

Ongoing Collaboration and Impact from the NASA Project

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Objectives of the NASA Project

Presented in
Summer 2021

- Develop “customized” winter seasonal forecasts for Florida; **CLIFF**: experimental seasonal **CL**imate Forecasts for **F**lorida

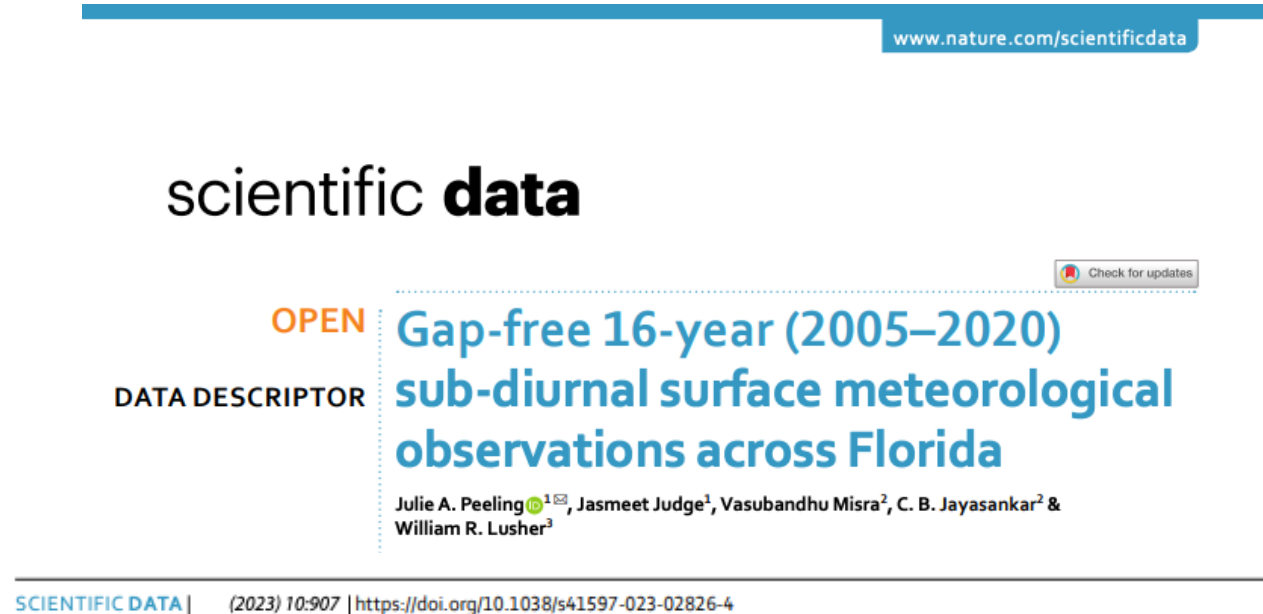
Presented in
Summer 2022

- Develop a real time monitoring and seasonal outlook of the rainy (summer) season for Florida

- Developing high temporal resolution gap-free surface meteorological observations across Florida

Published in 2023

The Journal Article



“Using data from the Florida Automated Weather Network (FAWN), methods of linear interpolation, trend continuation, reference to external sources, and nearest station substitution were applied to fill the data gaps depending on the extent of the gap. The outcome of this study provides continuous, publicly accessible surface meteorological observations for 30 FAWN stations at 15-minute intervals for years 2005–2020.”

Florida Automated Weather Network

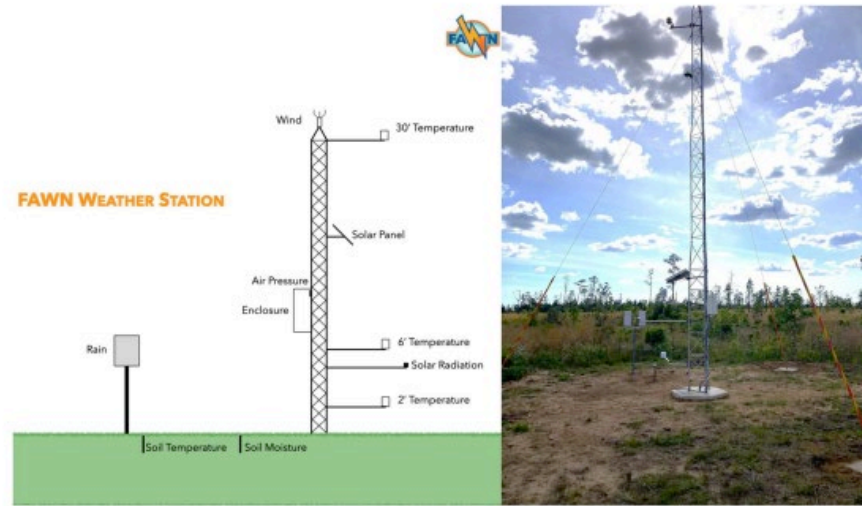
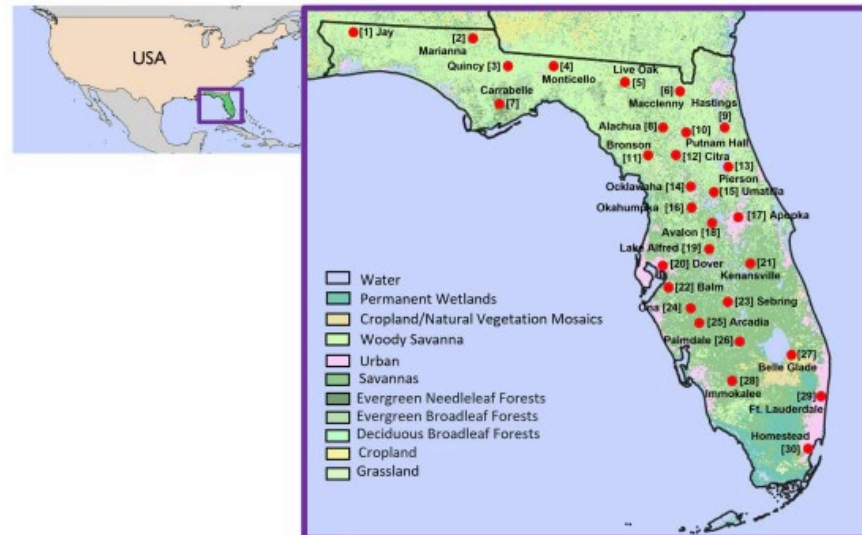


Fig. 1 Typical FAWN tower configuration (left) and photo of a FAWN tower (right).



FAWN was initiated in 1997 to provide climatic data to rural areas in Florida to inform growers, it is currently comprised of 42 stations providing sub-hourly data for 10 meteorological variables

Application of the gap-free data

ASCE

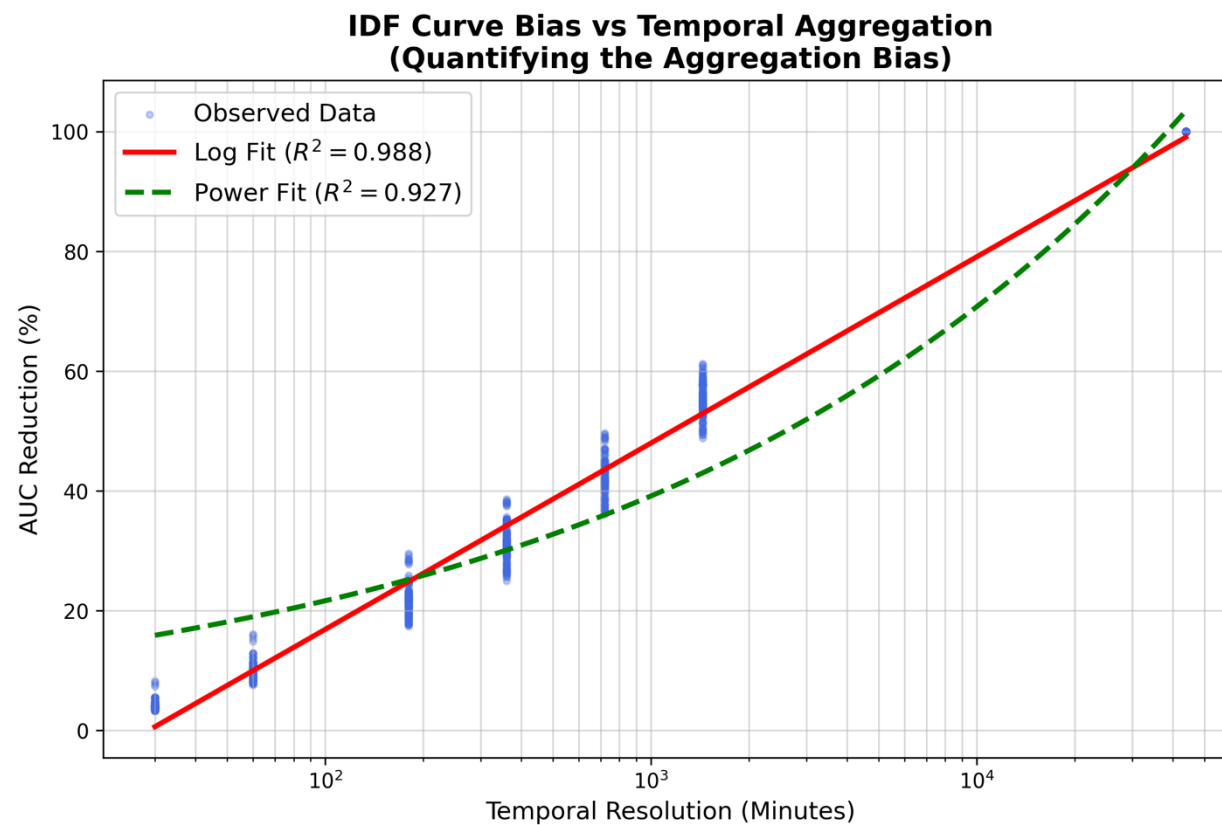
Sensitivity of Intensity–Duration–Frequency Curves to the Temporal Resolution of Rainfall Observations

David Johnson¹; Vasubandhu Misra²; and Ebrahim Ahmadisharaf³

Journal of Hydrologic Engineering; Doi: 10.1061/JHYEFF.HEENG-6773.

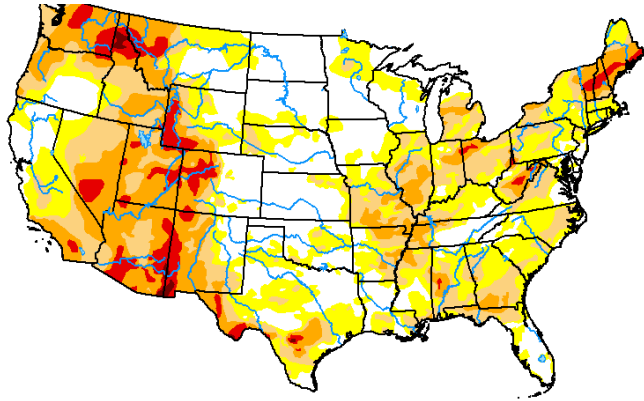
“Our analysis reveals that the loss of information of rainfall intensity in Florida with aggregation interval follows a logarithmic fit with significant losses occurring in the first three hours. Our study concludes that rainfall observations with subhourly measurements are critical to estimate IDF curves over Florida.

Loss of information from aggregation

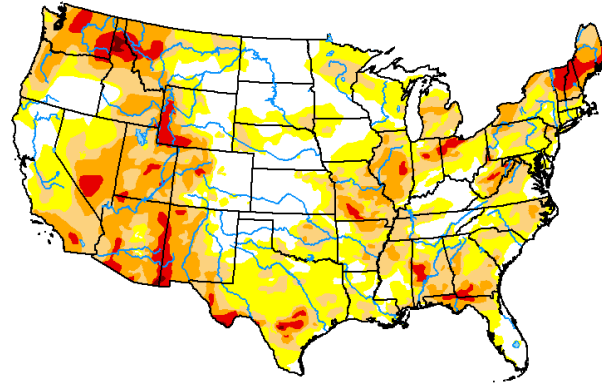


Anticipating the 2026 Panhandle Florida Drought

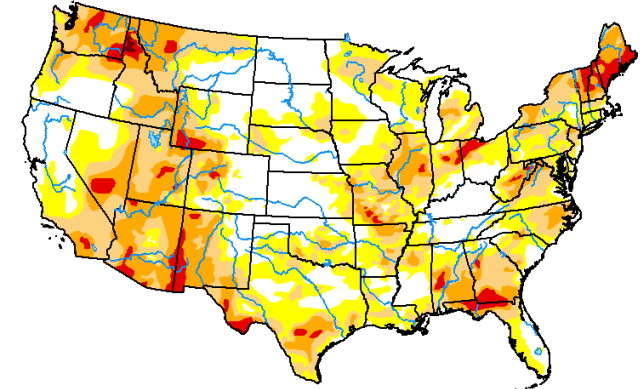
Sept 30, 2025



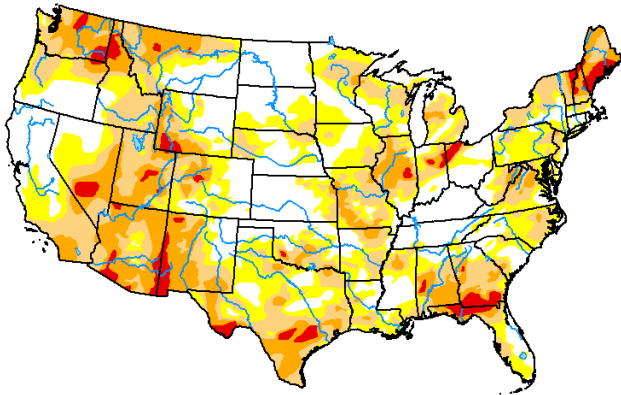
October 14, 2025



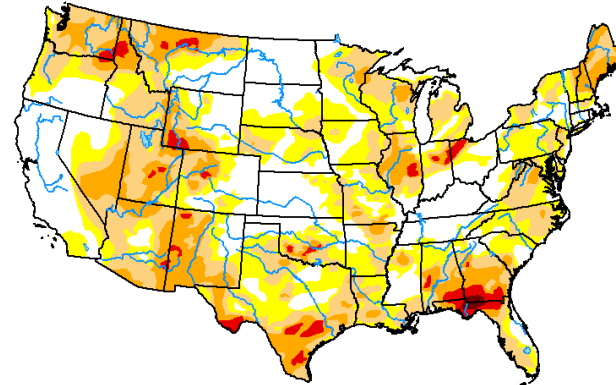
October 28, 2025



Nov 11, 2025



Nov 25, 2025

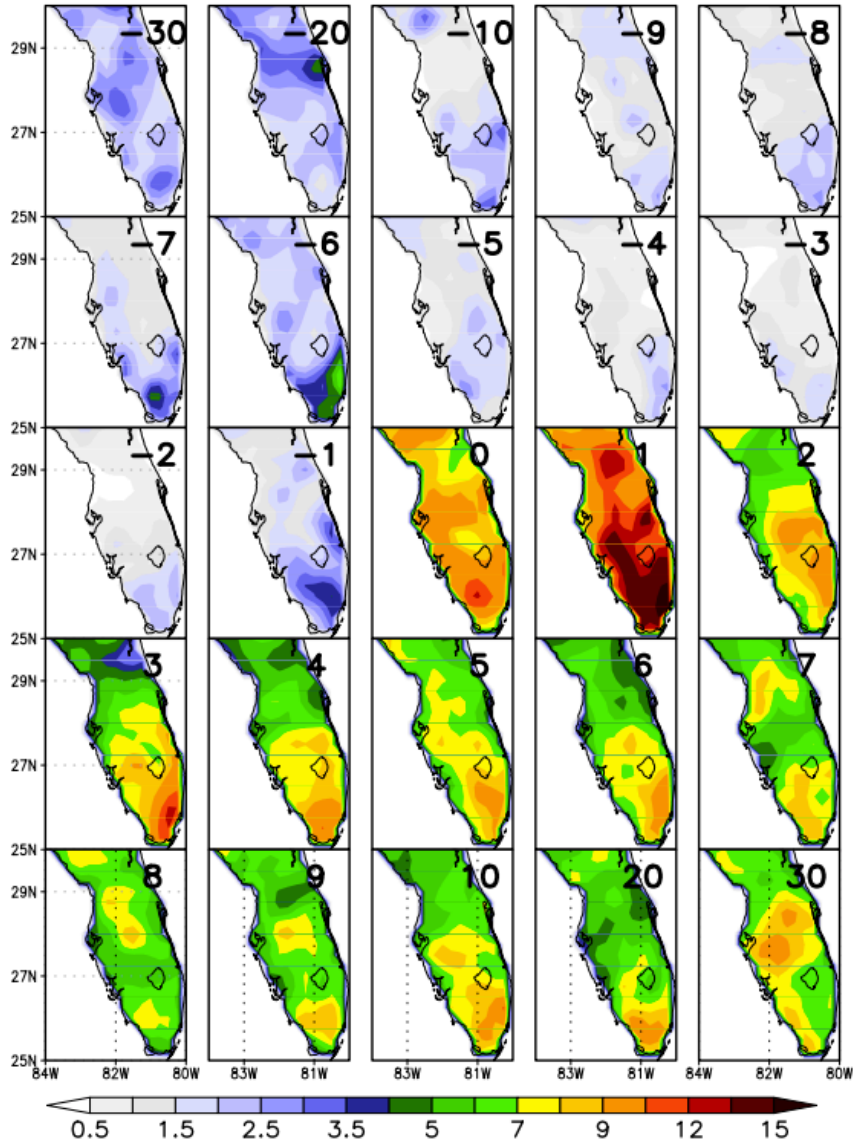


Ending with a deficit by the end of wet season of 2025 gave sufficient clues that this deficit will not recover but further deteriorate through at least the beginning of the 2026 wet season given the seasonal variations of the hydrological cycle of Florida.

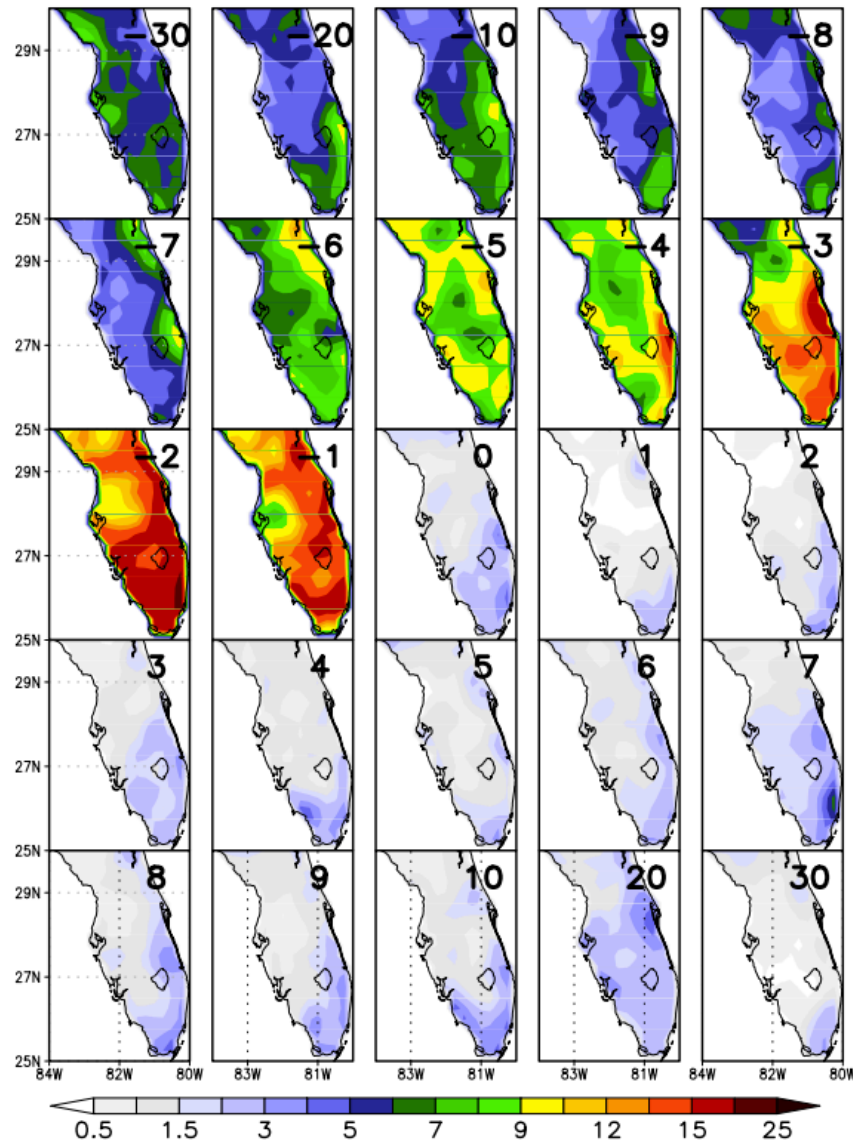
From the drought monitor map

Seasonal hydrological cycle of Peninsular Florida

At time of onset



At time of retreat



Thank You!

