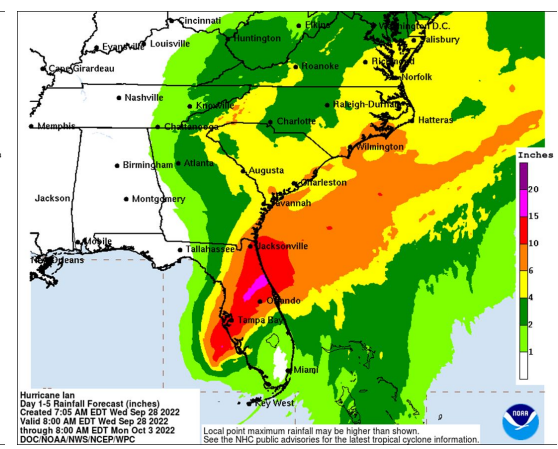
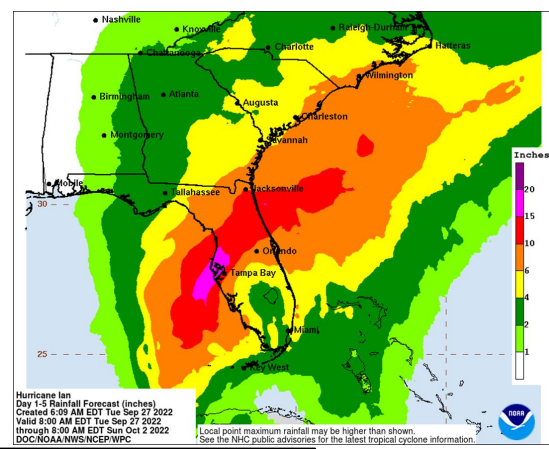
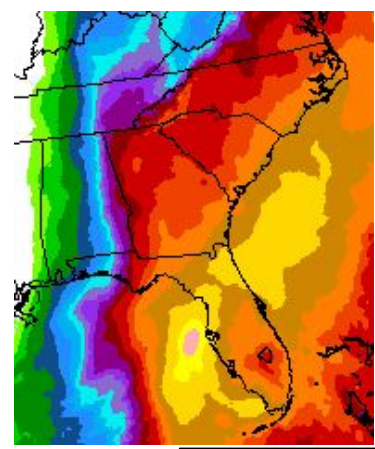
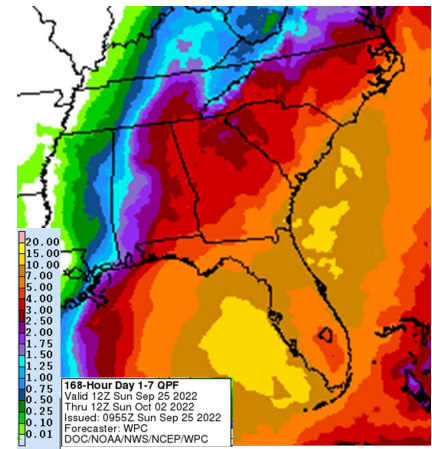
Greatest Risk river flood threat area

Additional Flood threat begins Wednesday

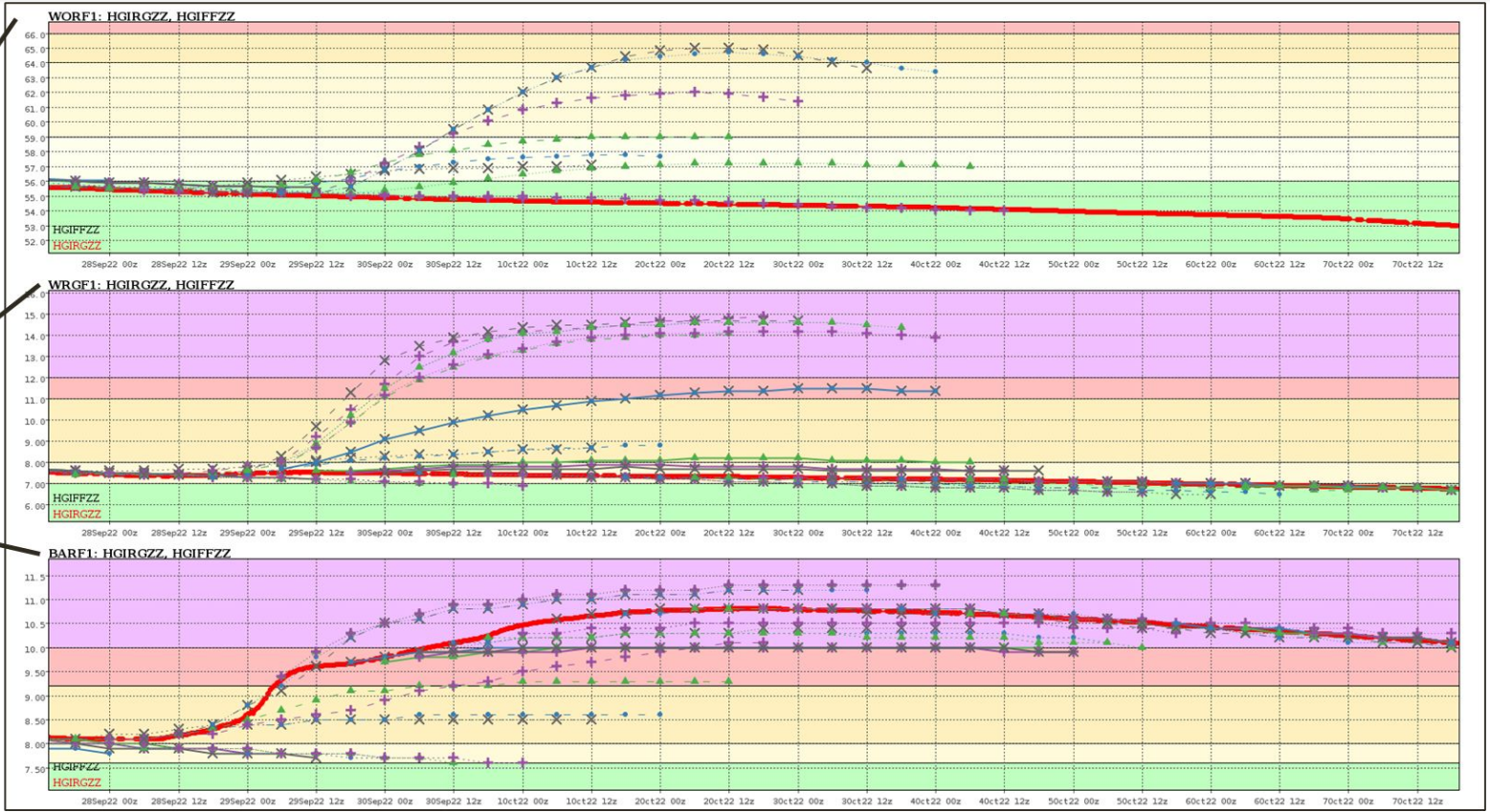
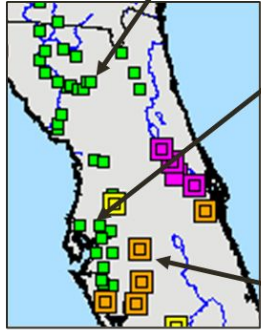
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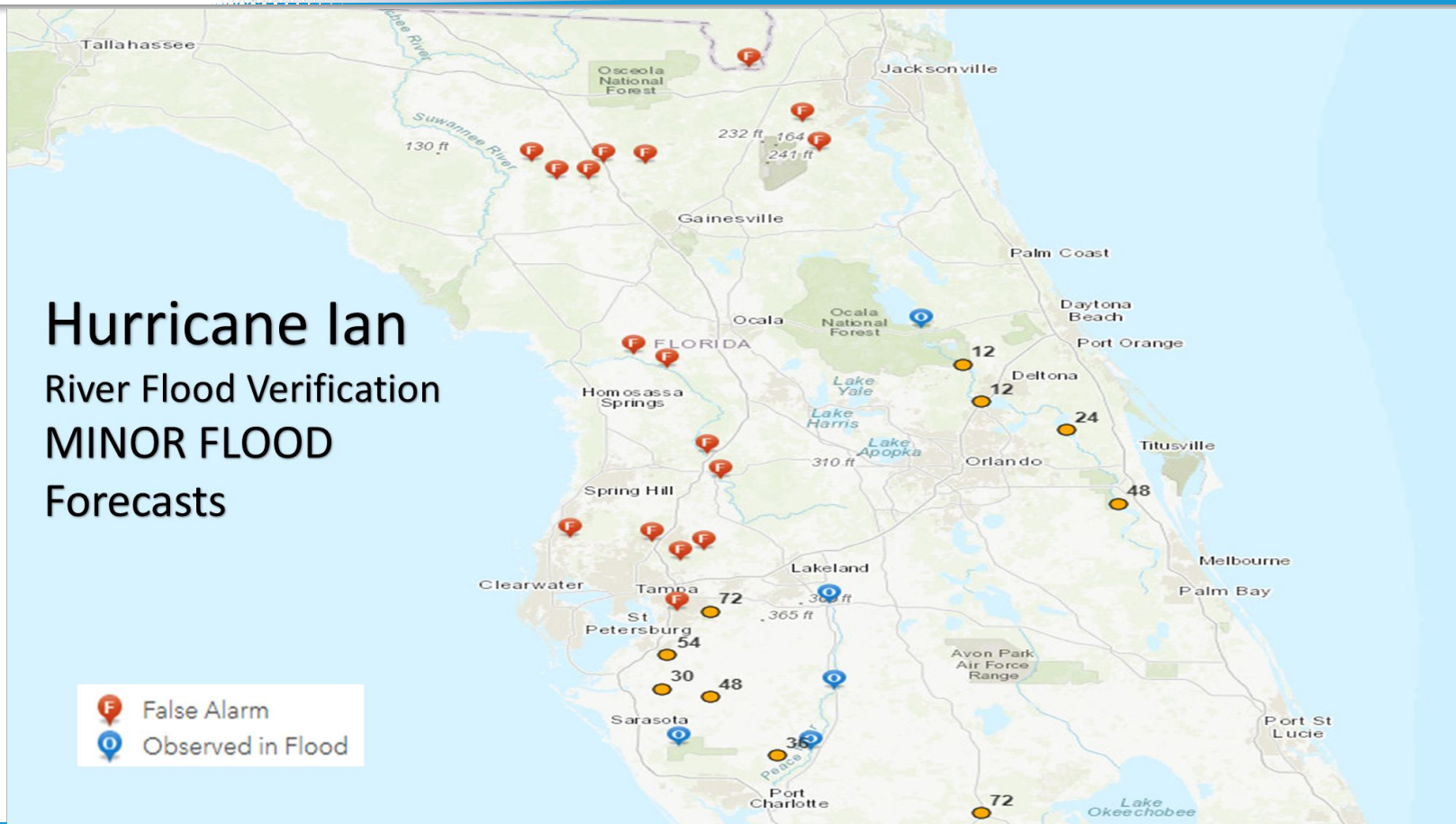
Issued September 24, 2022

# Rainfall Forecast (QPF) Progression

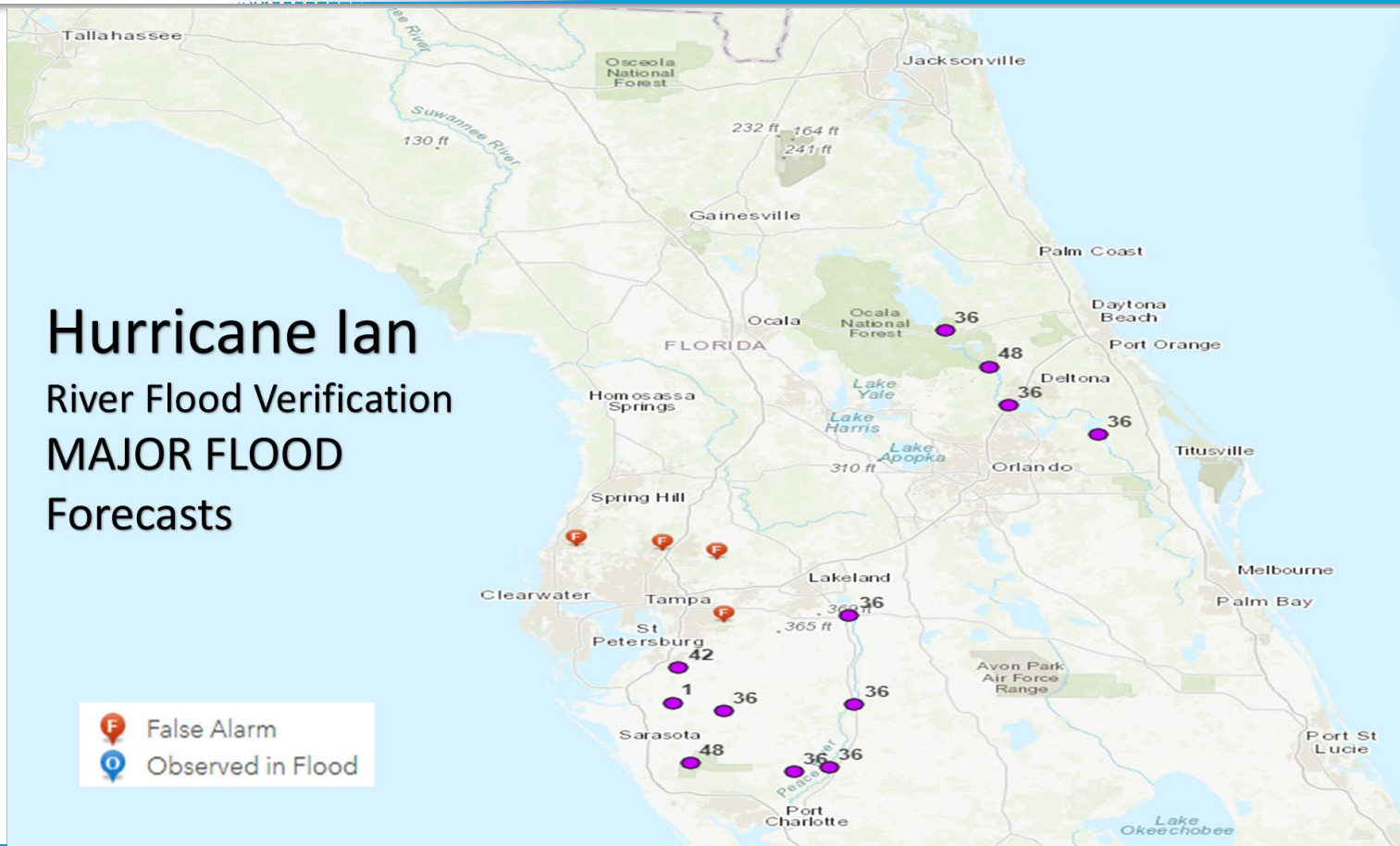




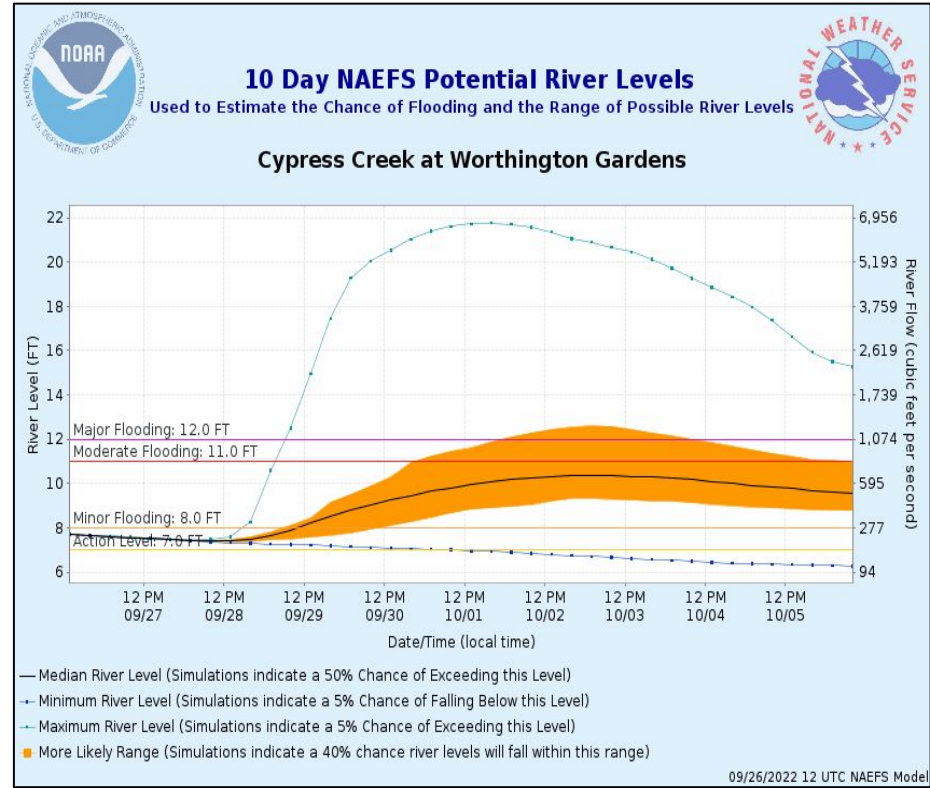
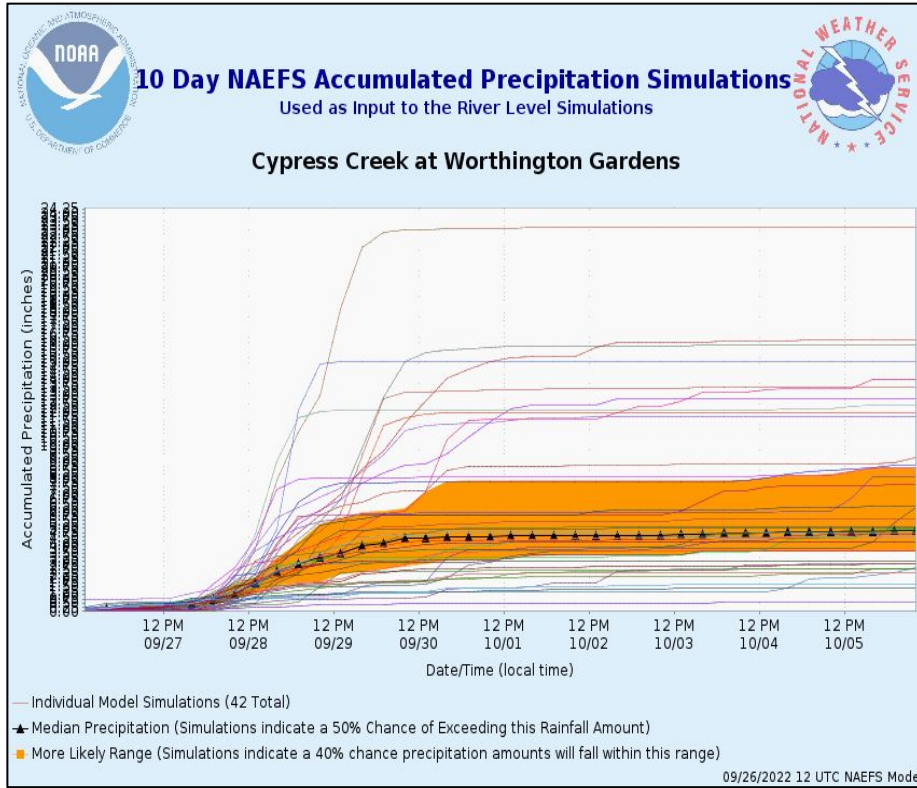


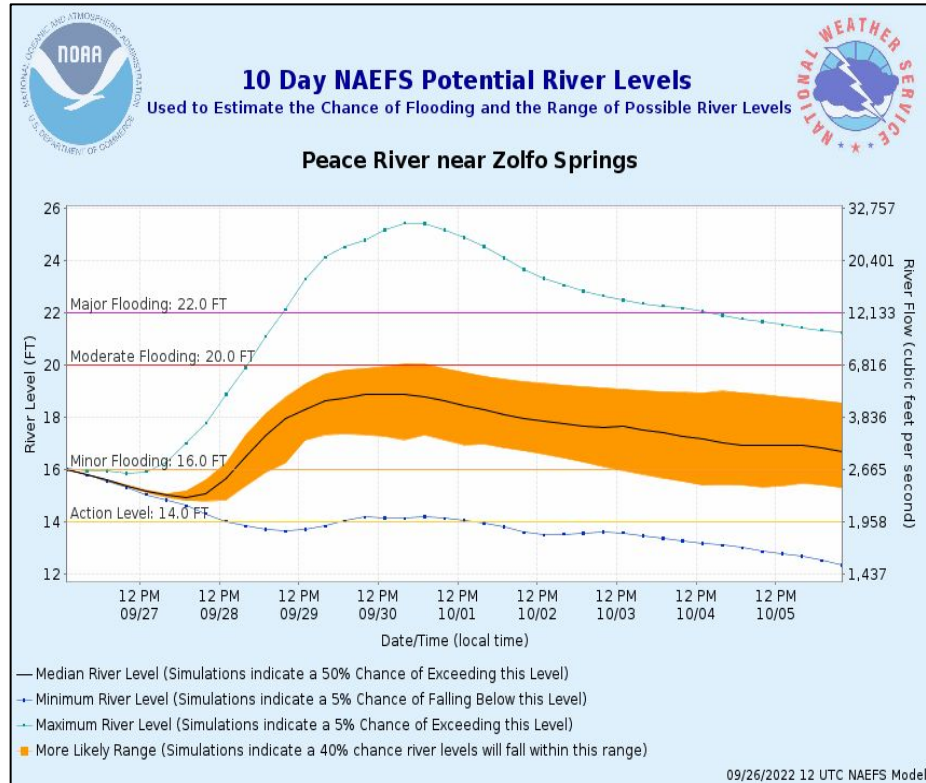
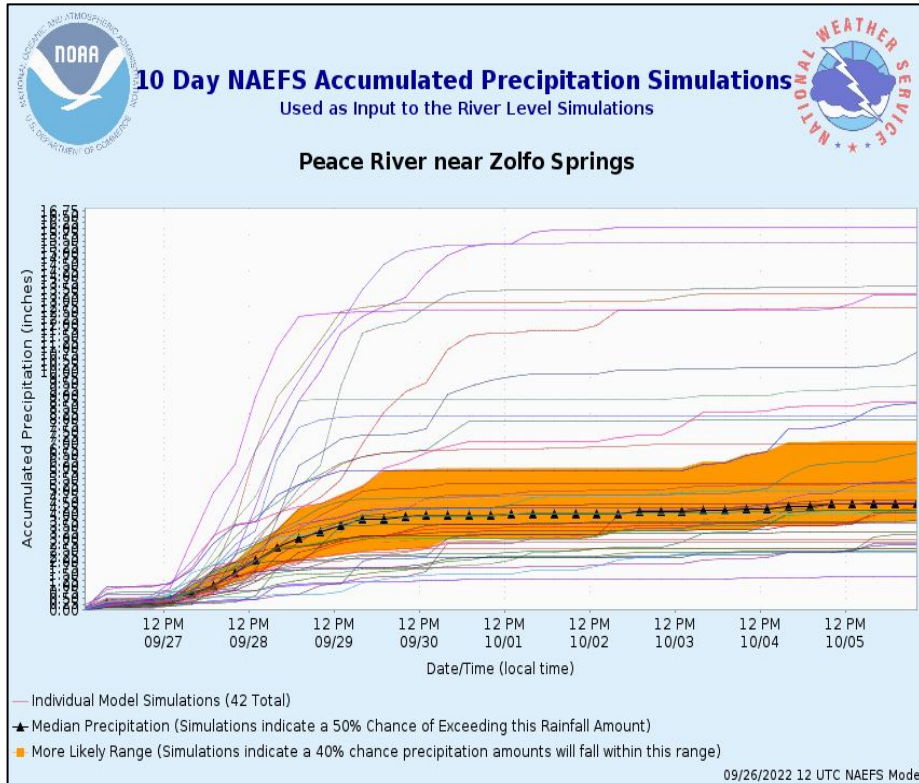


## Hurricane Ian River Flood Verification MAJOR FLOOD Forecasts







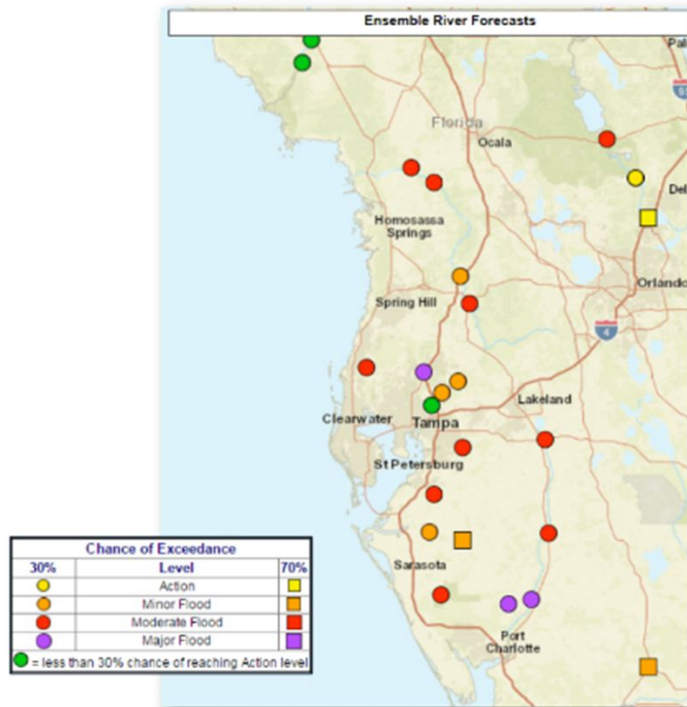






## Potential for River Flooding Next 7 Days

Major Hurricane Ian



- Models have various forecast solutions based on where the heavy rain falls
- Moderate to Major flooding is expected to develop on all area rivers by the end of the week
- Urban, small stream, and overland flooding can happen quickly and catch people unaware



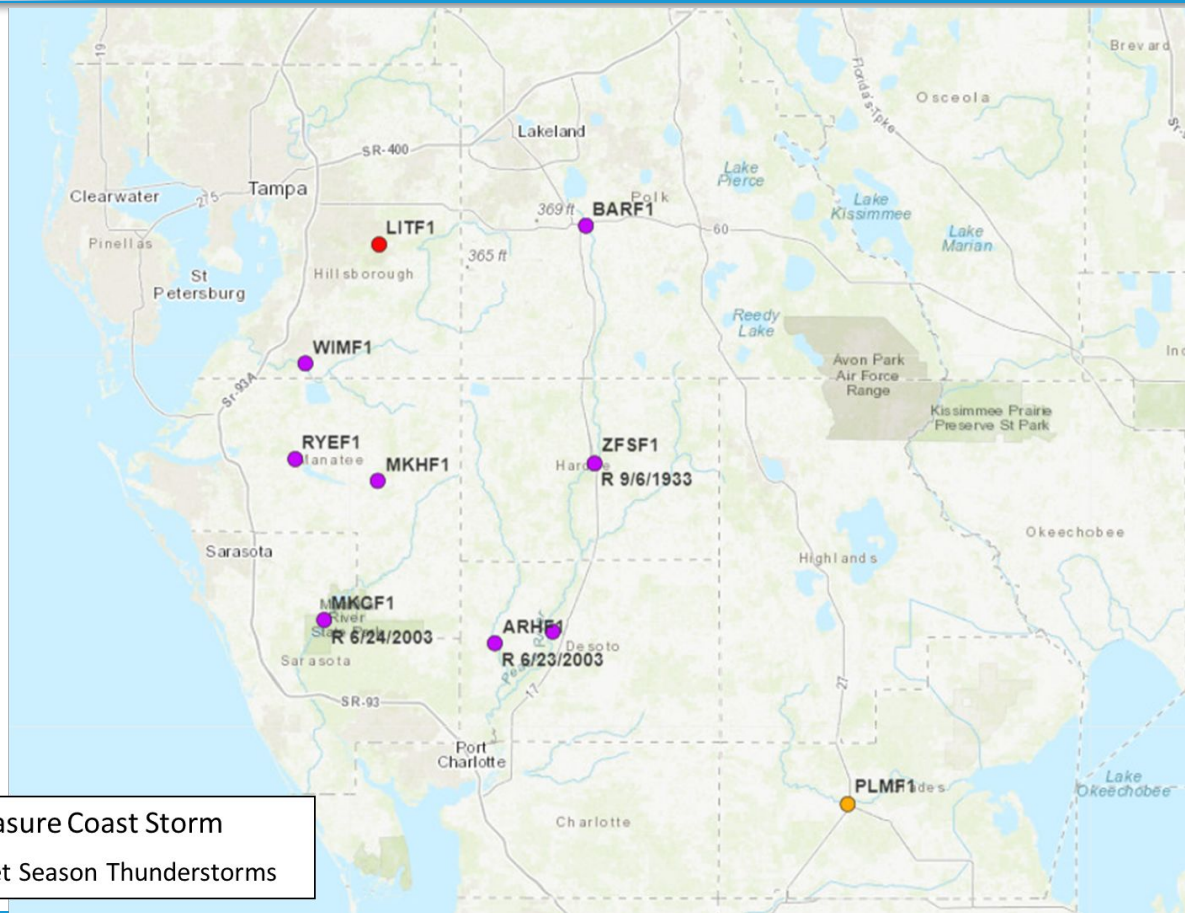
Last Updated: 9/27/2022 5:21 AM

National Weather Service – Tampa Bay



## Hurricane Ian River Flood Impact With Record-Breakers Tampa/Peace River

- Major
- Moderate
- Minor

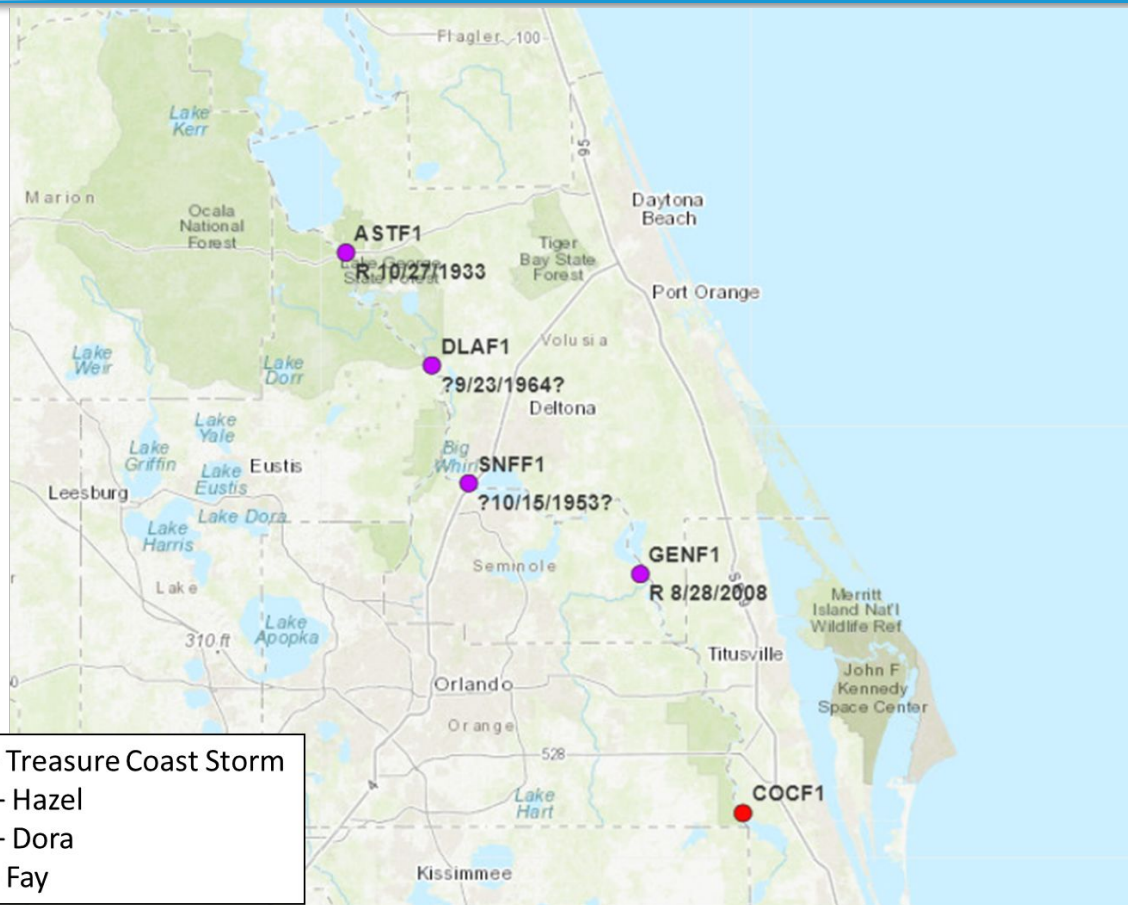


1933 - Treasure Coast Storm  
 2003 — Wet Season Thunderstorms

## Hurricane Ian River Flood Impact With Record-Breakers St Johns River

- Major
- Moderate
- Minor

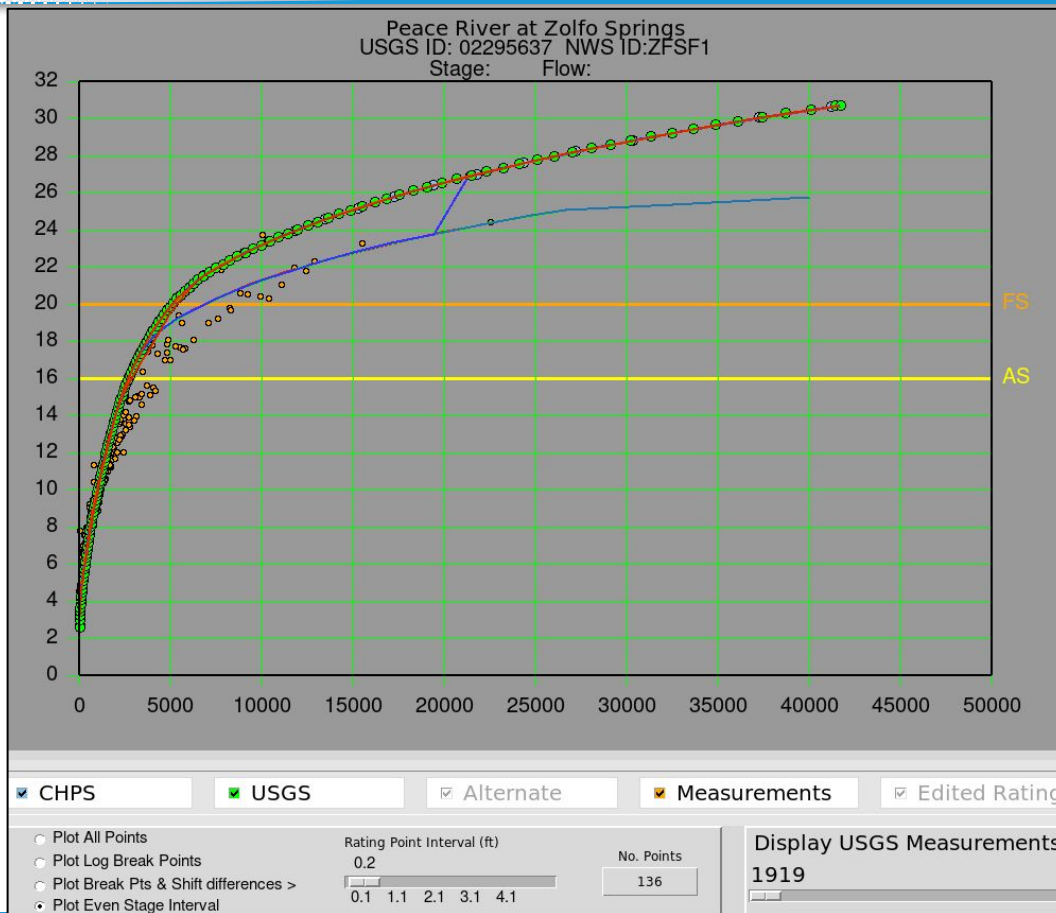
1933 - Treasure Coast Storm  
1953 - Hazel  
1964 - Dora  
2008 - Fay



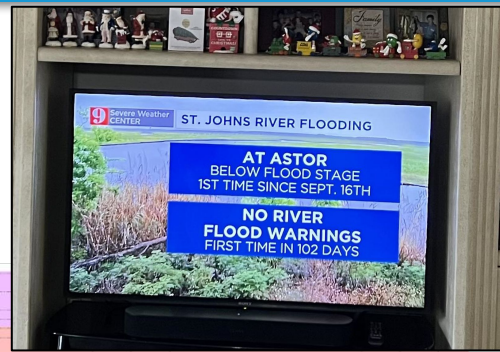
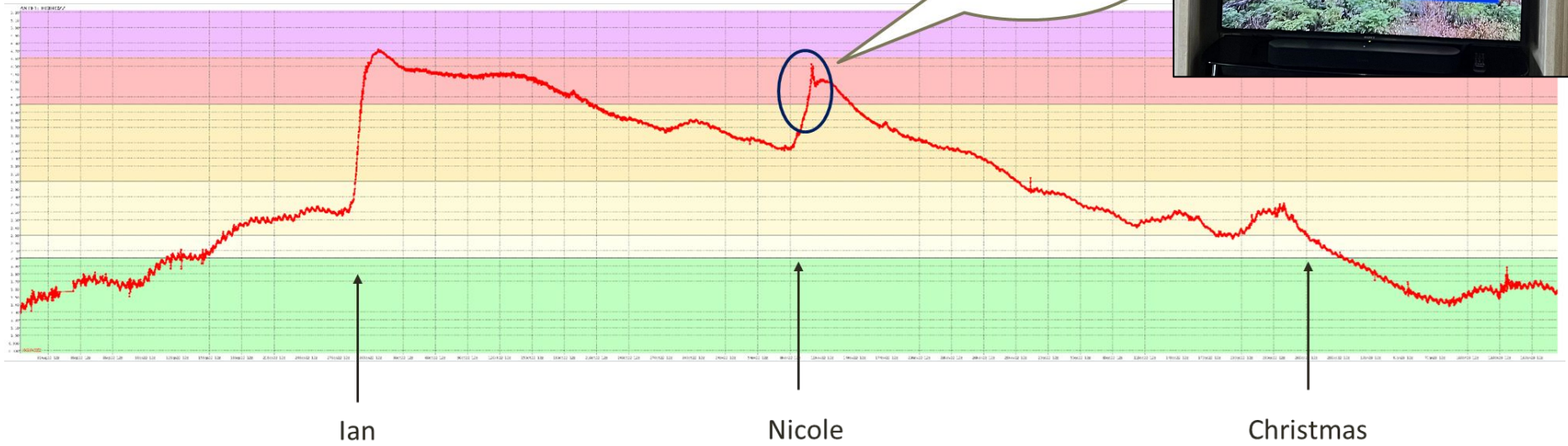




# Record Floods and Rating Curves



# St Johns River Flooding





## NWS Flood Inundation Mapping Services

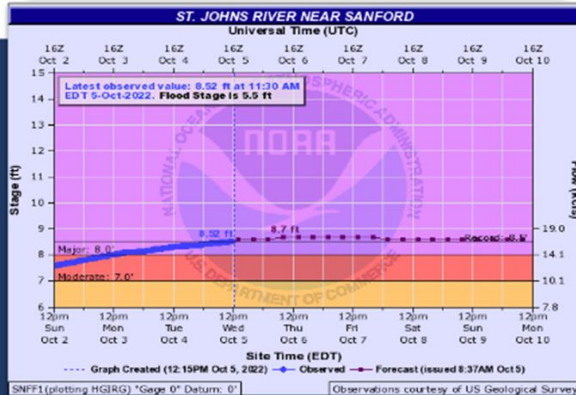
*Disclaimer: This map shows the flood extent based on a river crest of 9.0 feet. This is an approximate-based FIM which should be used more conservatively.*

### St Johns River at Sanford (SNFF1)

Forecast Crest Height: 8.7 feet  
Map Height Shown: 9.0 feet  
FIM Source: Local NWS Map (FESM Model)  
FIM Type: Static (depth not depicted)  
FIM Creation Time: 10/5/2022 12:30 pm ET

**FOR OFFICIAL USE ONLY**

**Map shows flood extent  
Depth is not provided**



For the latest observations: [St Johns River at Sanford](#)



10/5/22 @ 12:30 PM