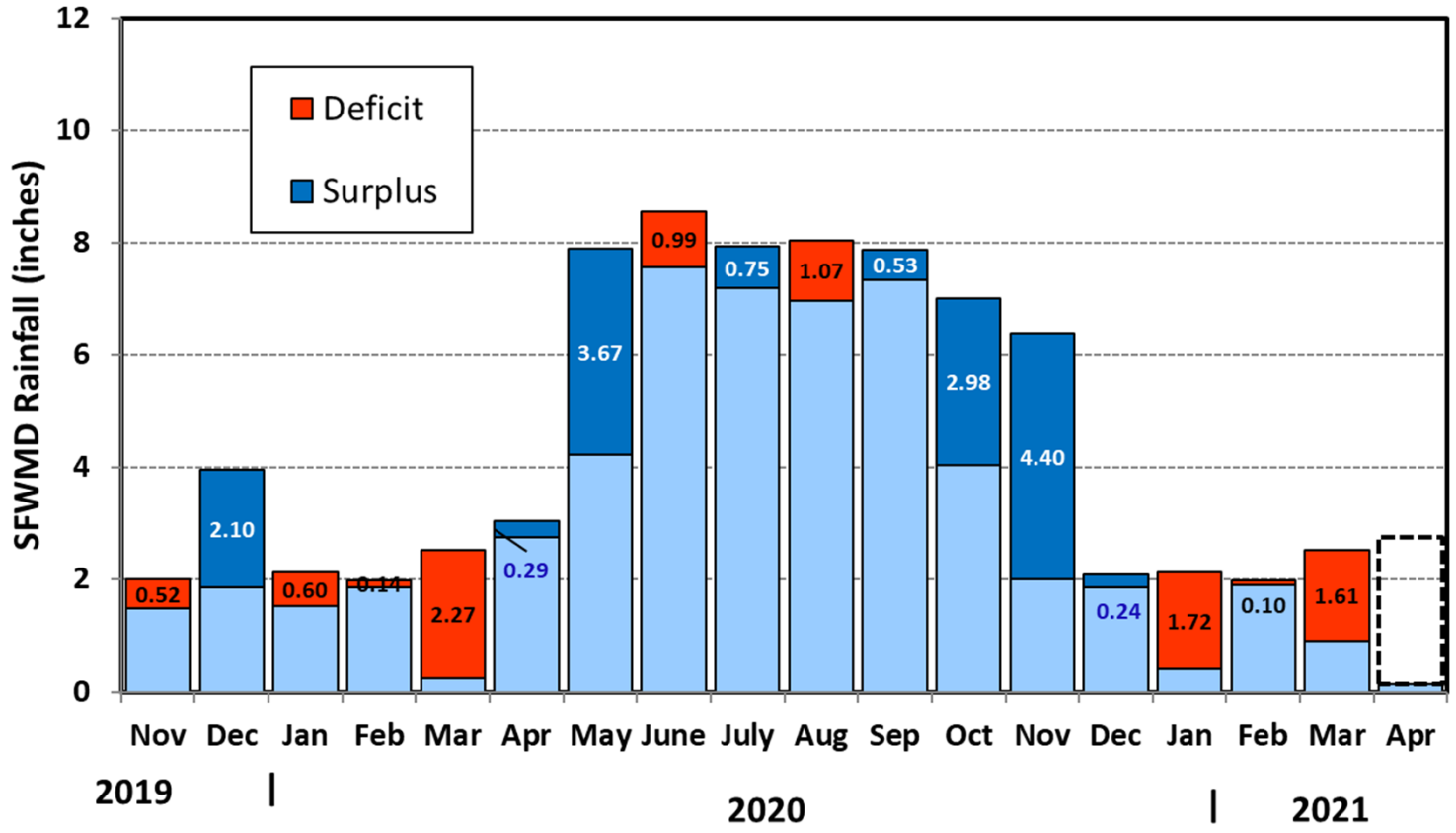
Water Conditions Summary

South Florida Water Management District
Governing Board Meeting
April 8, 2021

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

SFWMD Rainfall Distribution Comparison

(Nov 2019 - Apr 2021)



District Wide Average Rainfall

Month	Average (inches)
Jan	2.12
Feb	1.98
Mar	2.51
Apr	2.74
May	4.21
Jun	8.55
Jul	7.18
Aug	8.03
Sep	7.34
Oct	4.03
Nov	1.99
Dec	1.84

Wet Season

2019-2020 DRY SEASON.
- Sep. 18, 2019 to May 15, 2020, 73% or Normal
- Driest March in 89 years of record
- May was ~ 187% of normal

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
- Dec rainfall near normal
- Jan was extremely dry (bottom 10% of POR)
- March was 28% Normal

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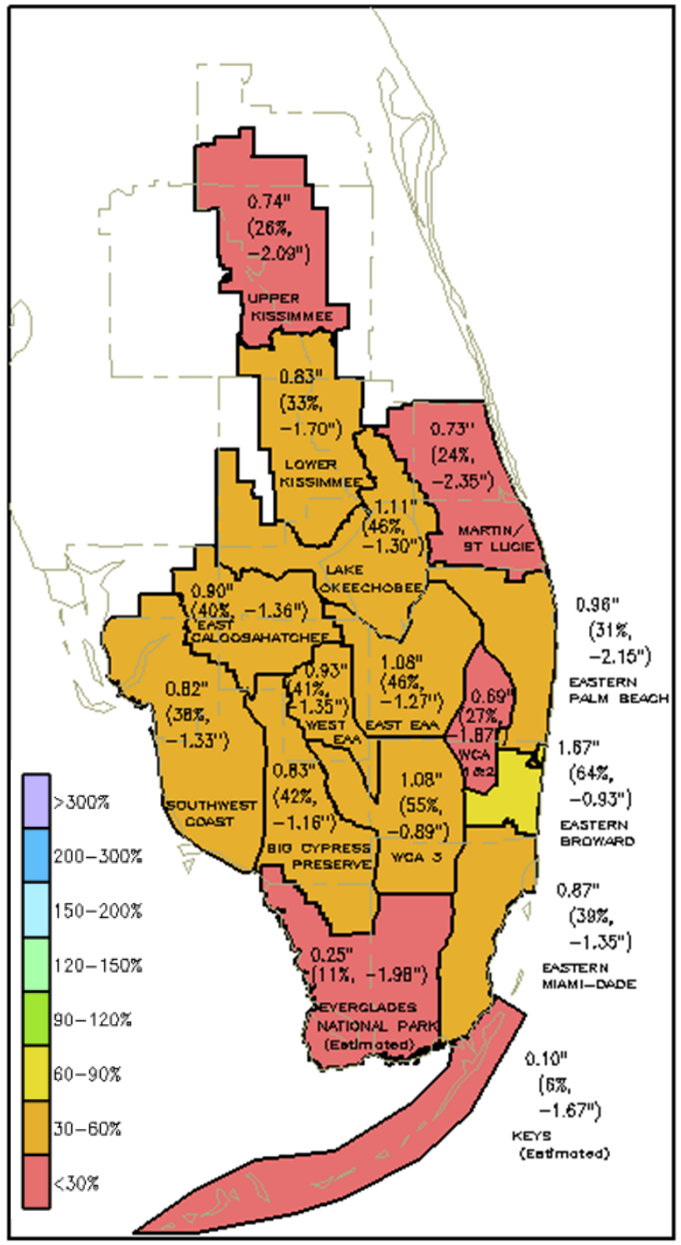


March 2021 Rainfall

DISTRICT-WIDE: 0.65”

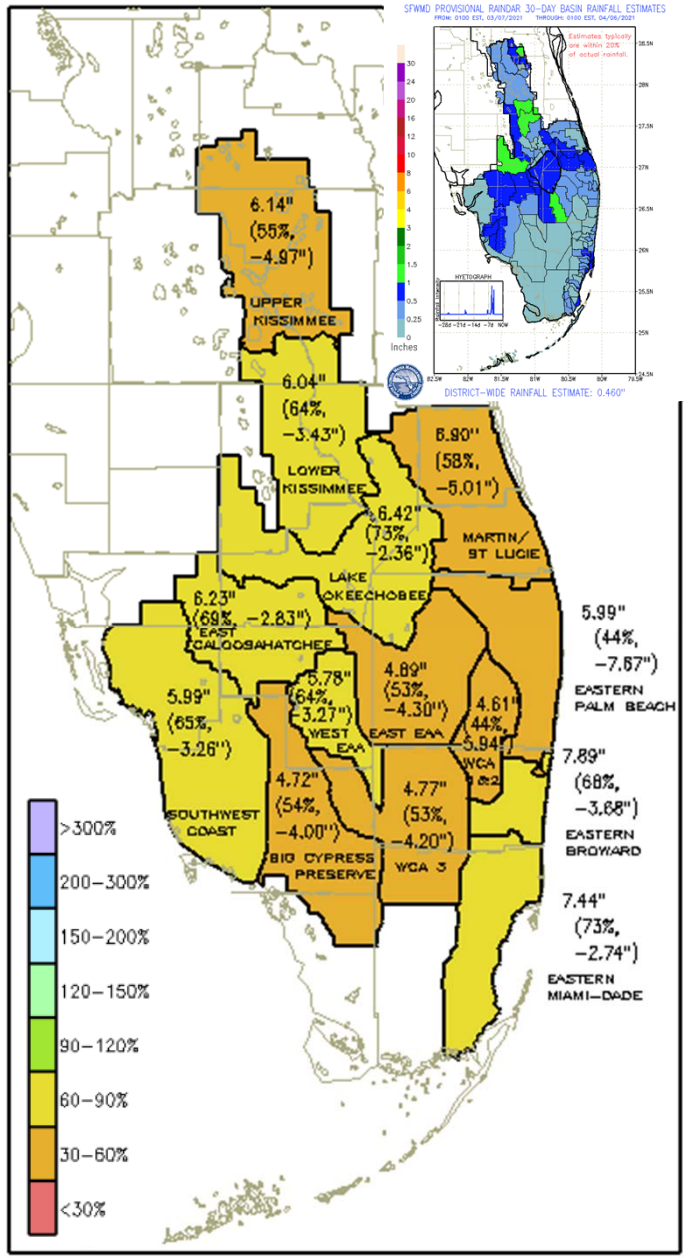
- 37% of average, -1.53” deficit
- March 2021 Rainfall is within ten of the lowest values for March
- Best positioned basin is Eastern Broward County with 64% of Normal
- Kissimmee basins are in the ~30% Normal range
- Five out of sixteen areas shown in the map are below 30% of Normal

Dry Season Rainfall

19 Nov – Apr 07

DISTRICT-WIDE: ~5.92”

- 60 % of average, -4.00” deficit
- All areas show rainfall deficit
- Highest rainfall for Eastern Broward
- Easter Palm Beach and WCA 1 and 2 are the lowest with ~ 44% of Normal
- Lat 30 days, with ~ 0.4” last 7 days



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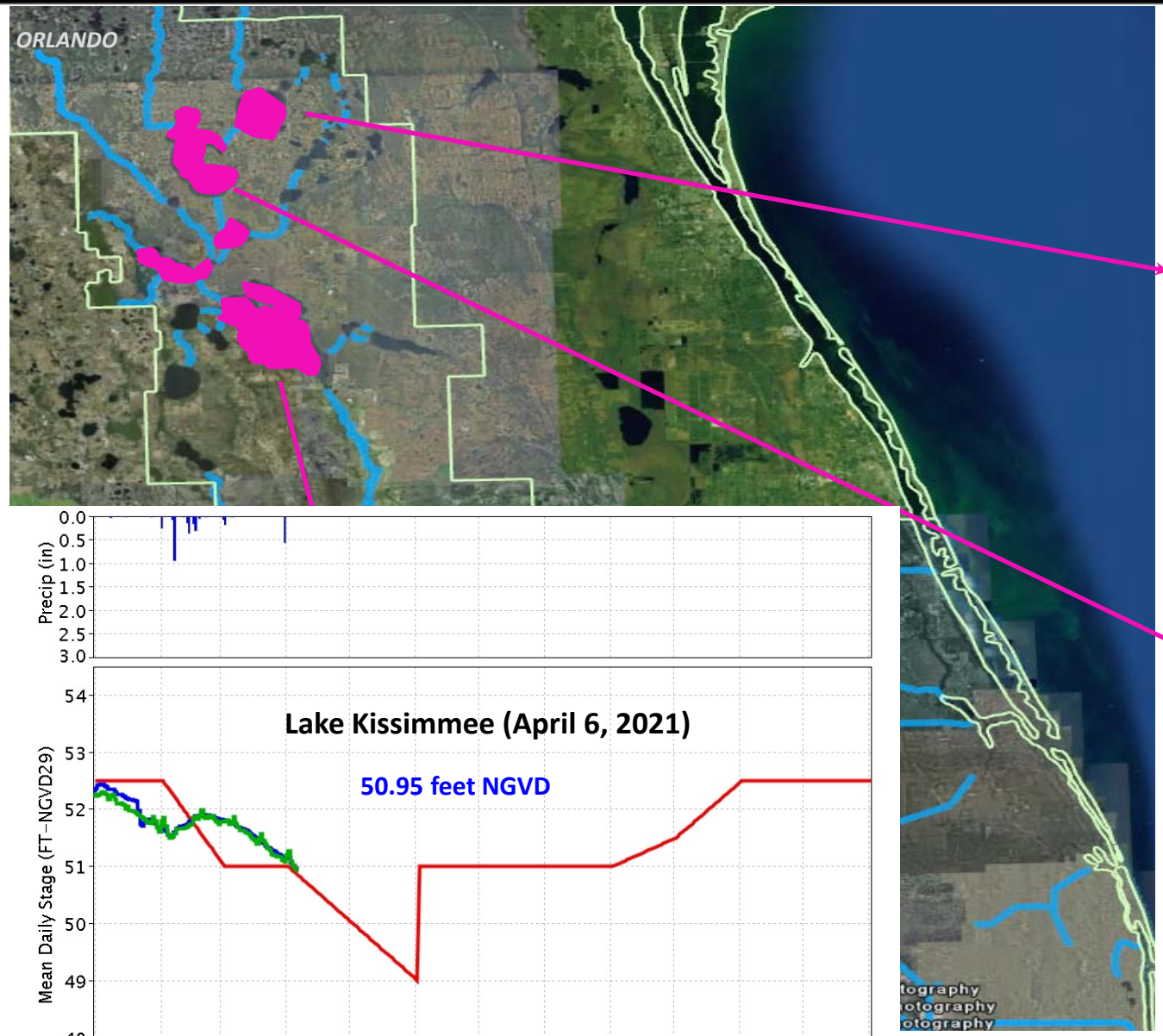
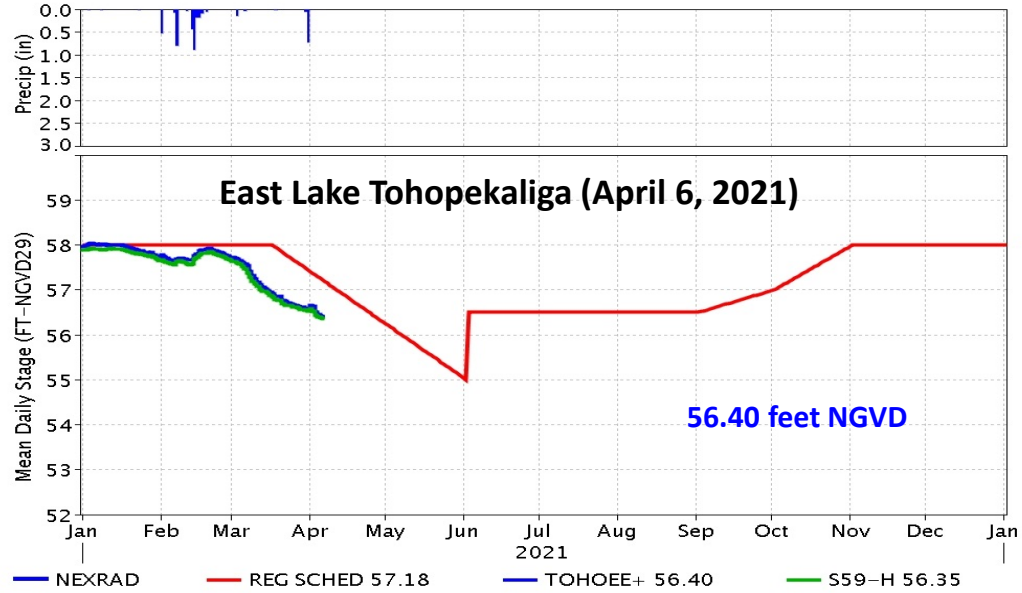
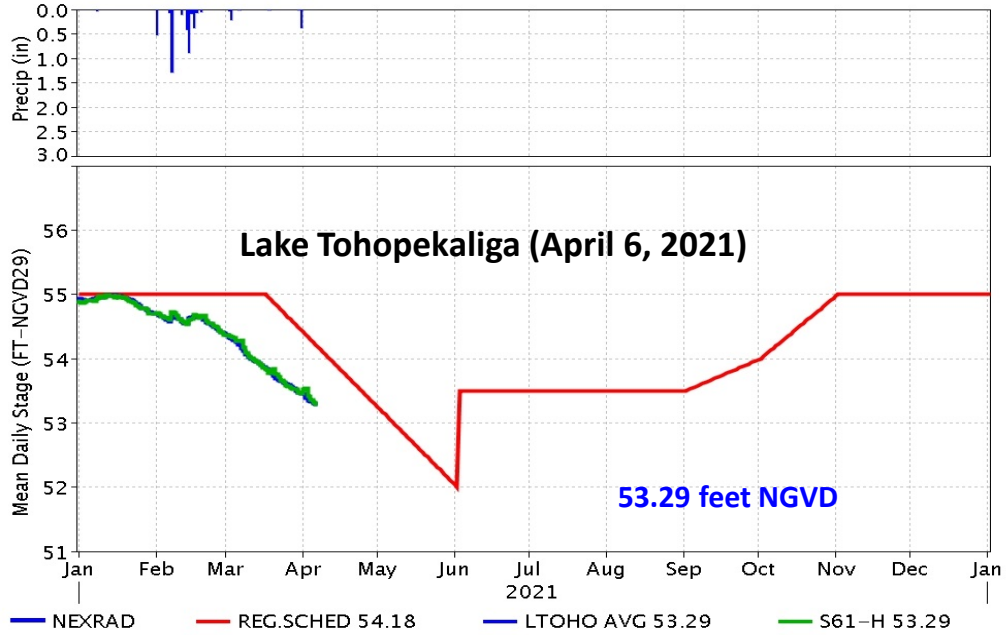
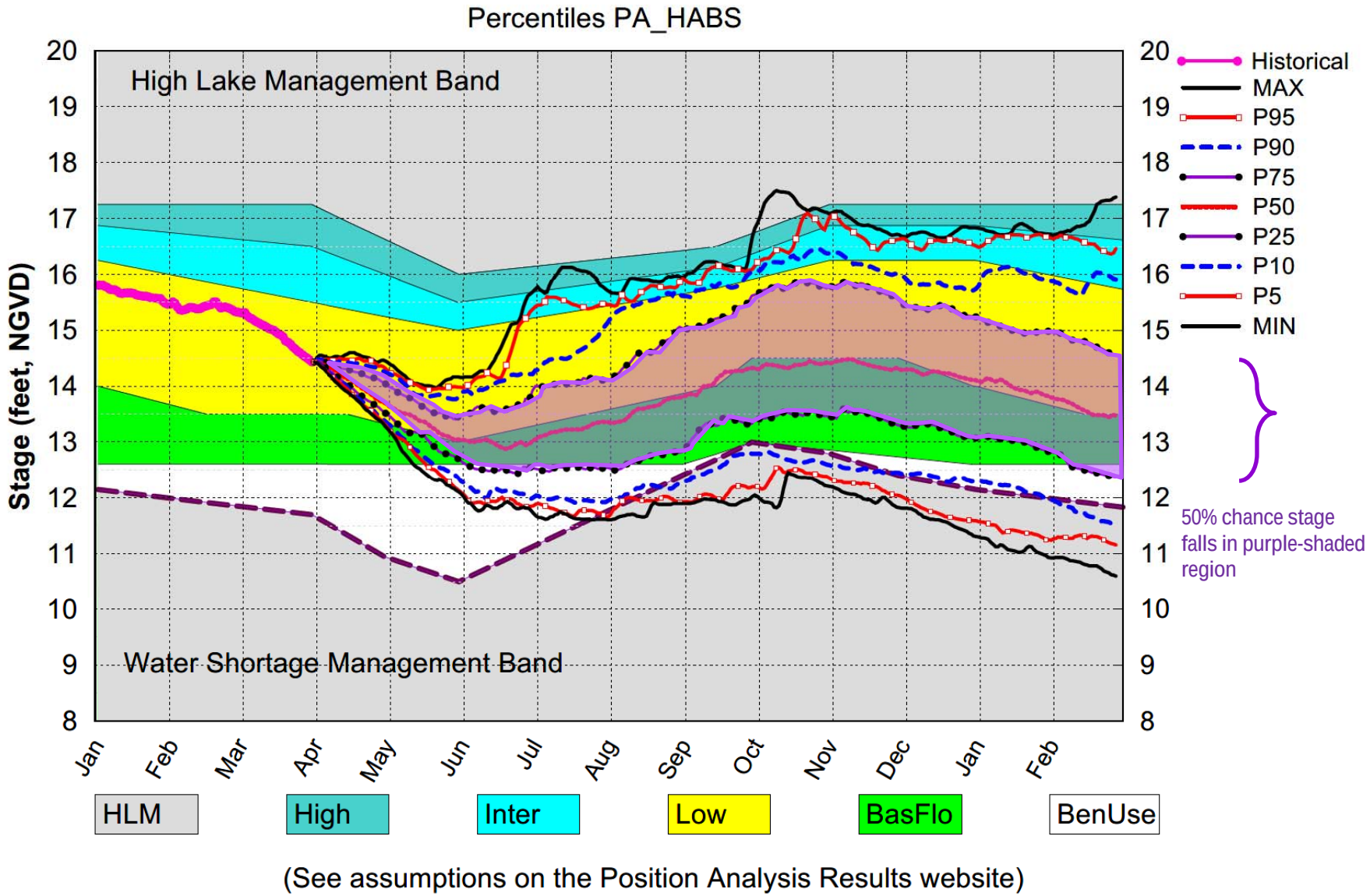

ORLANDO

Precip (in)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Lake Kissimmee (April 6, 2021)
50.95 feet NGVD
Mean Daily Stage (FT-NGVD29)
54
53
52
51
50
49
48
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
2021
NEXRAD
REG SCHED 50.84
LKISS AVG 50.95
S65-H 50.93


Precip (in)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
East Lake Tohopekaliga (April 6, 2021)
56.40 feet NGVD
Mean Daily Stage (FT-NGVD29)
59
58
57
56
55
54
53
52
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
2021
NEXRAD
REG SCHED 57.18
TOHOEE+ 56.40
S59-H 56.35


Precip (in)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
Lake Tohopekaliga (April 6, 2021)
53.29 feet NGVD
Mean Daily Stage (FT-NGVD29)
56
55
54
53
52
51
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
2021
NEXRAD
REG.SCHED 54.18
LTOHO AVG 53.29
S61-H 53.29

Lake Okeechobee SFWMM Apr 2021 Position Analysis

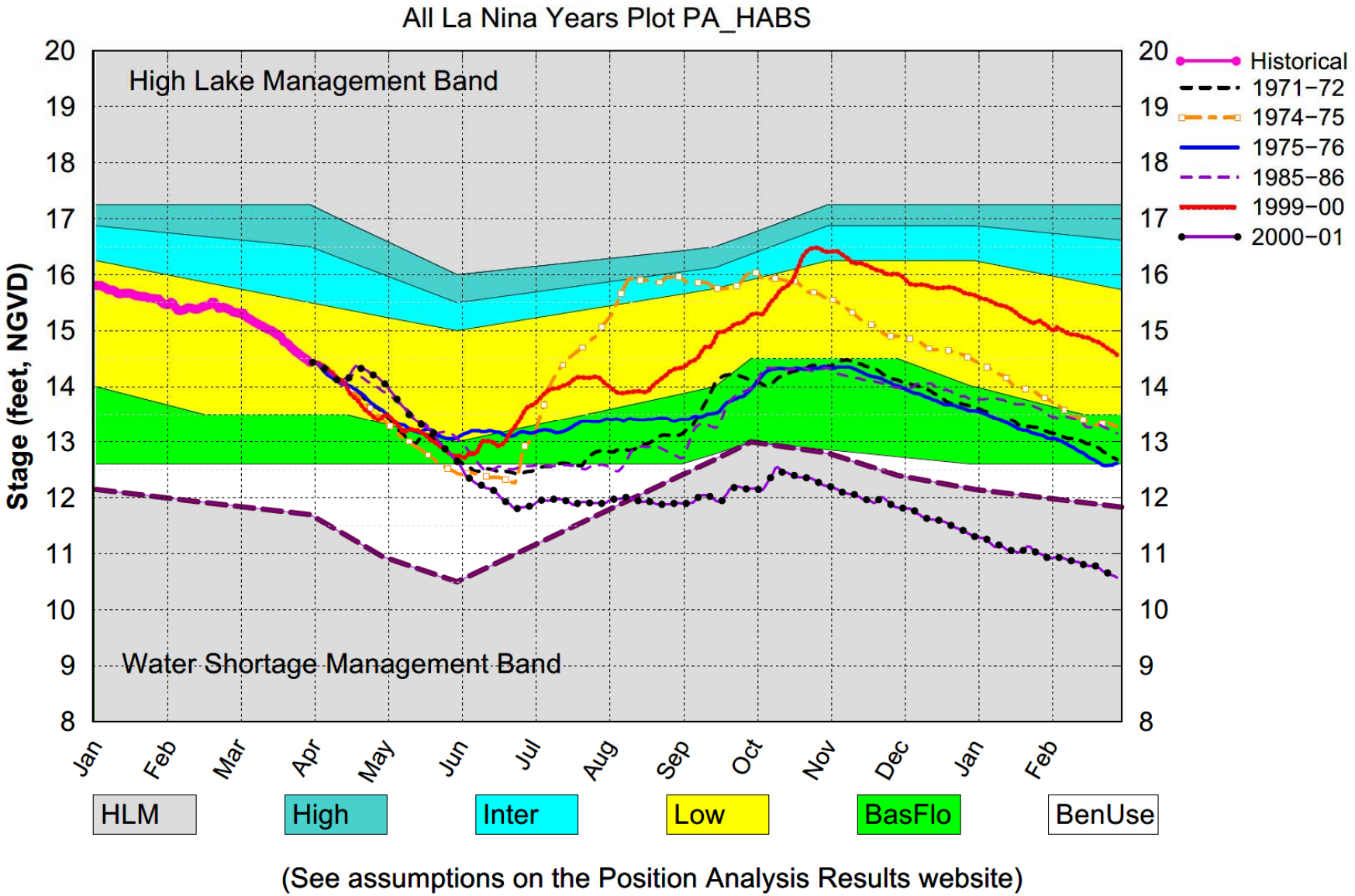


(See assumptions on the Position Analysis Results website)

Tue Apr 6 14:01:15 2021

 Presenter: John Mitnik

Lake Okeechobee SFWMM Apr 2021 Position Analysis



(See assumptions on the Position Analysis Results website)

Tue Apr 6 14:01:51 2021

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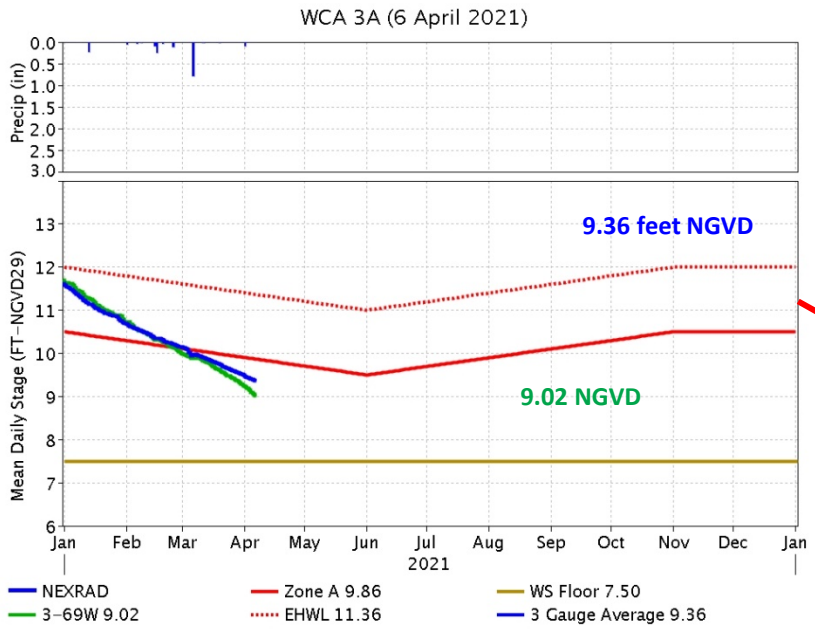
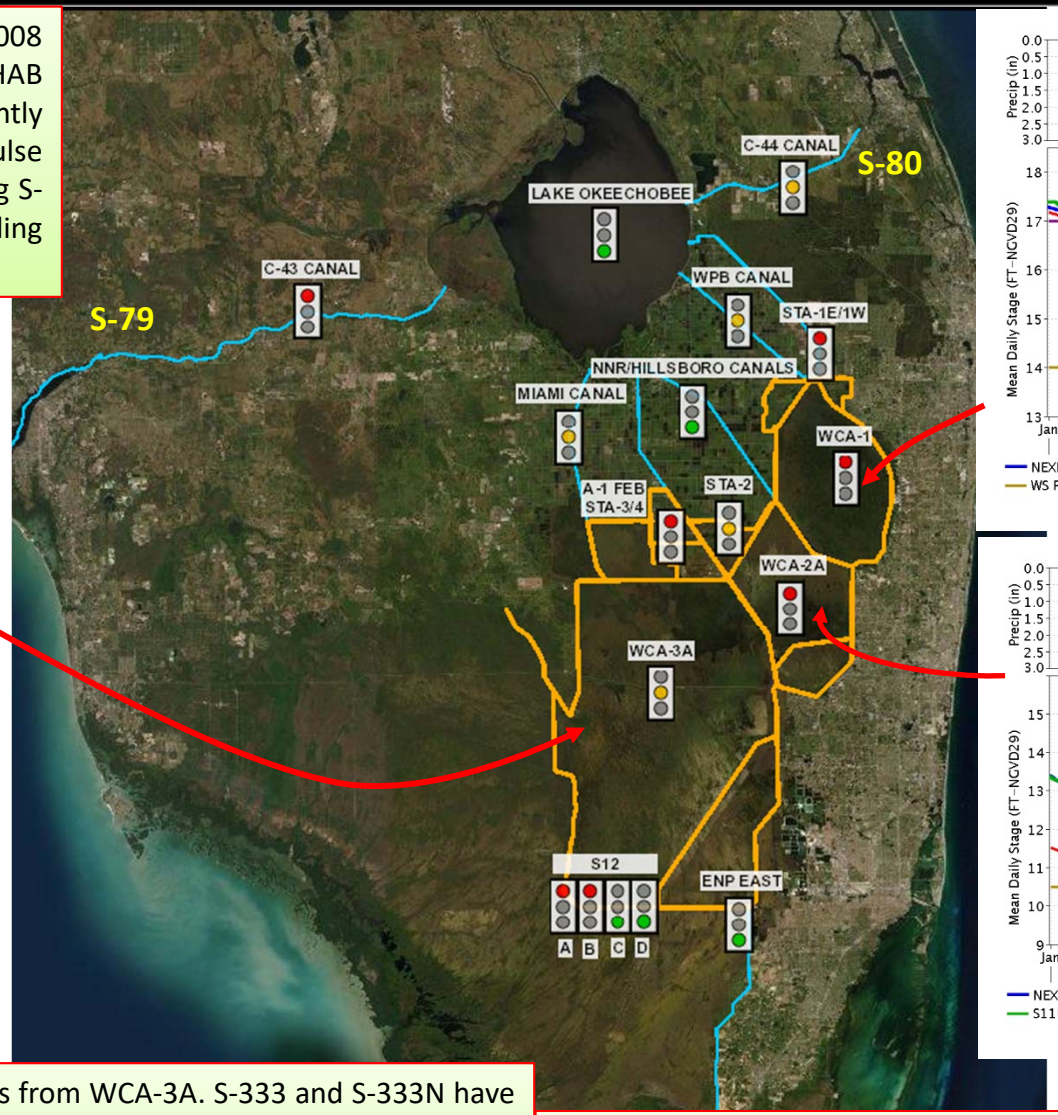
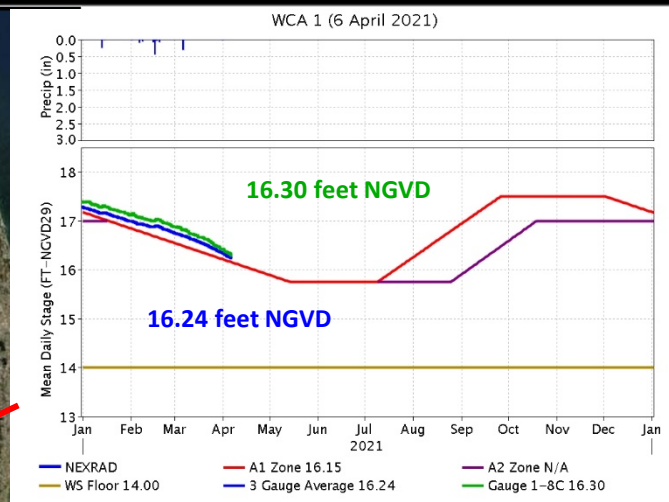
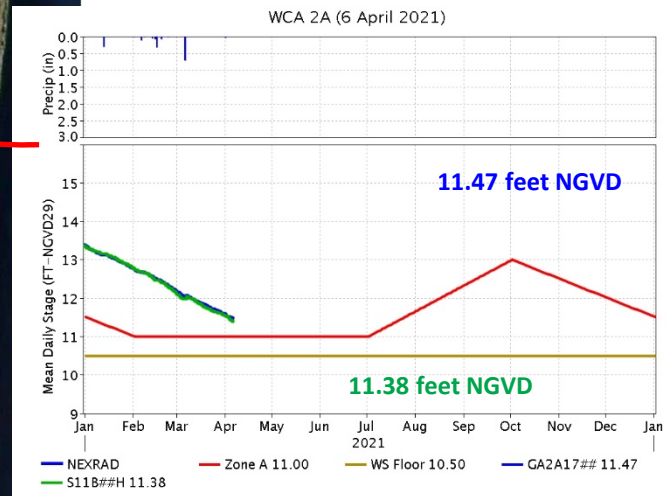
Lake Okeechobee stage is in the Low Sub-band of LORS-2008 Regulation schedule. USACE has been operating under the HAB Deviation since the beginning of February. USACE is currently implementing 1,200 cfs at S-79 and 300 cfs at S-80 average pulse releases. For the current week, LORS 2008 Part D is recommending S-79 up to 450 cfs and 200 cfs at S-80. The District is sending approximately 500 cfs from the lake south to the WCAs.



Note: With COP floor gauge switched from S333-H to 3-69W



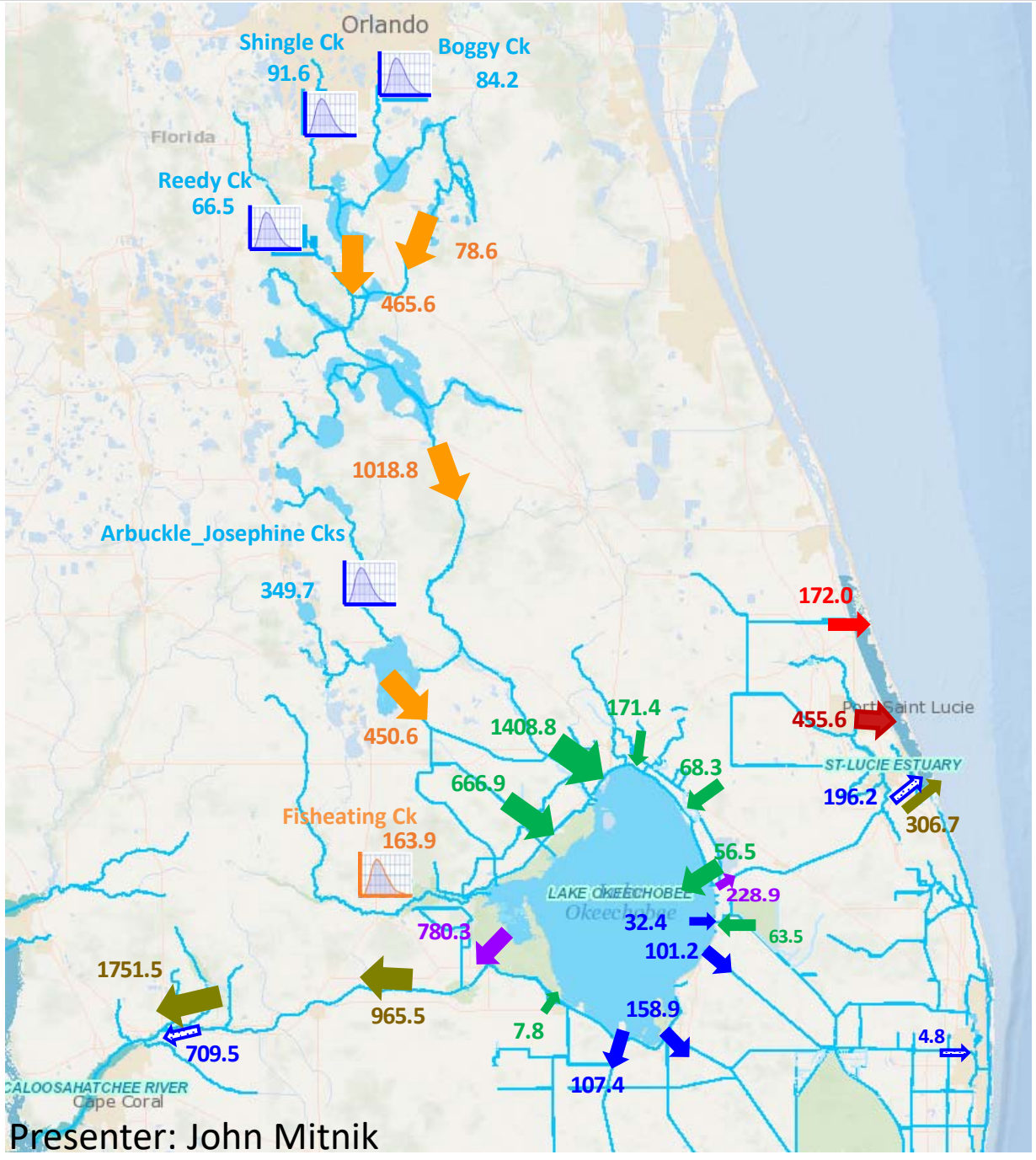




Tamiami Trail Flow Formula is currently calling for 1,168 cfs releases from WCA-3A. S-333 and S-333N have been releasing since the middle of December. L-29 stage constraint has been lowered from 8.5 to 8.3 feet NGVD. S-356 is pumping. S-331 and S-357 continue pumping. Of all the S-332 pump stations, only S-332D is running. Pumping has been reduced due to dry conditions. S-199 is running one unit and S-200 is secured due to Sparrow protection. S-197 has been closed since Dec 13, 2020.

WCA-1 is in Zone A1 of the regulation schedule; WCA-2A is in Zone A of the regulation schedule; WCA-3A stage crossed int Zone B of its regulation schedule around March 4. S-10s and S-11s are closed. S-12A closed Jan. 22 and S-12B closed Jan. 29. S-343A&B closed on Jan. 28. S-12C closed March 01 to facilitate Old Tamiami Trail road removal. S-12D is currently releasing around 220 cfs.

System considerations for sending water south for the period 03/29/2021 to 04/04/2021



SFWMD – Selected Release Volumes for the Period May 1, 2020 to April 06, 2021

(volumes in 1,000 acre-feet)

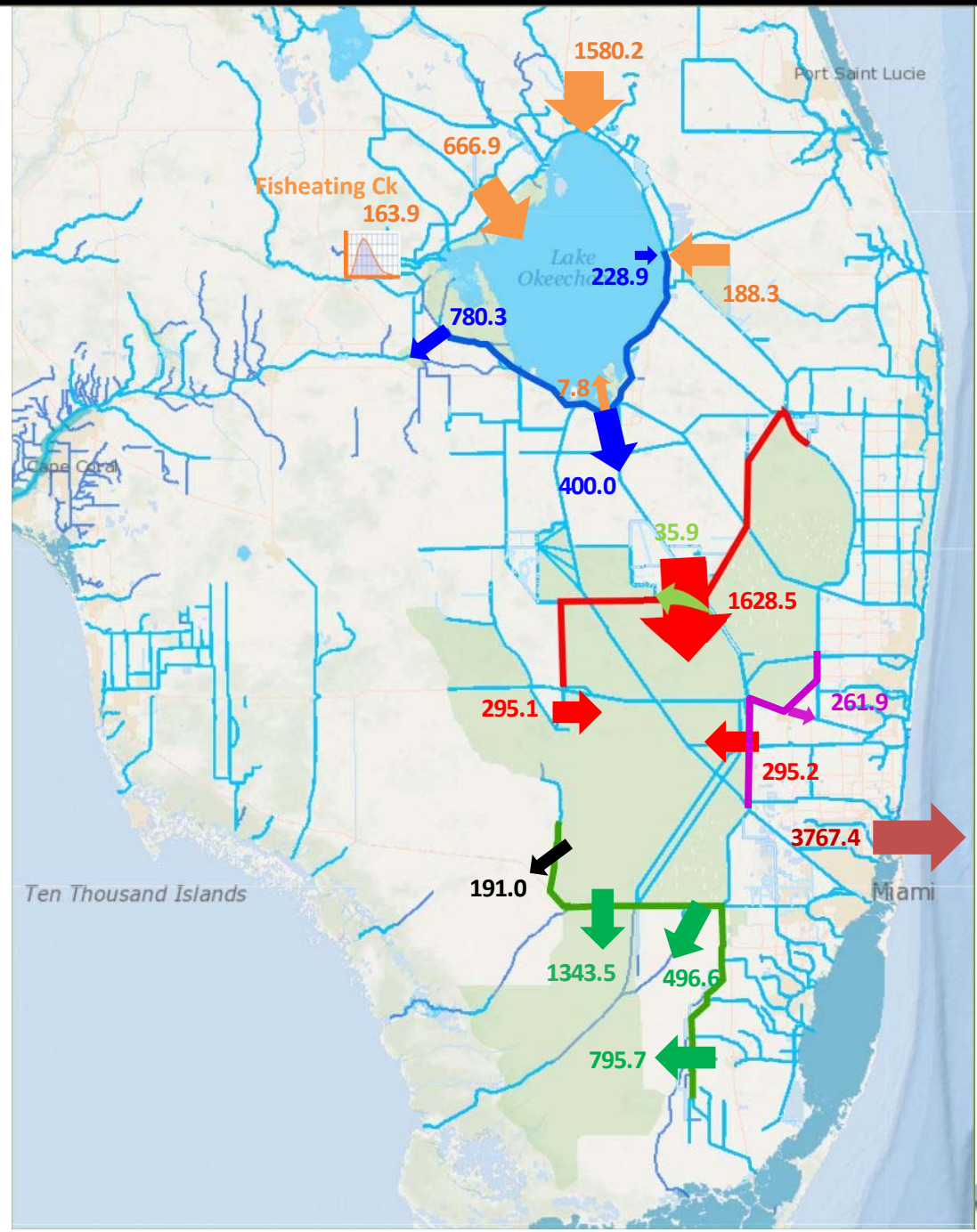
Symbol	Description	Volume (1,000 acre- feet)	
		Season to Date	Last Month
→	Upper Kissimmee to Lower Kissimmee	1018.8	47.1
→	Inflows to Lake Okeechobee (including Fisheating Creek)	2607.1	130.1
→	Lake Releases and Basin Runoff	2058.2	138.6
→	Lake Releases East and West	1009.2	131.8
⇢	Lake Flood Control to Estuaries	905.7	105.1
→	Total Lake Releases South	400.0	125.2
→	Releases to Indian River Lagoon	172.0	0.3
→	Upper East Coast discharges to St. Lucie Estuary	455.6	3.2
	Uncontrolled flows - Creeks (does not include Fisheating Creek)	592.0	7.6

1,000 acre-feet = 325.9 Million Gallons

Presenter: John Mitnik

SFWMD –Volumes Flowing Down the System
May 1, 2020 to April 6, 2021
(volumes in 1,000 acre-feet)

Symbol	Description	Volume (1,000 acre- feet)	
		Season to Date	Last Month
→	Lake Okeechobee Inflows	2607.1	130.1
→	Lake Okeechobee Outflows	1409.2	257.0
→	WCAs Inflows	2218.8	37.8
→	ENP / Detention Cell Inflows	2635.8	108.0
→	WCAs to East	261.9	8.2
→	Flows to Intracoastal	3767.4	58.6



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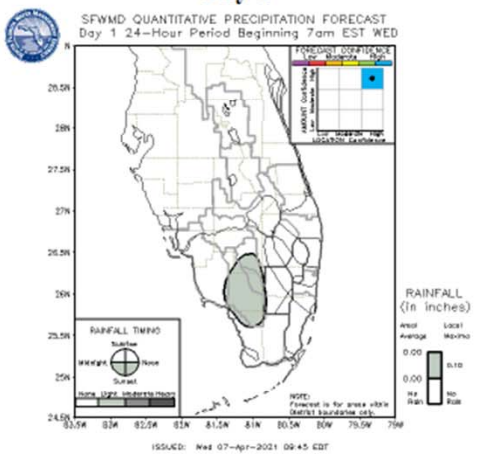
Posted 04/07/2021

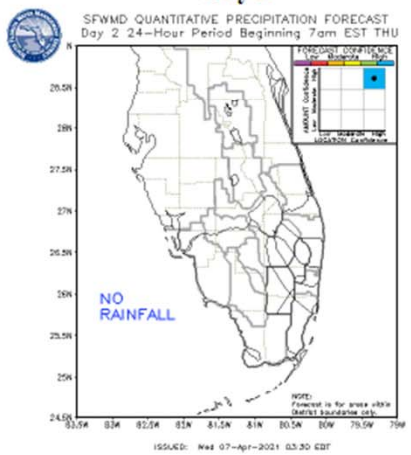
Daily Quantitative Precipitation Forecasts

0.00" 0.01" 0.05" 0.10" 0.15" 0.20" 0.25" 0.35" 0.50" 0.65" 0.75" 1.00" 1.50" 2.00" 3.00" 4.00" 5.00" 6.00" 8.00" 10.00" 12.00" 15.00"

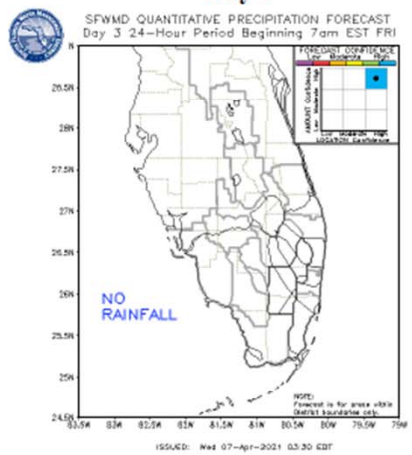
Day 1



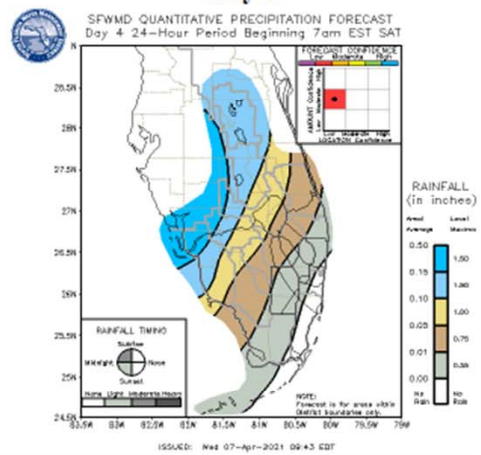
Day 2



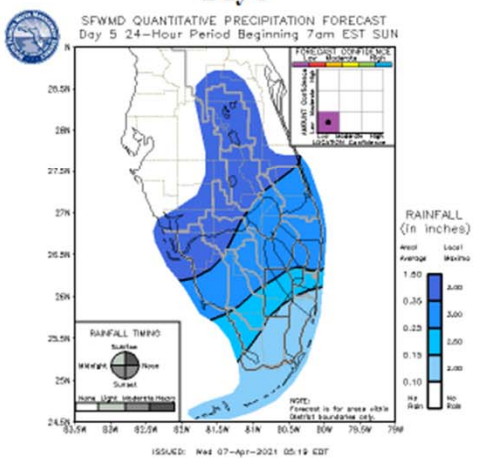
Day 3



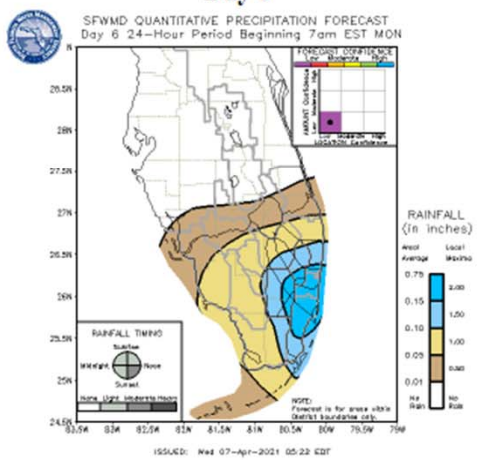
Day 4



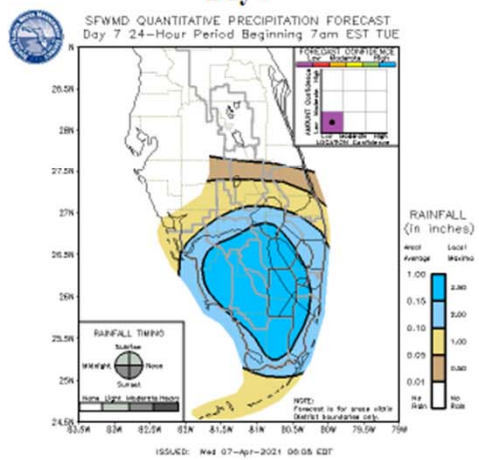
Day 5



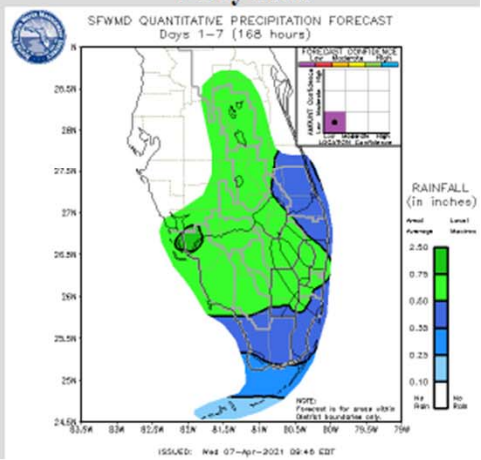
Day 6



Day 7



7-Day Total



CPC Precipitation Outlook for South Florida

Apr 2021

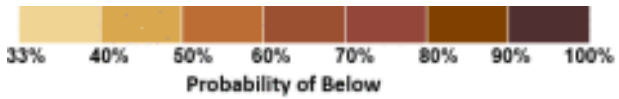
Apr-Jun

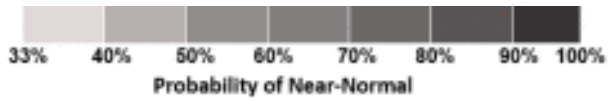
May-Jul

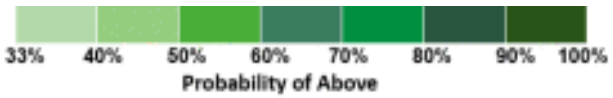
Sep-Nov

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

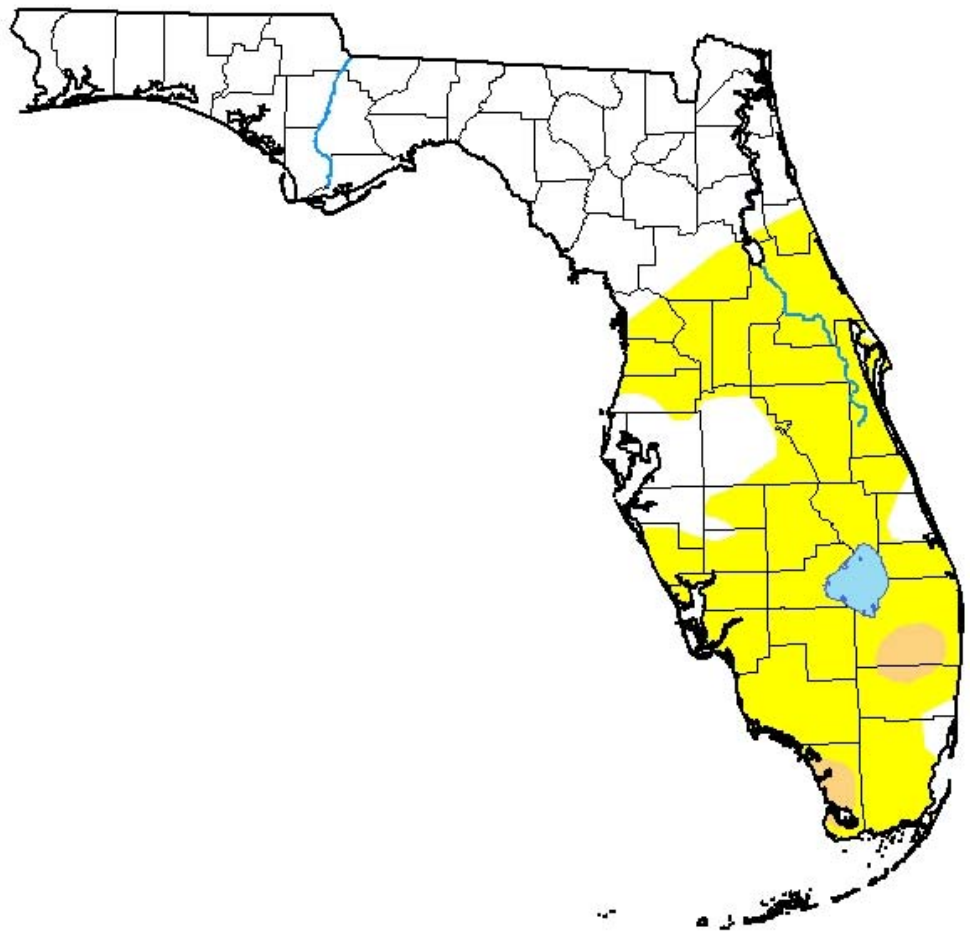
- The most recent CPC precipitation outlook for Mar 2021 for south Florida is for below normal rainfall.
- The 3-month window Apr-Jun calls for equal chances of above-normal, normal, and below-normal rainfall.
- The outlooks for the 3-month windows from May-Jul to Sep-Nov is for slightly increased to increased chances of above-normal rainfall for south Florida.
- The outlook for the remainder of the 3-month windows from Oct-Dec and into 2022 is for equal chances of above-normal, normal, and below-normal rainfall.







U.S. Drought Monitor
Florida



March 30, 2021
(Released Thursday, Apr. 1, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	52.04	47.96	2.12	0.00	0.00	0.00
Last Week *03-23-2021*	50.92	49.08	0.76	0.00	0.00	0.00
3 Months Ago *12-29-2020*	89.27	10.73	0.00	0.00	0.00	0.00
Start of Calendar Year *12-29-2020*	89.27	10.73	0.00	0.00	0.00	0.00
Start of Water Year *09-29-2020*	100.00	0.00	0.00	0.00	0.00	0.00
One Year Ago *03-31-2020*	0.19	99.81	66.71	1.07	0.00	0.00

Intensity:

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

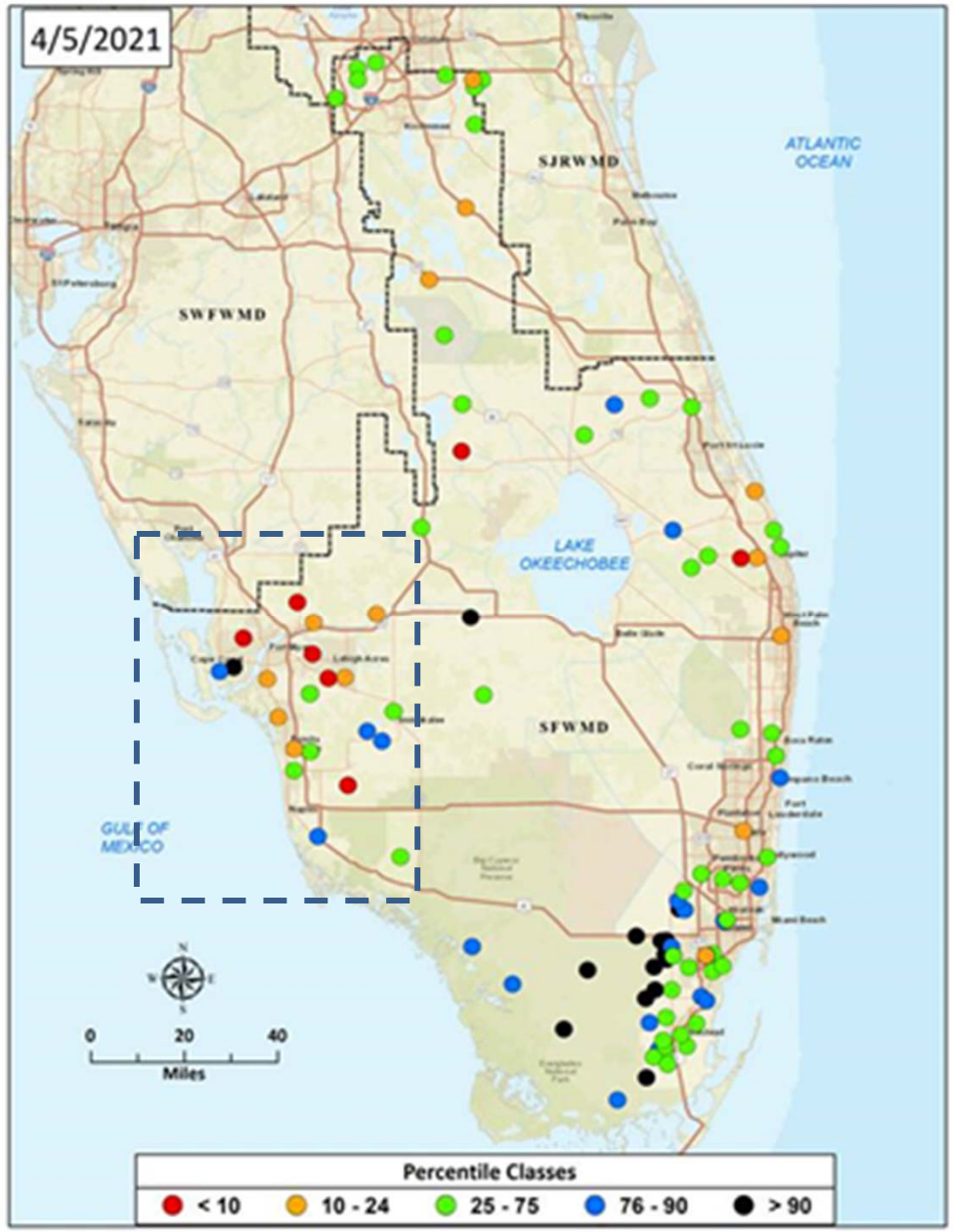
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Brad Pugh
CPC/NOAA

droughtmonitor.unl.edu

Status of Lower West Coast Groundwater Conditions

- In LWC, over 96% of Public Water Supply and Domestic Self-supply comes from groundwater
- 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
  - Groundwater levels in most of the LWC are below average for this time of year
  - Lowest groundwater levels -- Northern Cape Coral (Mid-Hawthorn), Lehigh Acres (Sandstone)



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