

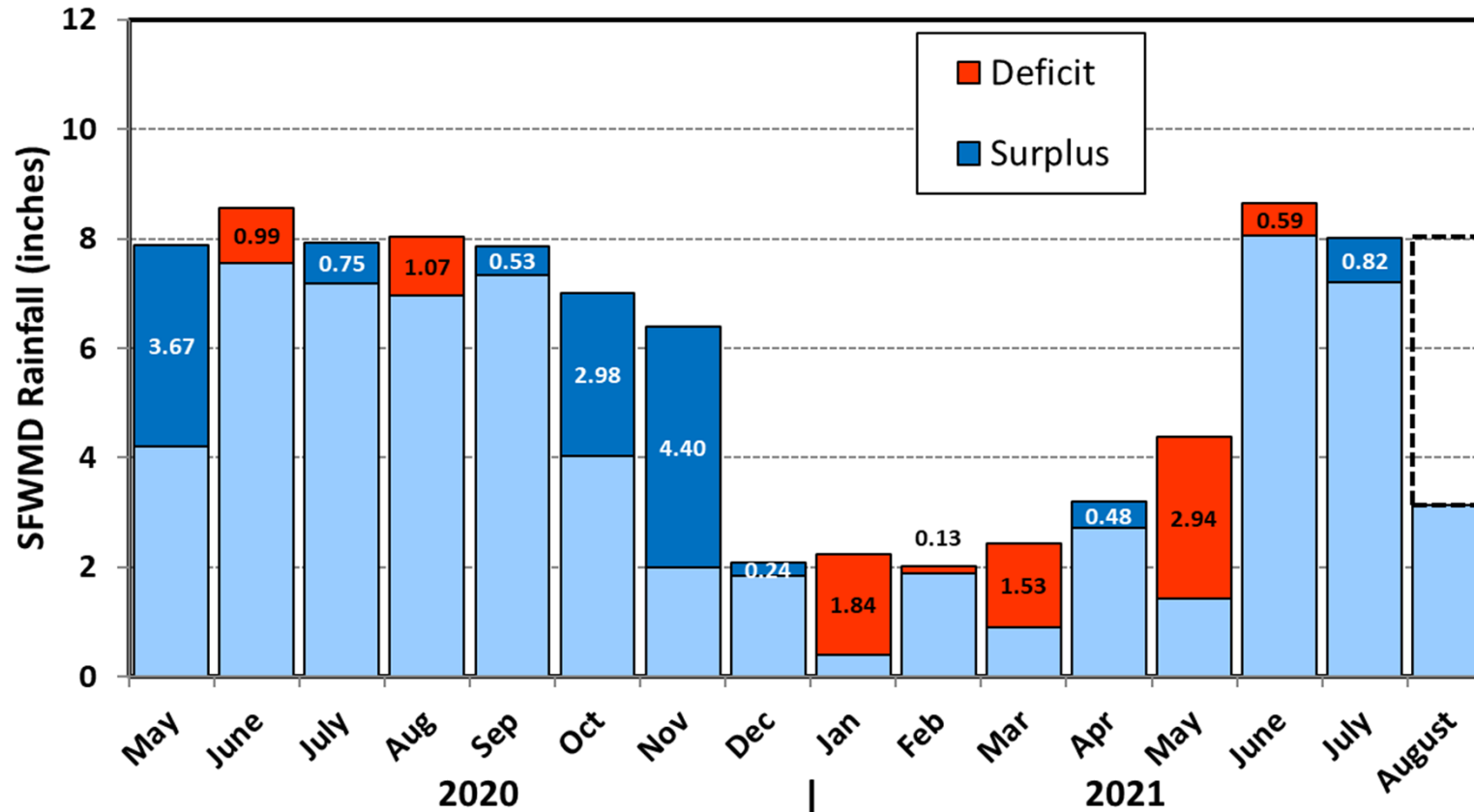
# Water Conditions Summary

**South Florida Water Management District  
Governing Board Meeting  
August 12, 2021**



**John P. Mitnik, PE  
Chief District Engineer  
Assistant Executive Director**

## SFWMD Rainfall Distribution Comparison (May 2020 - August 2021)



### District Wide Average Rainfall

Month	Average (inches)
Jan	2.24
Feb	2.01
Mar	2.43
Apr	2.71
May	4.37
Jun	8.65
Jul	7.20
Aug	8.03
Sep	7.31
Oct	4.15
Nov	2.18
Dec	1.94

Wet Season

#### 2020 WET SEASON

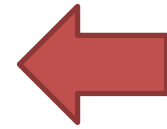
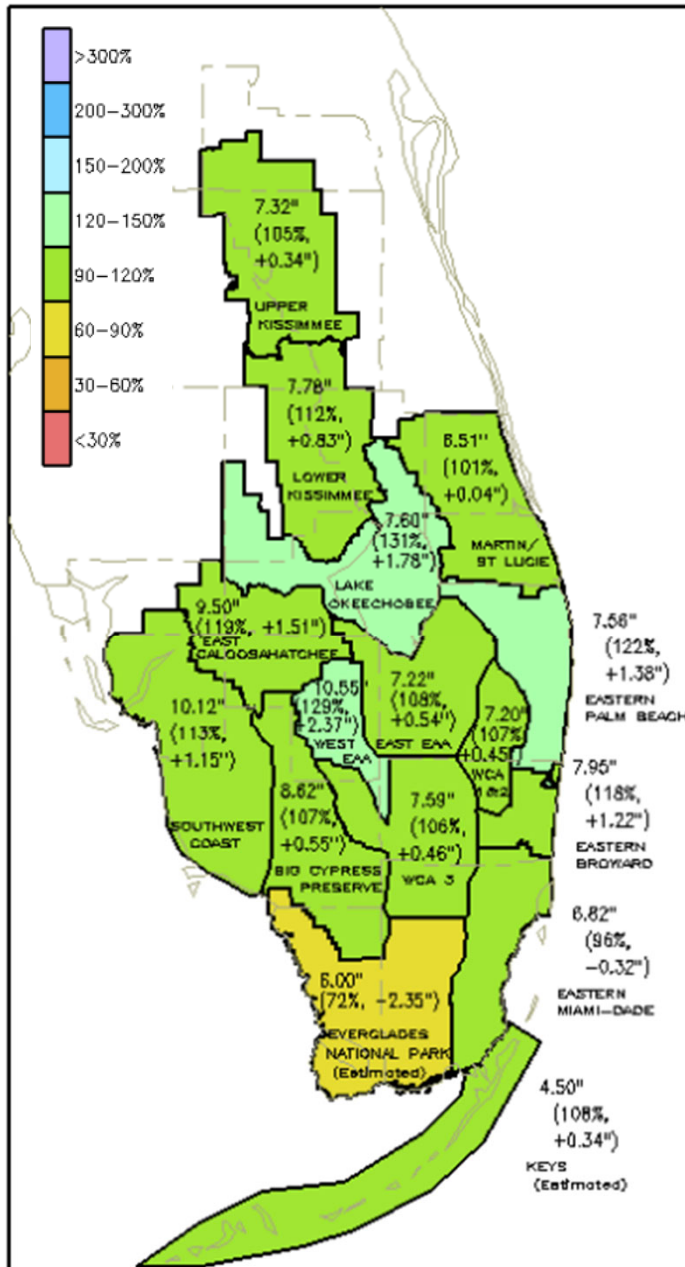
- Started May 15, 2020.
- Jul and Sep had above average rainfall.
- October rainfall was well above normal.
- Overall, slightly above normal.

#### 2020-2021 DRY SEASON.

- Nov rainfall was in excess of 300% of normal.
- Jan and Mar extremely dry months.
- Dec and Apr slightly above normal.
- May 2021 is the sixth driest May in POR.

#### 2021 WET SEASON

- Late Start May 28, 2021.
- Jun rainfall was below average, -0.6" deficit.
- TS Elsa brought ~1.5".
- July rainfall was above average, ~0.8".

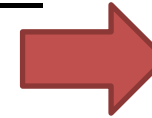
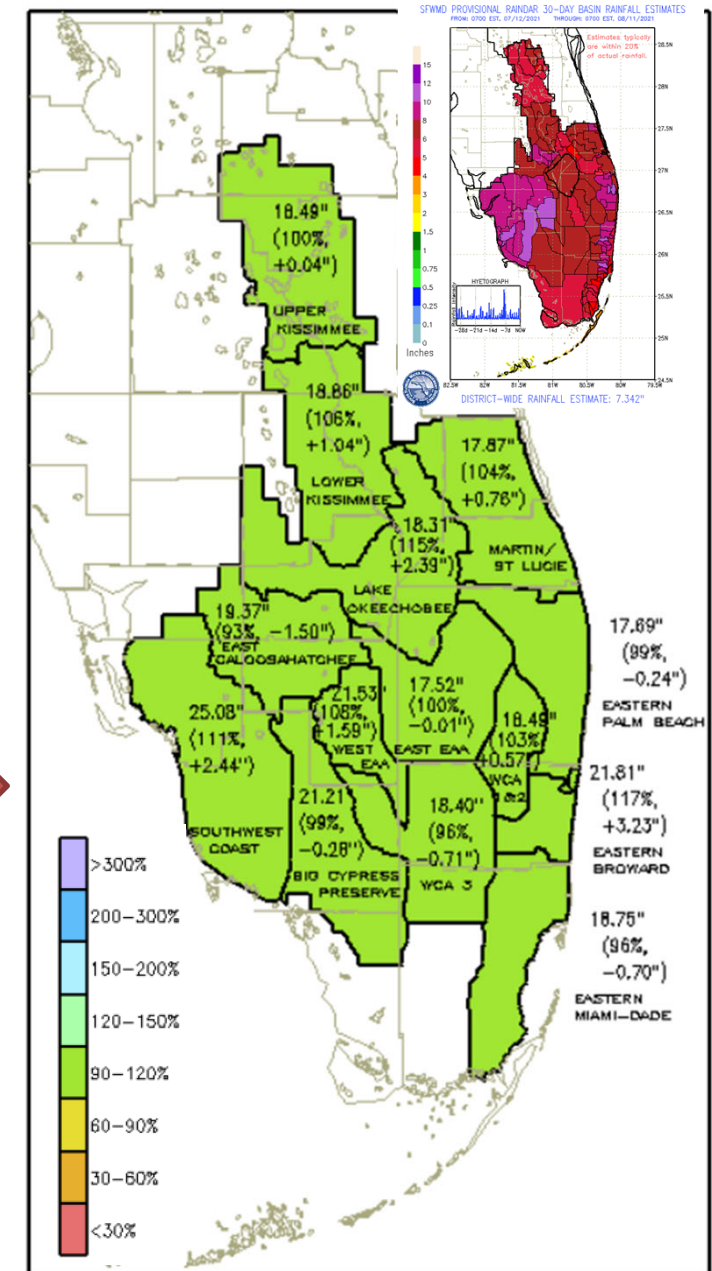


## July 2021 Rainfall DISTRICT-WIDE: 8.02"

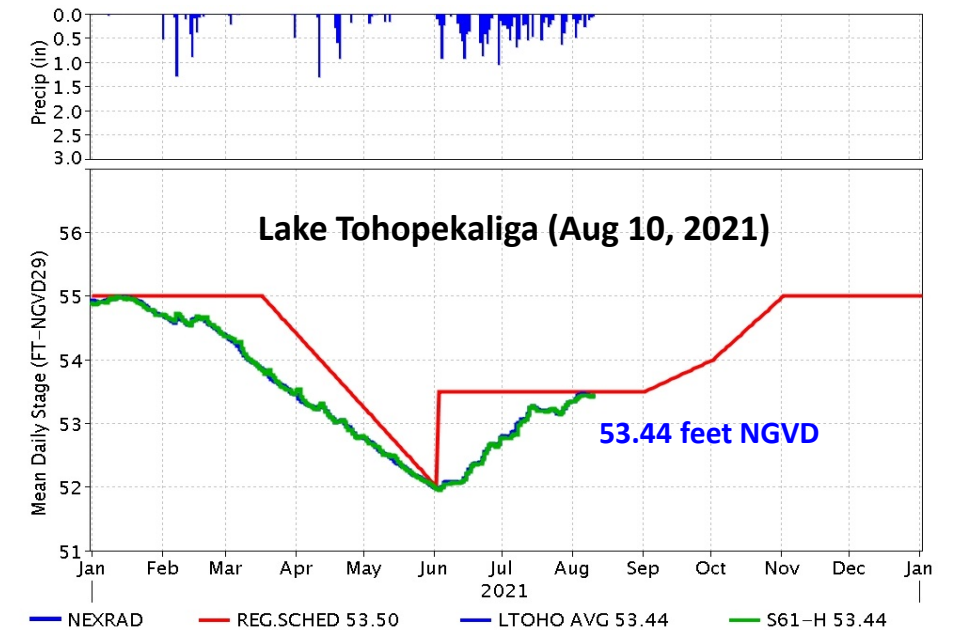
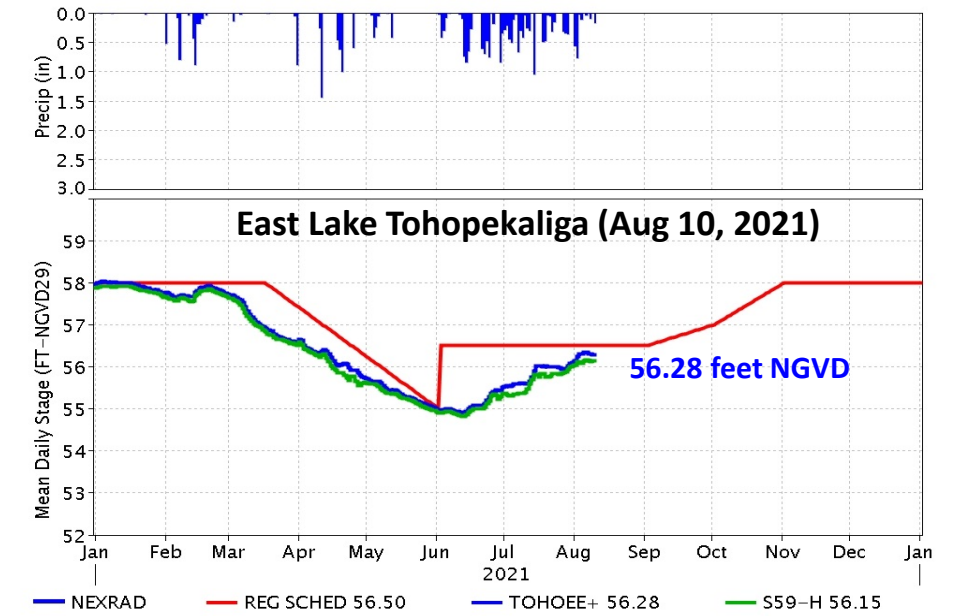
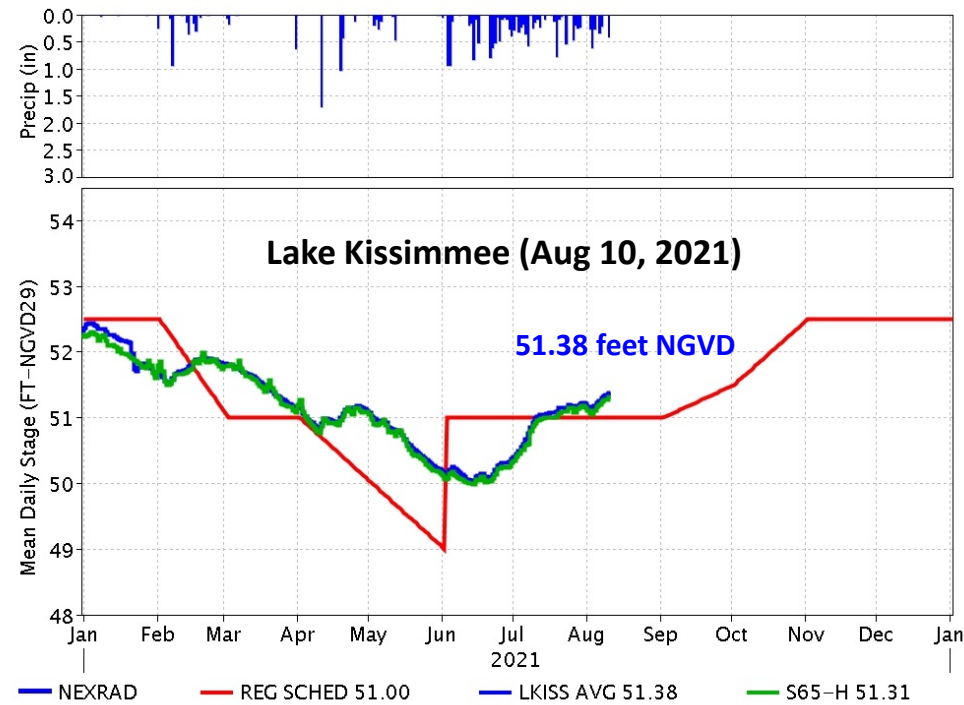
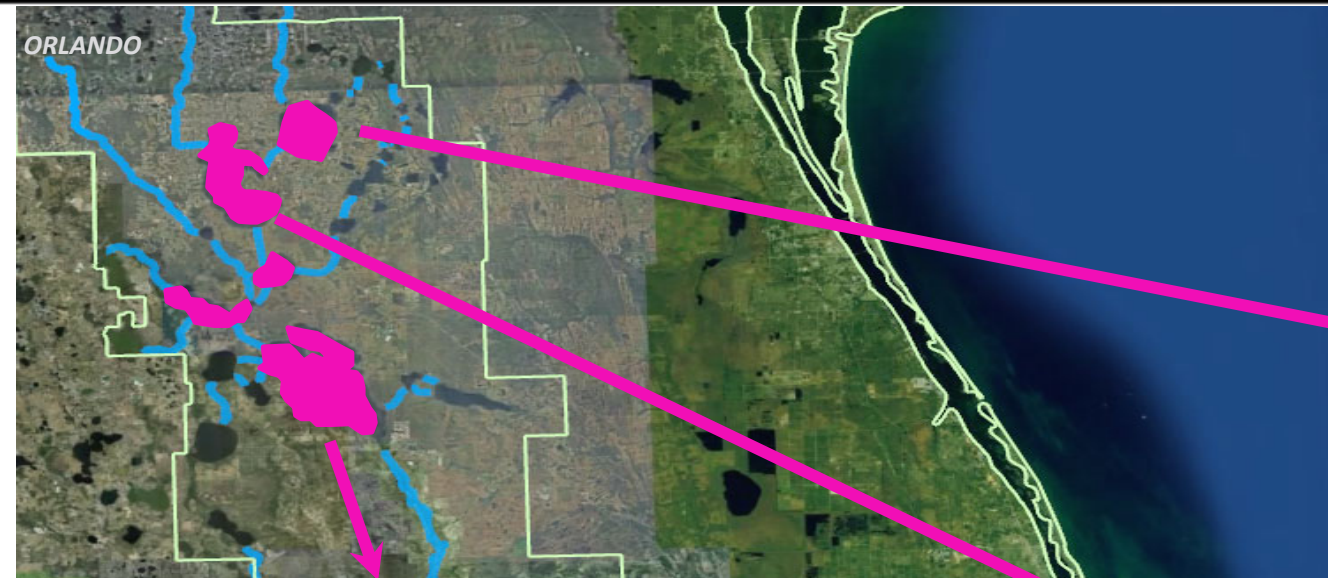
- 111% of average, +0.82" surplus.
- 14 out of 16 basins are above 100% Normal, except Eastern Miami-Dade and ENP
- Largest surplus is Lake Okeechobee at 131% or +1.78".
- ENP deficit is -2.35"

## Wet Season Rainfall 29 May 2021 – Aug 11 2021 DISTRICT-WIDE: ~19.58"

- Wet season started May 28<sup>th</sup>
- 103% of average, +0.58" surplus.
- Regional variability of 93% - 117%.
- Largest surplus is at East Broward, +3.23" (117%).
- Largest deficit is at East Caloosahatchee, -1.50" (93%).

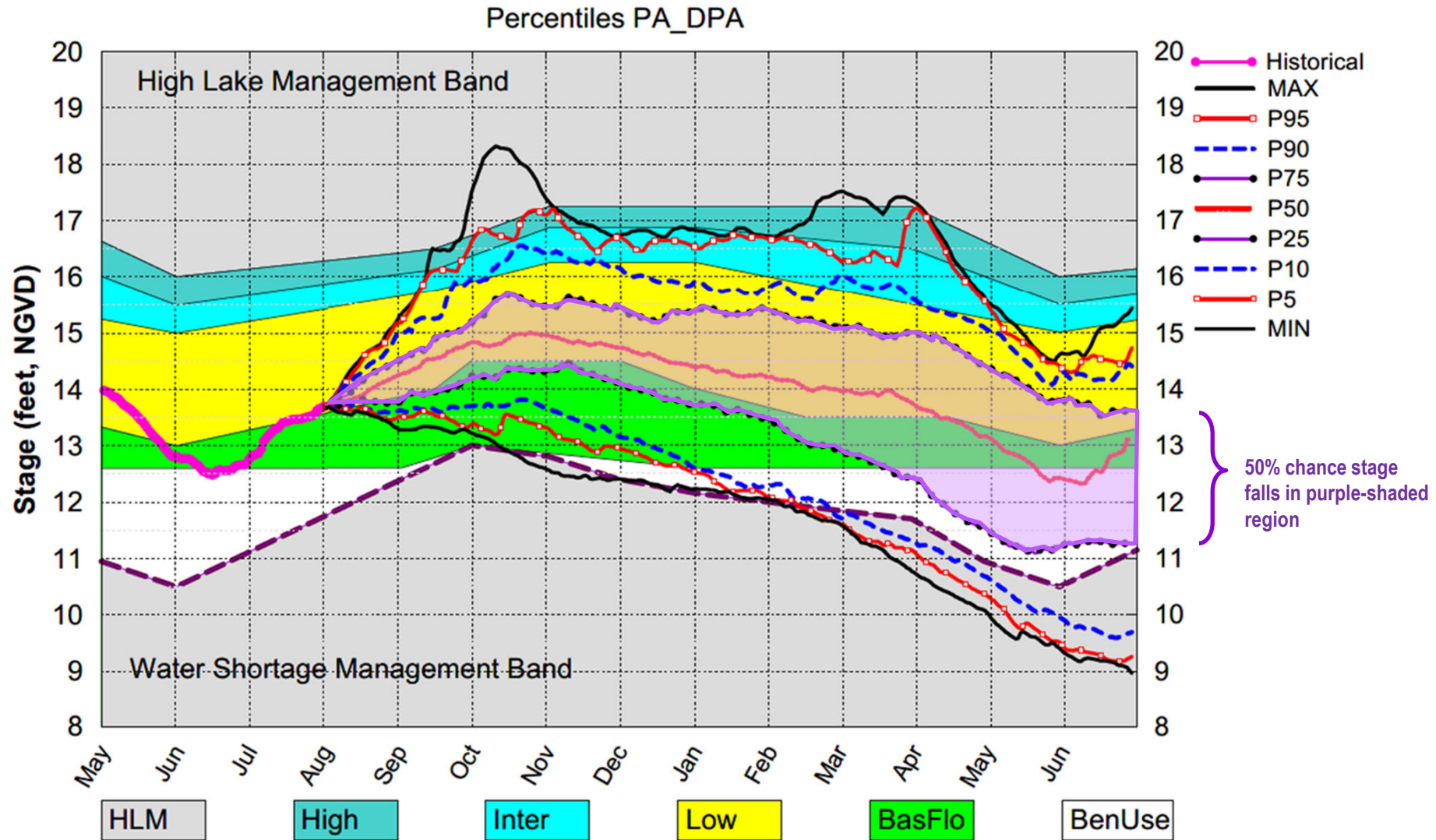








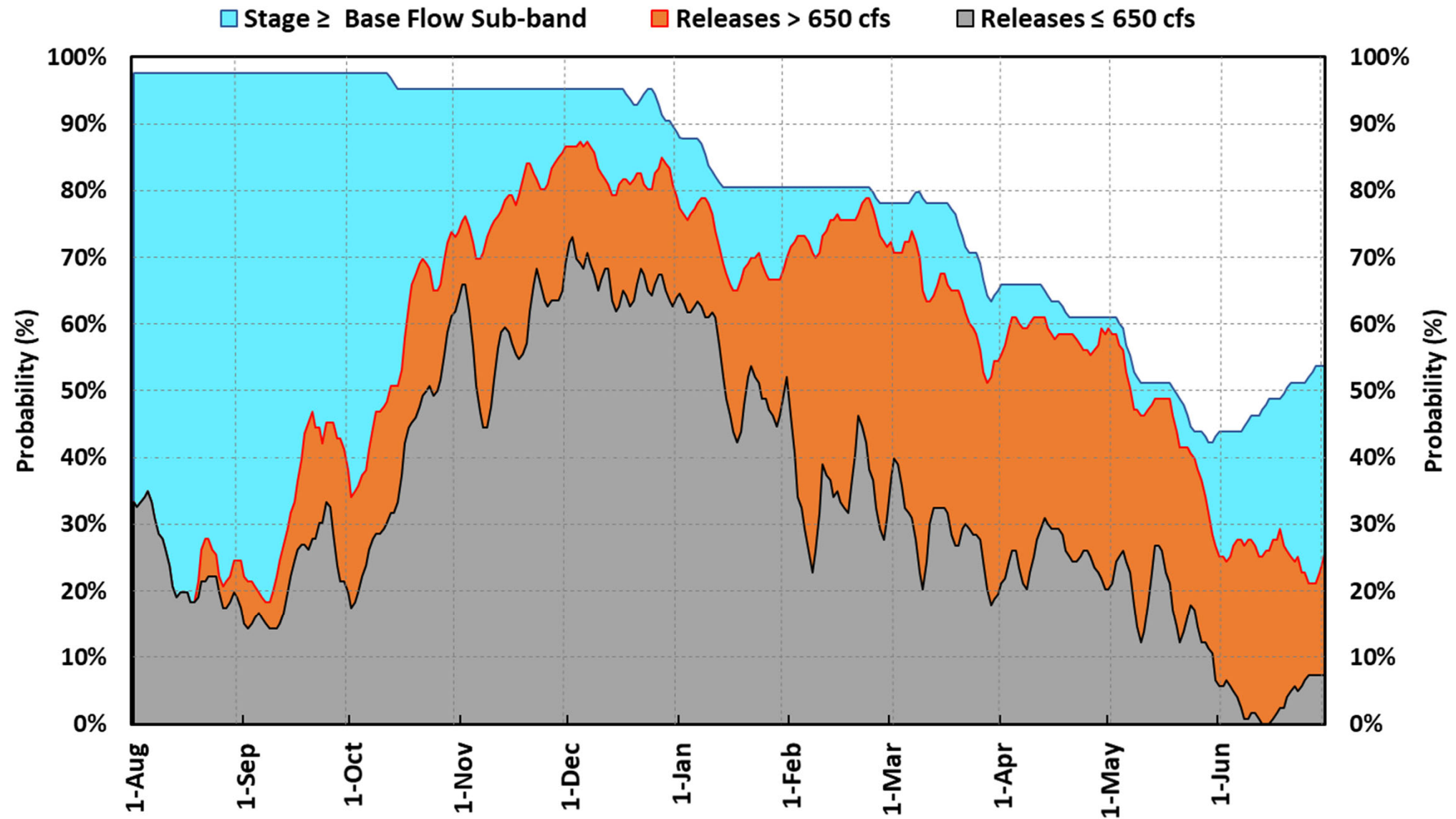
## Lake Okeechobee SFWMM Aug 2021 Position Analysis



(See assumptions on the Position Analysis Results website)

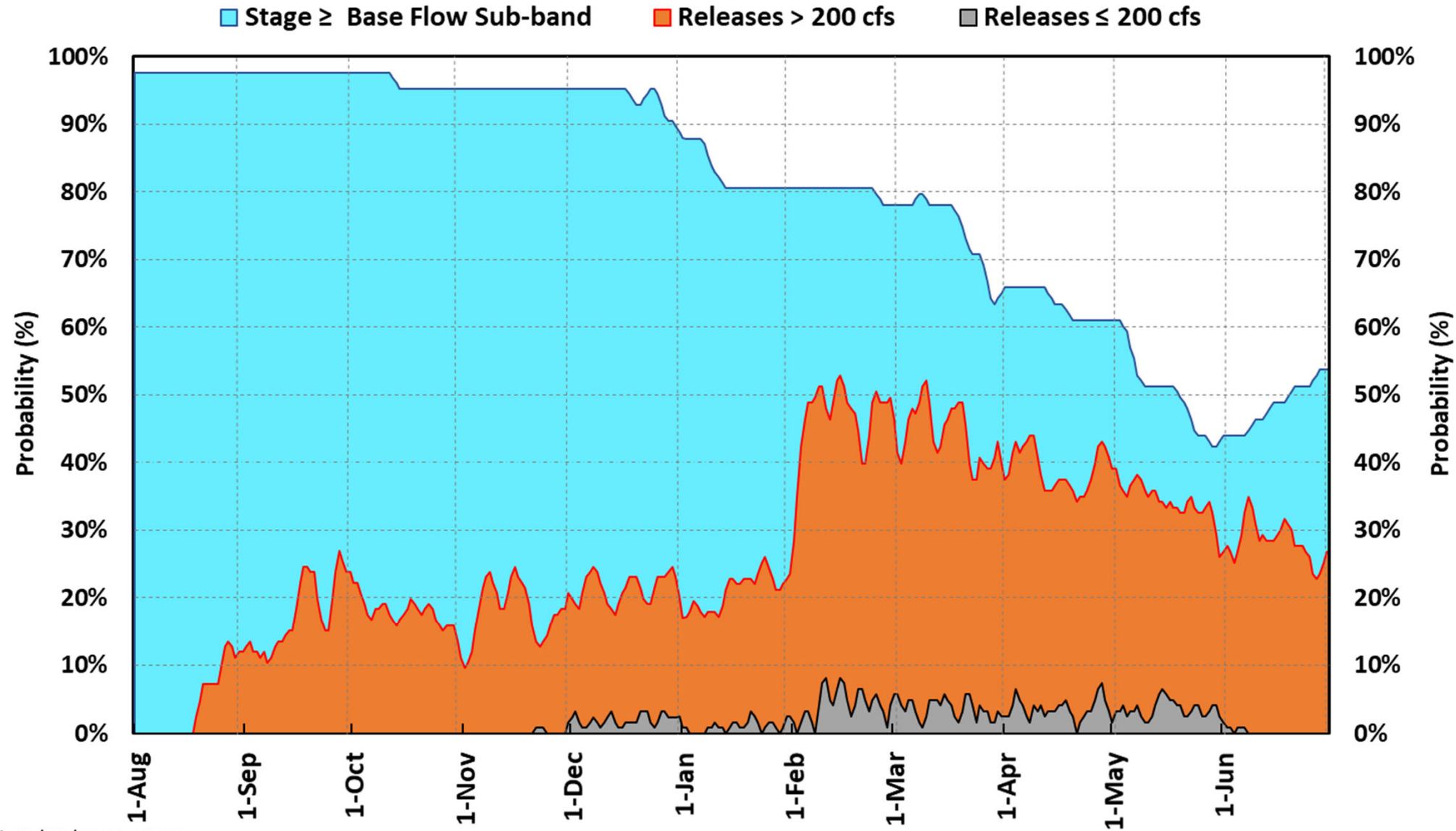
Tue Aug 3 13:38:26 2021

## August 2021 PA - Likelihood of Releases to the Caloosahatchee Estuary



Wed 08/04/2021 16:17

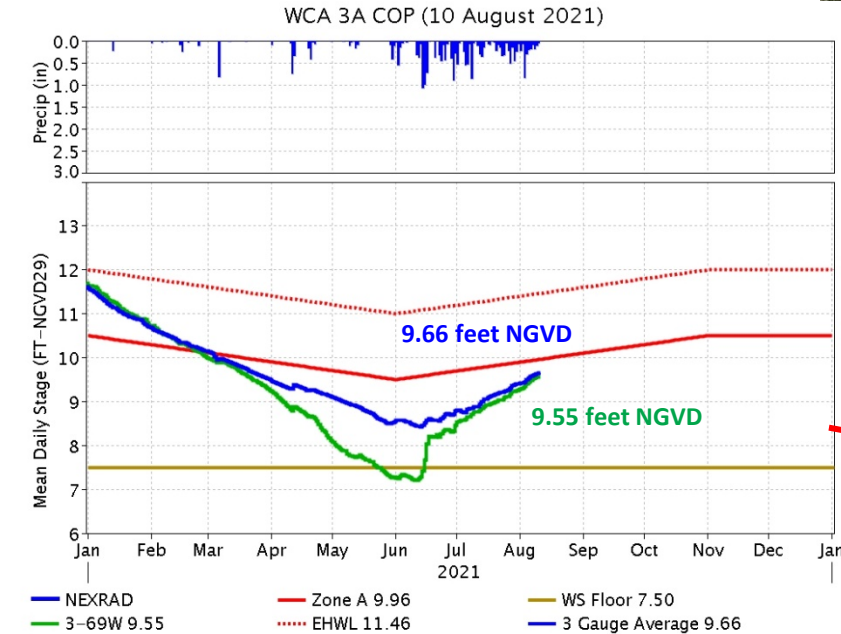
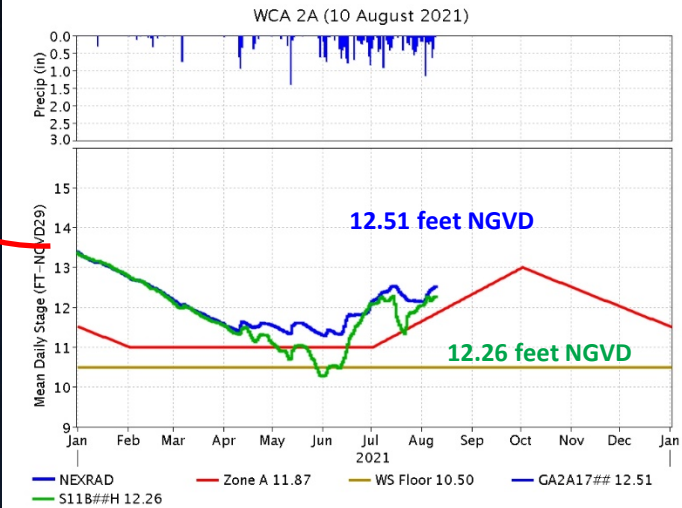
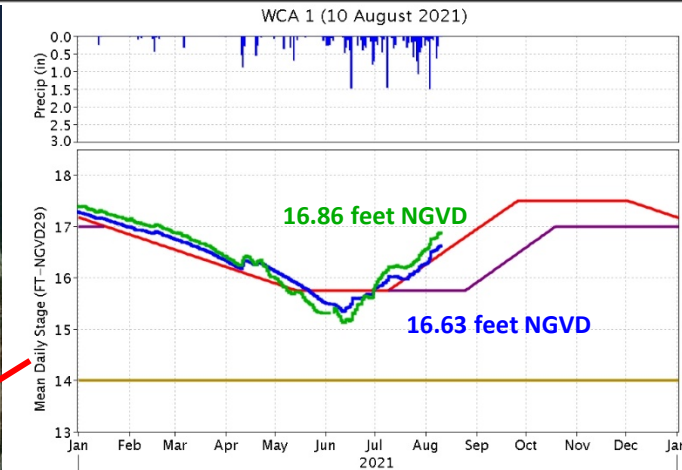
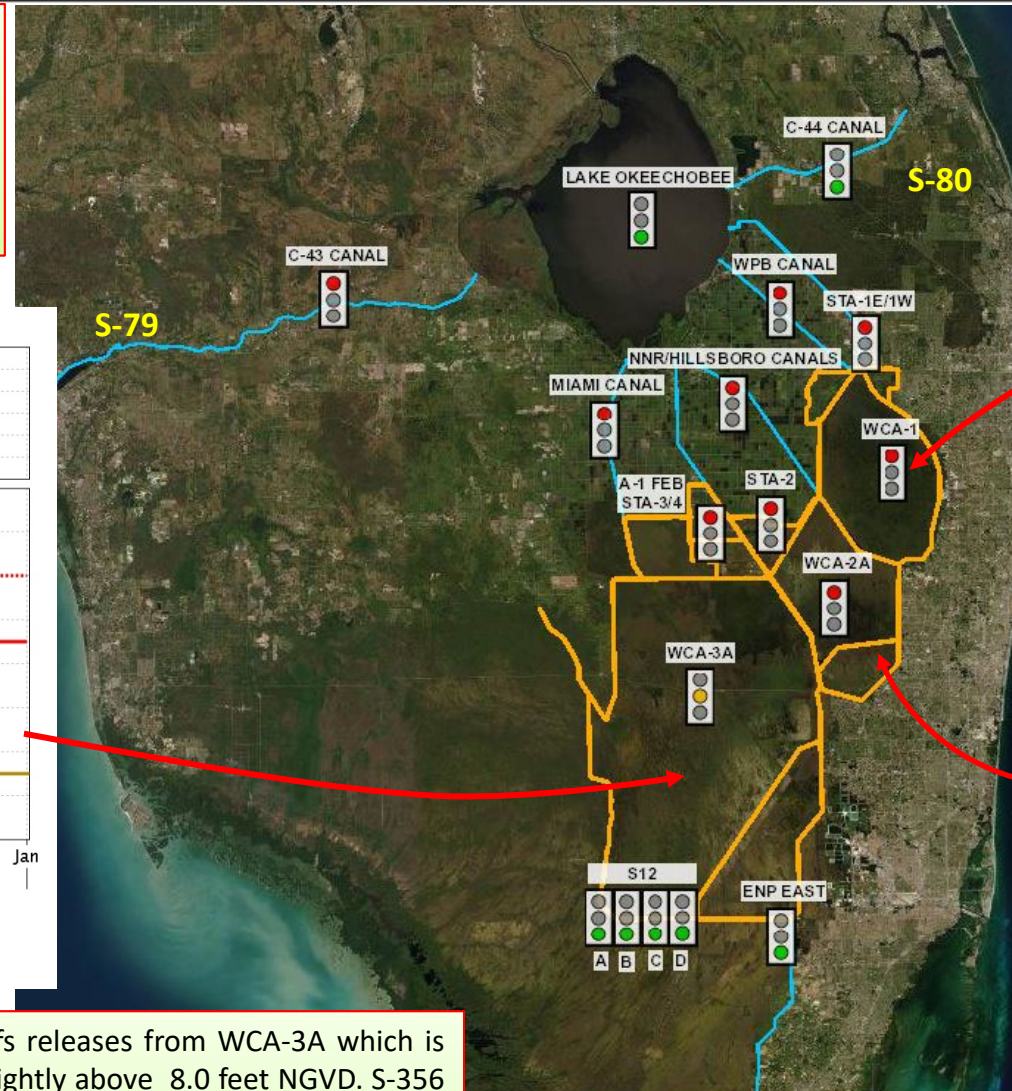
## August 2021 PA - Likelihood of Releases to the St. Lucie Estuary



Wed 08/04/2021 16:17



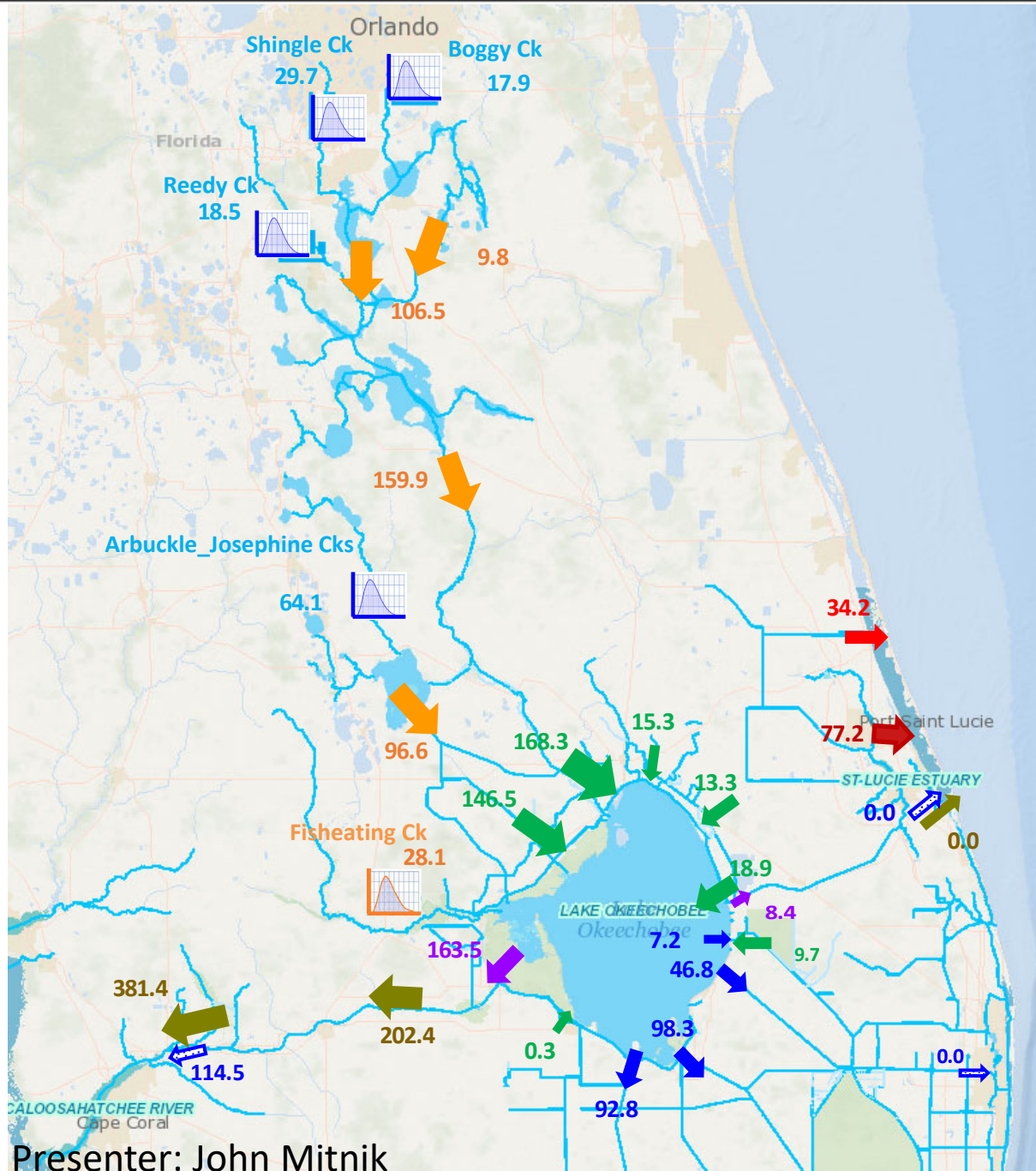
Lake Okeechobee stage is in the Low Sub-band of LORS-2008 Regulation schedule. LORS release guidance suggest: Up to Maximum Practicable to the WCAs if desirable or with minimum Everglades impact; otherwise, no releases to WCAs. For Estuaries, up to 450 cfs at S-79 and up to 200 cfs at S-80.



For this week, Tamiami Trail Flow Formula calls for 1,158 cfs releases from WCA-3A which is being delivered via S333N and S-12D. Current L-29 stage is slightly above 8.0 feet NGVD. S-356 is pumping since June 16 to maintain canal stages in the L-31N. S-334 had been closed since June 15th. S-331 has been syphoning since June 24, S-173 has been closed since June 24. Currently all the S-332's are capable of pumping. S-199/S-200 have been pumping all units since July 1<sup>st</sup>. S-18C has been discharging since June 16 and S-197 has been closed since December 13, 2020. Closure period for WCA-3A structures ended July 14, 2021.

WCA-1 stage is in Zone A1, above of its regulation schedule; WCA-2A stage is in Zone A and above its regulation schedule; WCA-3A stage is in Zone B, below its regulation schedule. S-12A closed January 22 and S-12B closed January 29. S-343A & B closed on January 28. S-12D closed May 17<sup>th</sup> and reopened July 22. S-12C opened on June 16th to contribute to Tamiami Trail Flow Formula release and closed July 24. S-12D opened July 22. S-11's are open since June 30<sup>th</sup>. S-10's are closed.











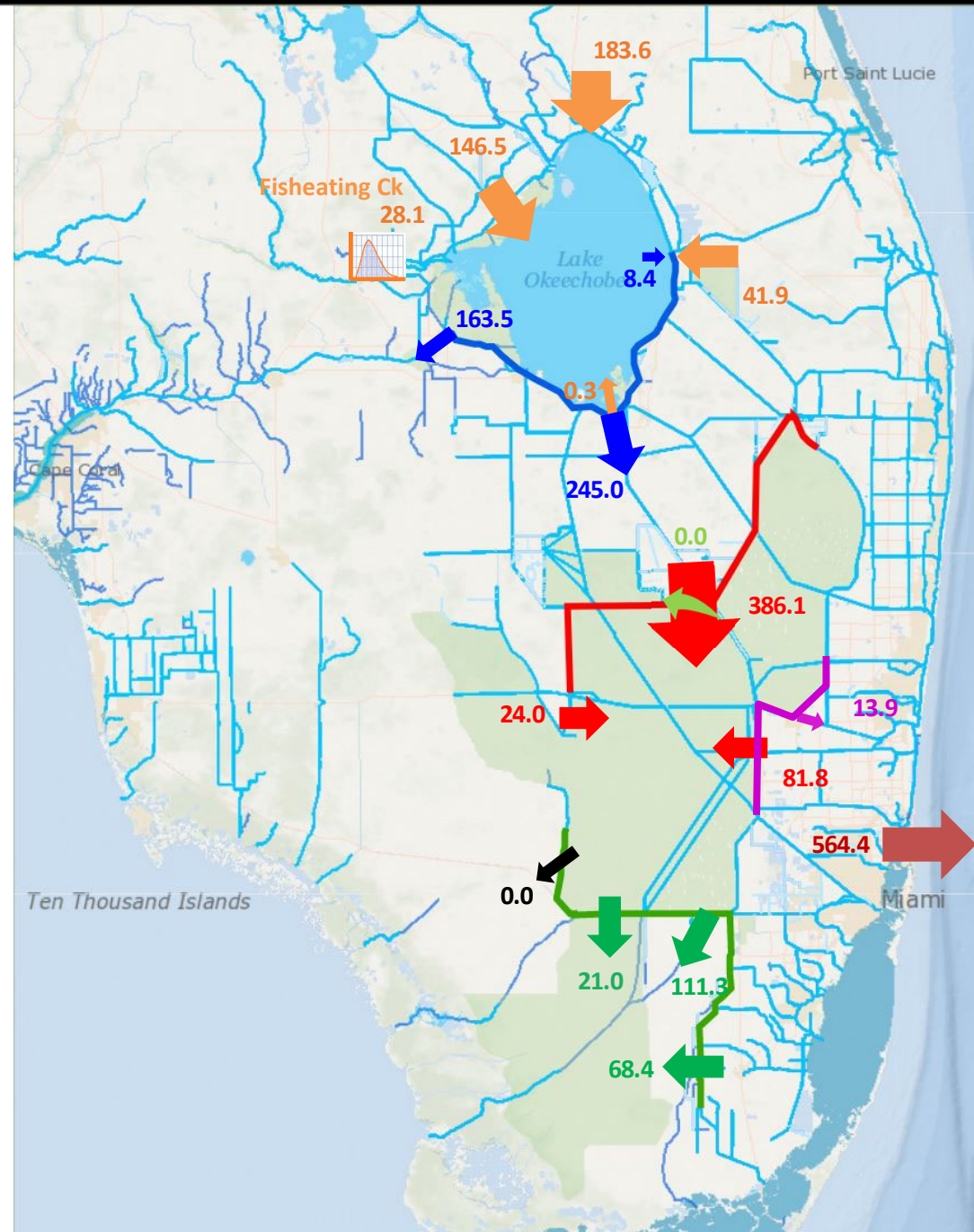
## SFWMD – Selected Release Volumes for the Period May 1, 2021 to August 10, 2021 (volumes in 1,000 acre-feet)

Symbol	Description	Volume (1,000 acre- feet)	
		Season to Date	Last Month
	Upper Kissimmee to Lower Kissimmee	159.9	91.7
	Inflows to Lake Okeechobee (including Fisheating Creek)	400.5	272.1
	Lake Releases and Basin Runoff	381.4	167.4
	Lake Releases East and West	171.9	1.4
	Lake Flood Control to Estuaries	114.5	1.4
	Total Lake Releases South	245.0	4.1
	Releases to Indian River Lagoon	34.2	23.0
	Upper East Coast discharges to St. Lucie Estuary	77.2	46.5
	Uncontrolled flows - Creeks (does not include Fisheating Creek)	130.1	76.1

1,000 acre-feet = 325.9 Million Gallons

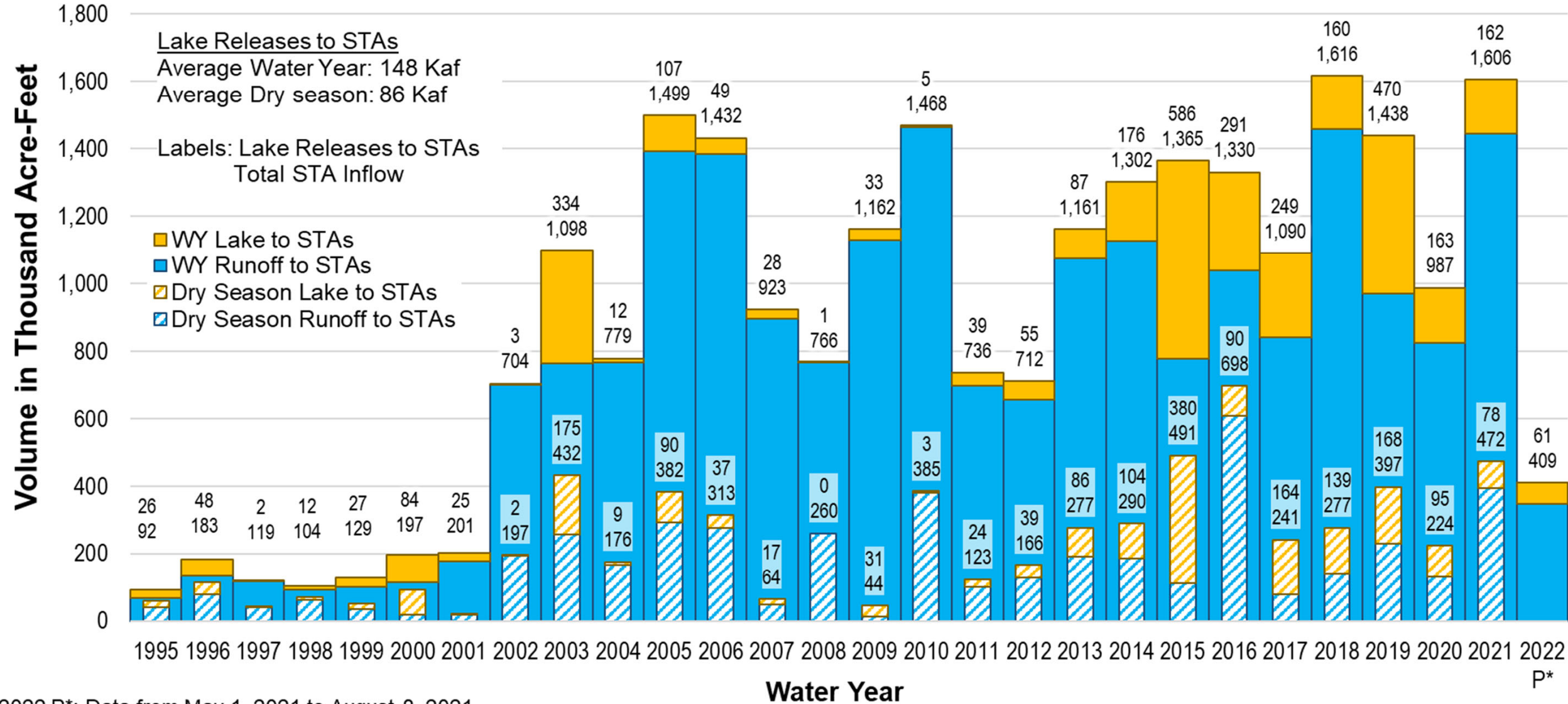
**SFWMD –Volumes Flowing  
Down the System  
May 1, 2021 to August 10, 2021**  
(volumes in 1,000 acre-feet)

Symbol	Description	Volume (1,000 acre- feet)	
		Season to Date	Last Month
	Lake Okeechobee Inflows	400.5	272.1
	Lake Okeechobee Outflows	416.9	5.5
	WCAs Inflows	491.9	253.1
	ENP / Detention Cell Inflows	200.7	98.9
	WCAs to East	13.9	0.0
	Flows to Intracoastal	564.4	285.0



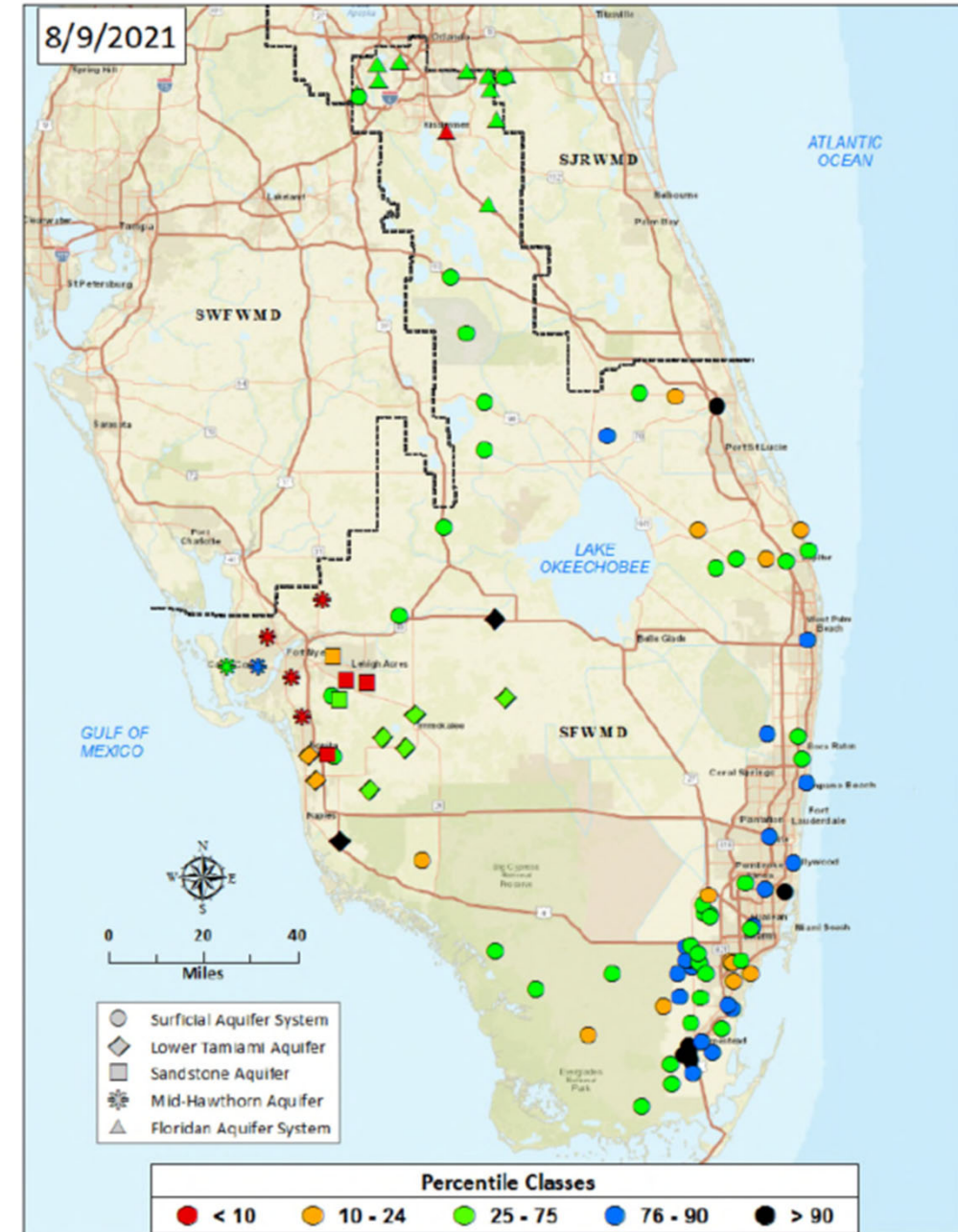


## Total STA Inflow and Lake Releases to STAs



# Status of Lower West Coast Groundwater Conditions

- Surface and groundwater levels showed mixed trends throughout the District over the last week.
- Most of the USGS real-time wells in the Kissimmee Basin within the District boundaries are at median levels for this time of year.
- Surface and groundwater levels increased in about 75% of the Lower East Coast stations during the past week.
- Approximately 90% of the Biscayne aquifer wells are at median levels and higher for this time of year. Groundwater levels are on the low side in ENP and C-111 Basin.
- Groundwater levels increased in about half of the stations on the Lower West Coast over the last seven days.
- Real-time groundwater levels:
  - Each dot represents a monitor well, continuously monitoring water levels.
  - Color coding corresponds to statistical comparison of current water levels compared to historical for this time of year.



# U.S. Drought Monitor Florida

## August 3, 2021

(Released Thursday, Aug. 5, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	100.00	0.00	0.00	0.00	0.00	0.00
<b>Last Week</b> 07-27-2021	100.00	0.00	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> 05-04-2021	85.08	14.92	1.70	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12-29-2020	89.27	10.73	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 09-29-2020	100.00	0.00	0.00	0.00	0.00	0.00
<b>One Year Ago</b> 08-04-2020	92.35	7.65	0.00	0.00	0.00	0.00

### Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

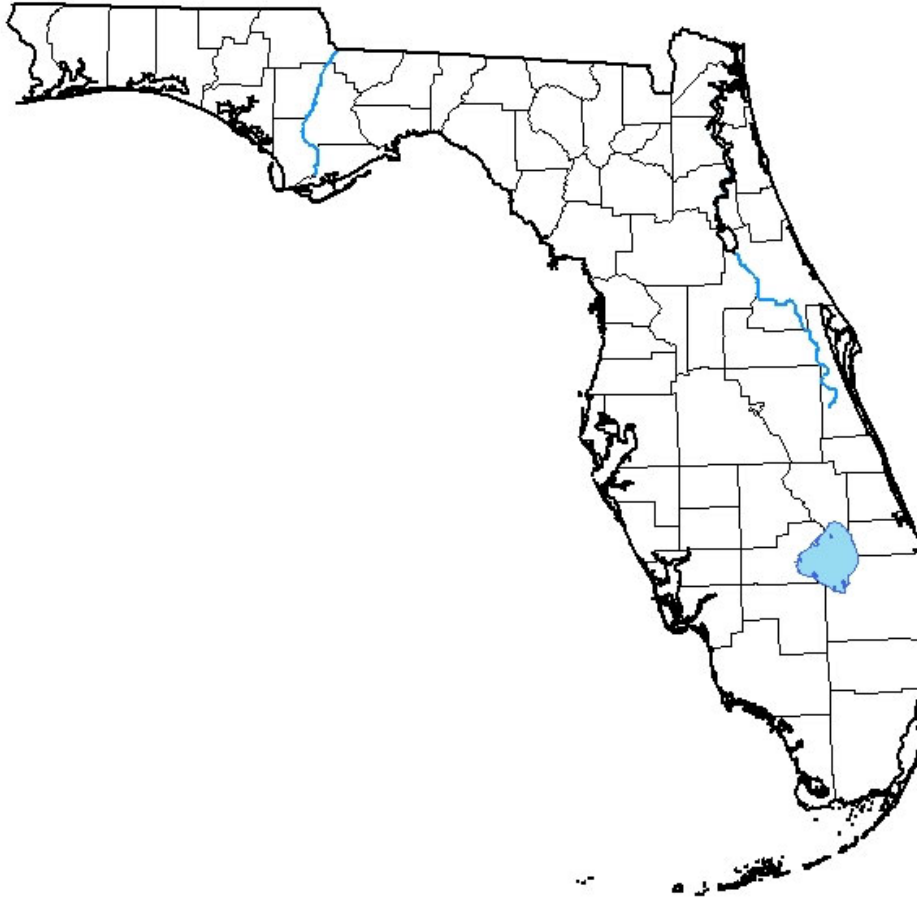
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

### Author:

Richard Tinker  
CPC/NOAA/NWS/NCEP



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)





# CPC Precipitation Outlook for South Florida

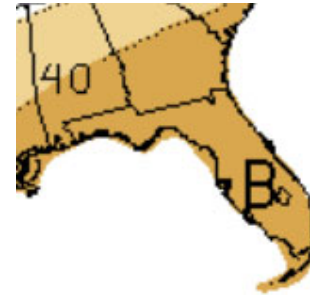
Last update for Aug 2021 issued: July 31, 2021



Aug 2021



Aug-Oct



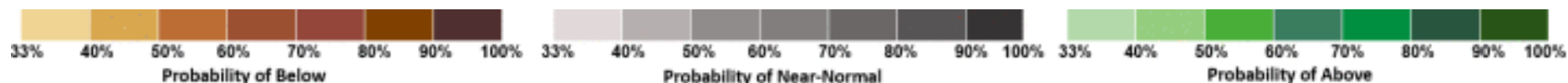
Nov-Jan



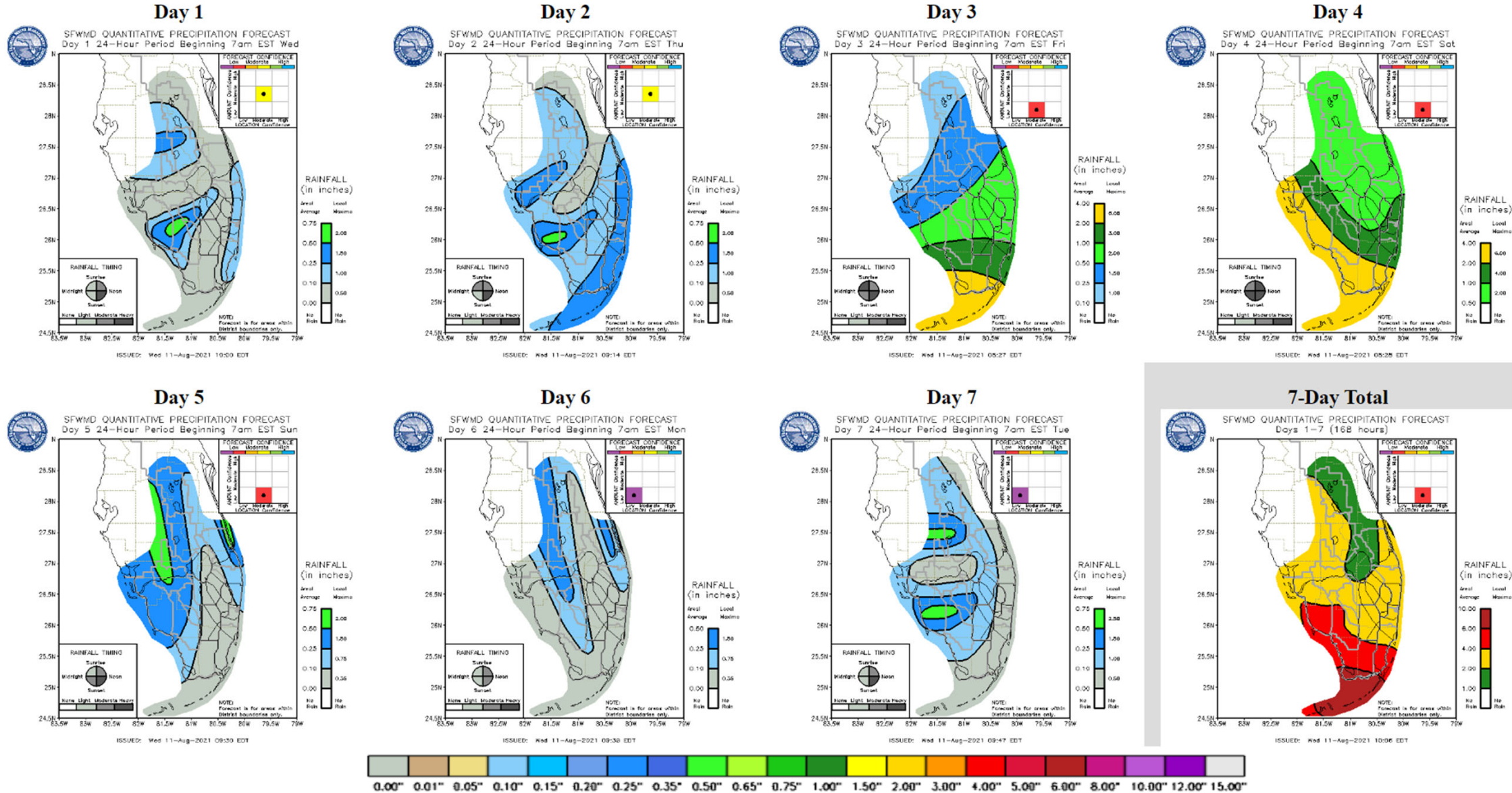
Jan-Mar

<https://www.cpc.ncep.noaa.gov/products/predictions/30day/>

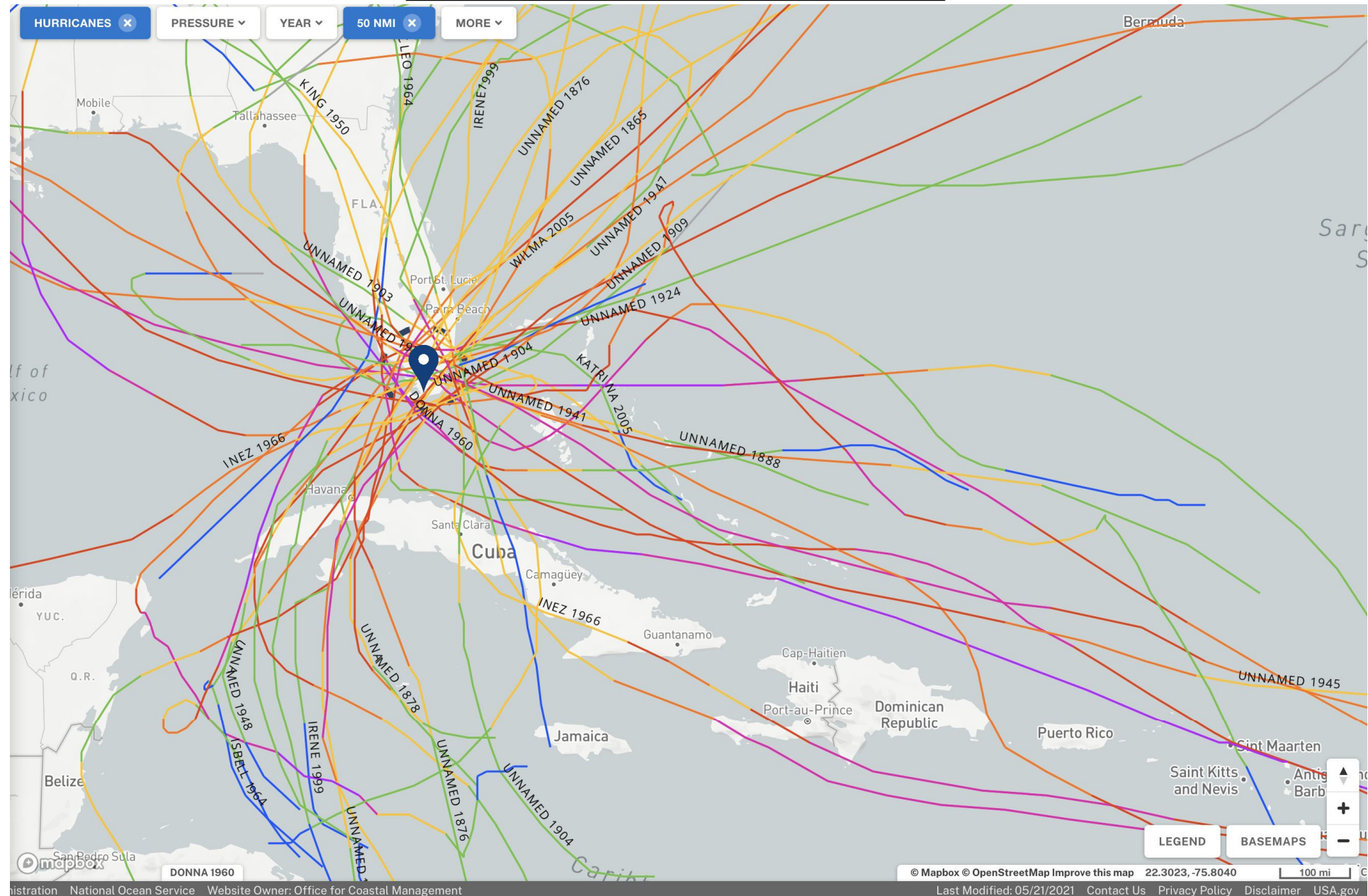
- The most recent CPC precipitation outlooks for August 2021 and for the 3-month windows of Aug-Oct to Oct-Dec are for equal chances of above-normal, normal, and below-normal rainfall.
- The 3-month windows of Nov 2021–Jan 2022 to Feb 2022-Apr 2022 indicate increased chances of below-normal rainfall.
- The outlooks for the 3-month windows transitioning into the 2022 wet season are for slightly increased chances of above-normal rainfall.



# Daily Quantitative Precipitation Forecasts (Posted 08/11/2021)

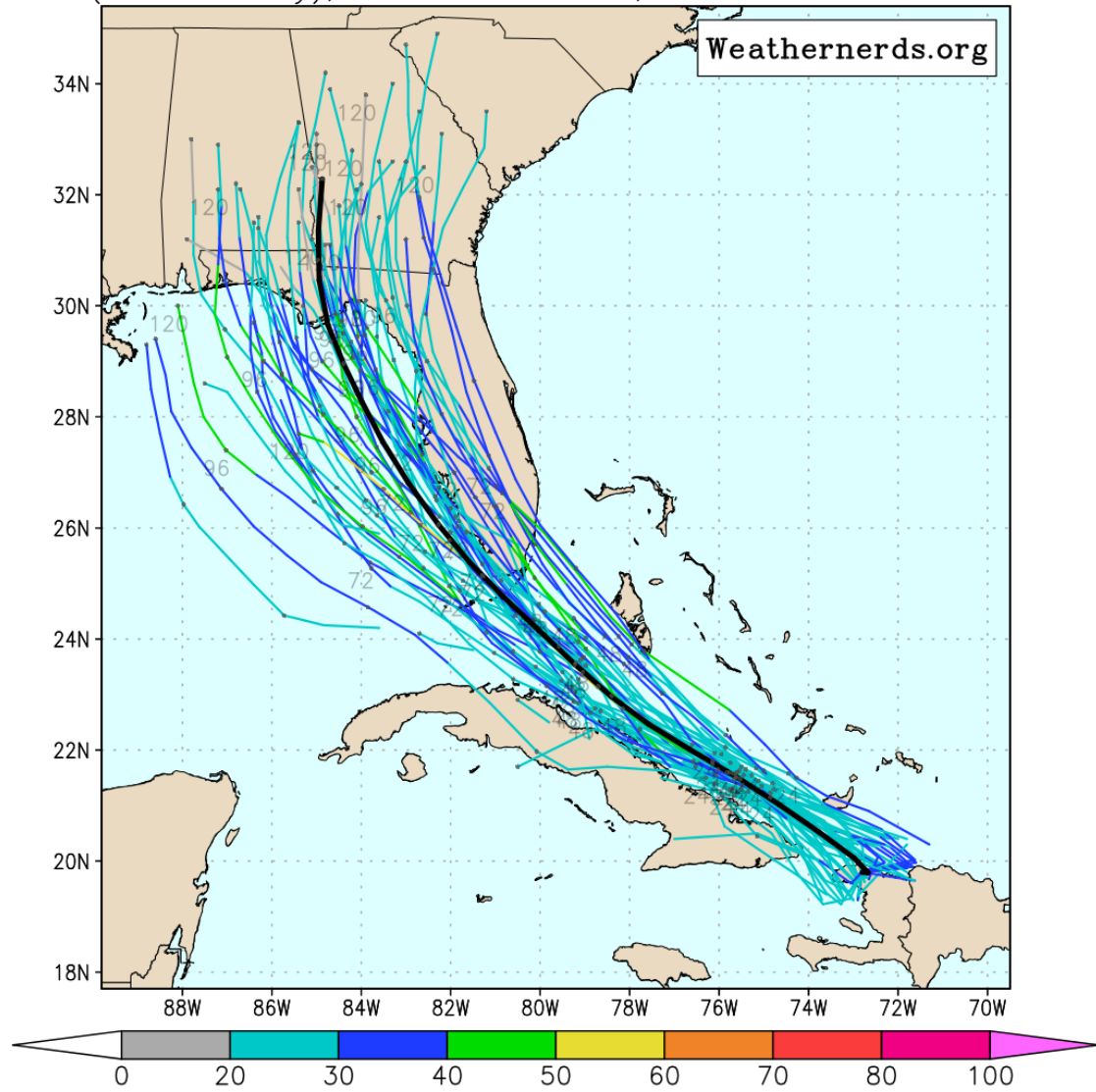




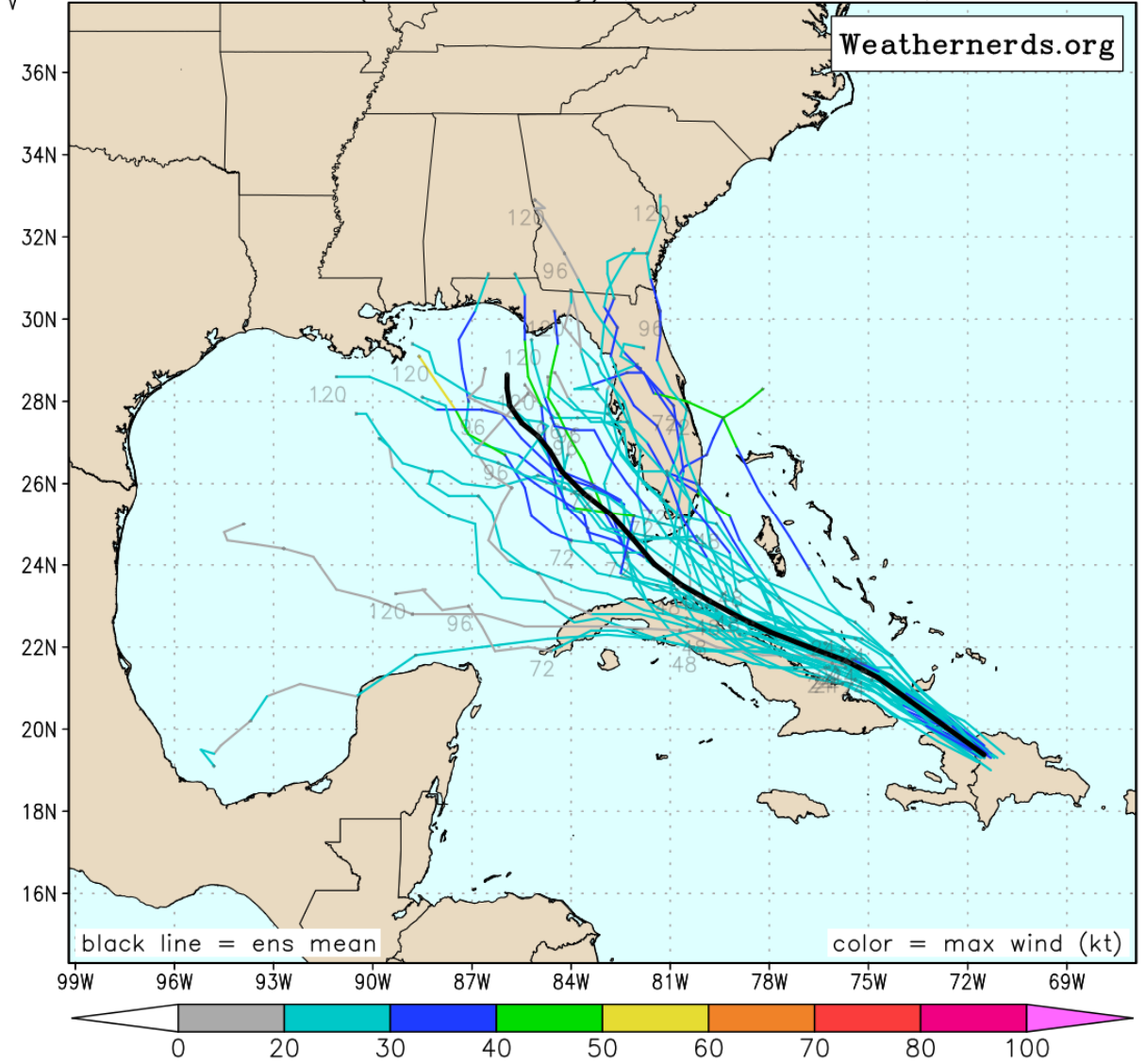




ECMWF Ens. (0-120h only), init: 2021081200, AL06 Fred color = max v



GEFS Ensemble (0-120 h only) , init: 2021081200, AL06 Fred

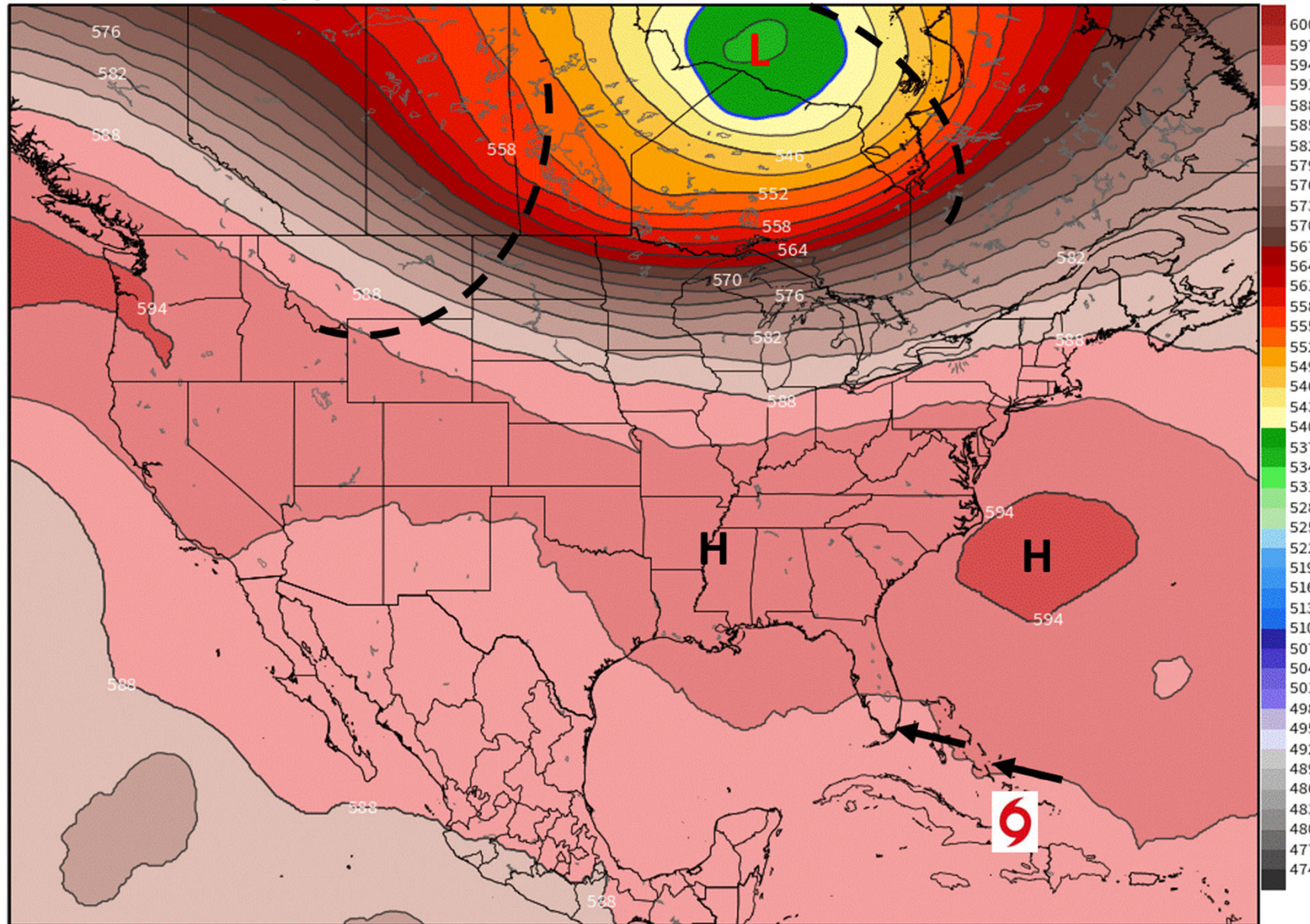


**LATEST MODEL GUIDANCE**



ECMWF 500 hPa Geopotential Height [dm]  
Init: 00Z11AUG2021 -- [36] hr --> Valid Thu 12Z12AUG2021

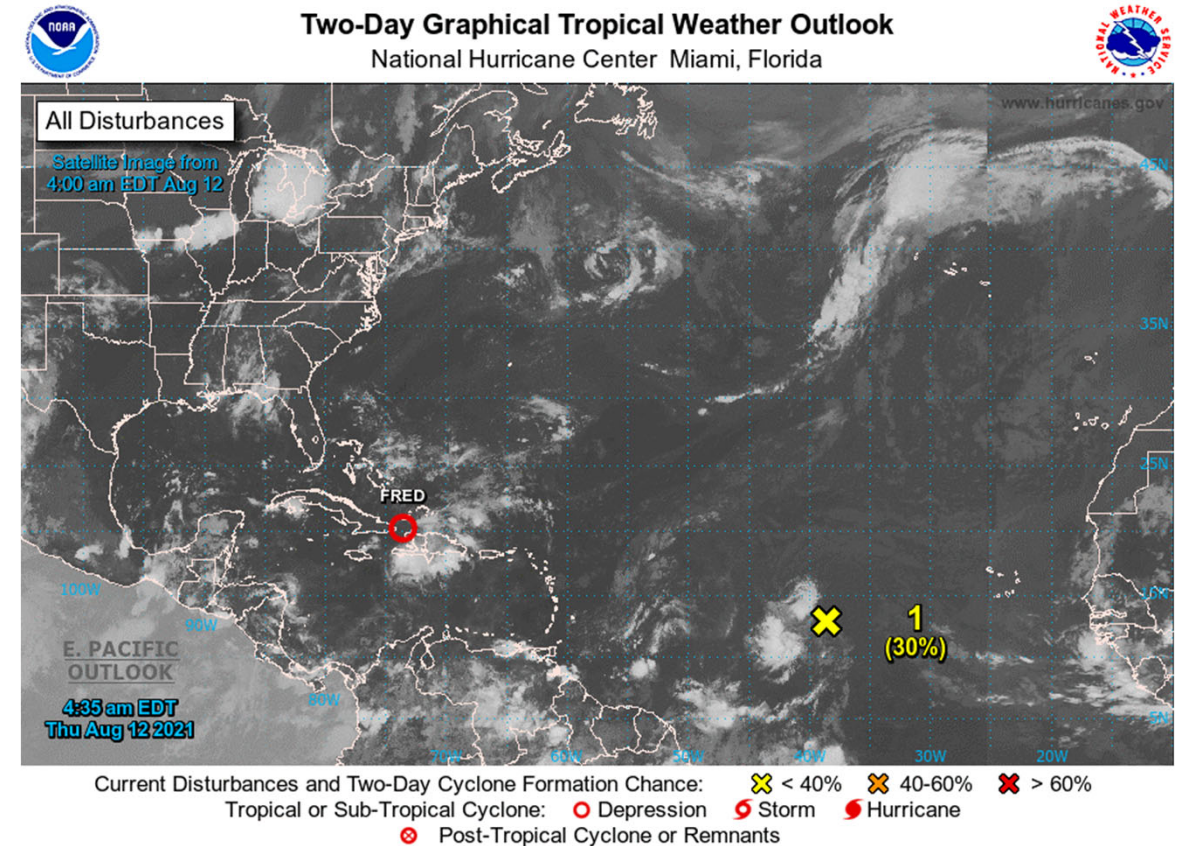
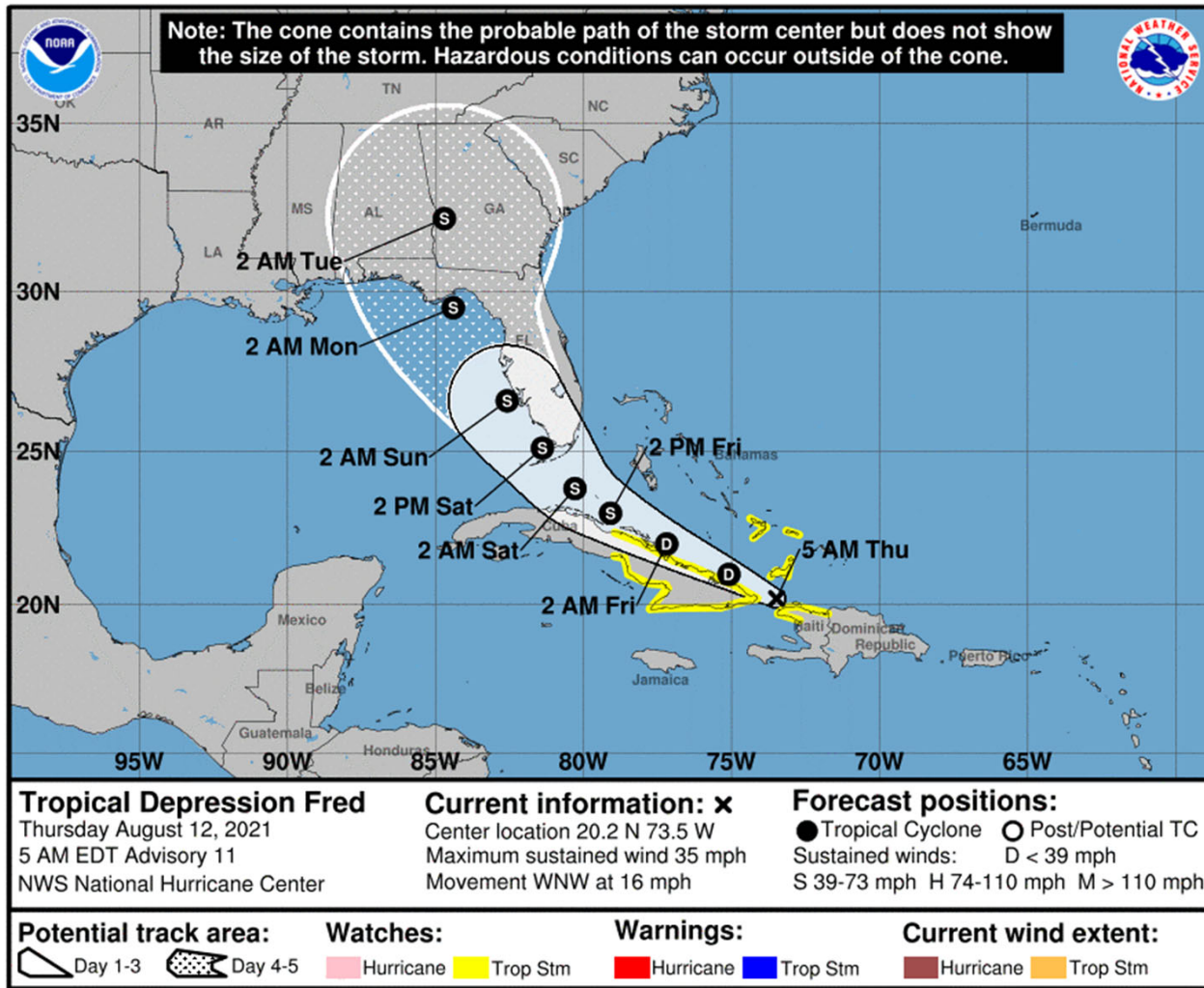
MIN|MAX: 5365.3 | 5947.8 gpm



This service is based on data and products of the European Centre for Medium-range Weather Forecasts (ECMWF)

[weathermodels.com](http://weathermodels.com)







ECMWF EPS Cyclone Locations --> Next [5.5-days]  
FORECAST INIT: 00Z12AUG2021 --> UNTIL 12Z17AUG2021

o-o > 1005 hPa  
o-o 1000 - 1005 hPa  
o-o 980 - 999 hPa  
o-o 960 - 979 hPa  
o-o 950 - 959 hPa  
o-o < 950 hPa

