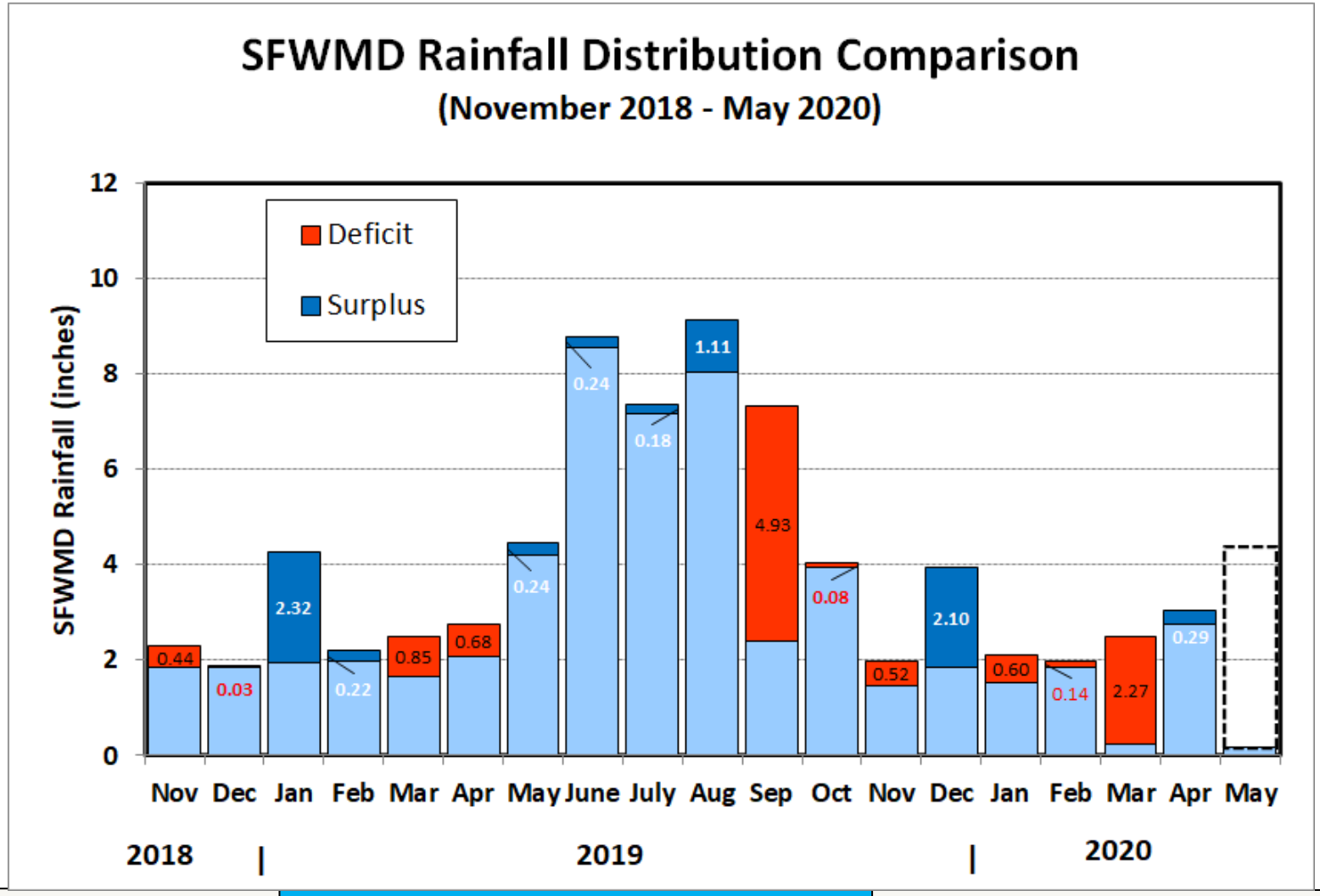
Water Conditions Summary

South Florida Water Management District
Governing Board Meeting
May 14, 2020

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



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

2018-2019 DRY SEASON
- Jan 2019 made dry season above normal.
- Dry Season ended slightly above average.

2019 WET SEASON
- May to August had above average rainfall
- August was 14% above average.
- Driest September in the 88-year POR.
- Earliest end in POR: Sep. 16, 2019.

2019-2020 DRY SEASON
- 75% of average to date.
- December above normal (214%).
- Driest March in 89 years of record
- April was ~ 111% of normal
- May 2020 has 0.16" to date

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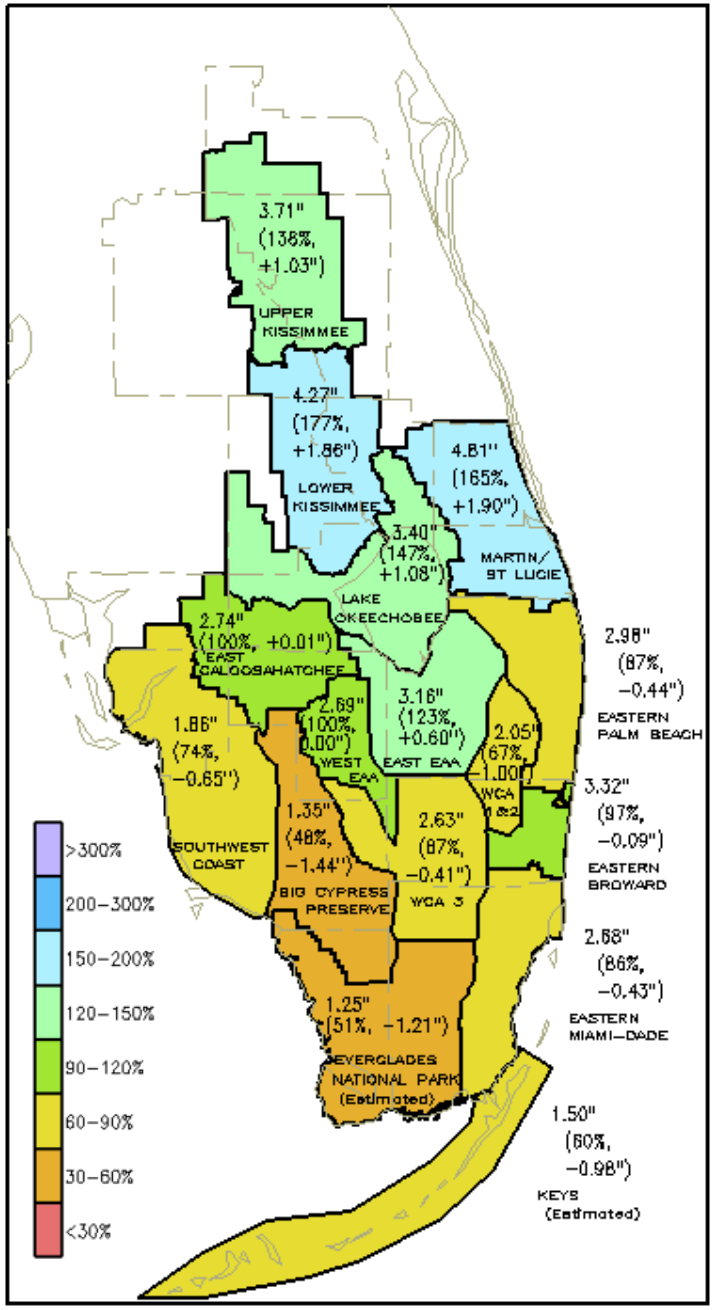


April 2020 Rainfall

DISTRICT-WIDE: 3.03”

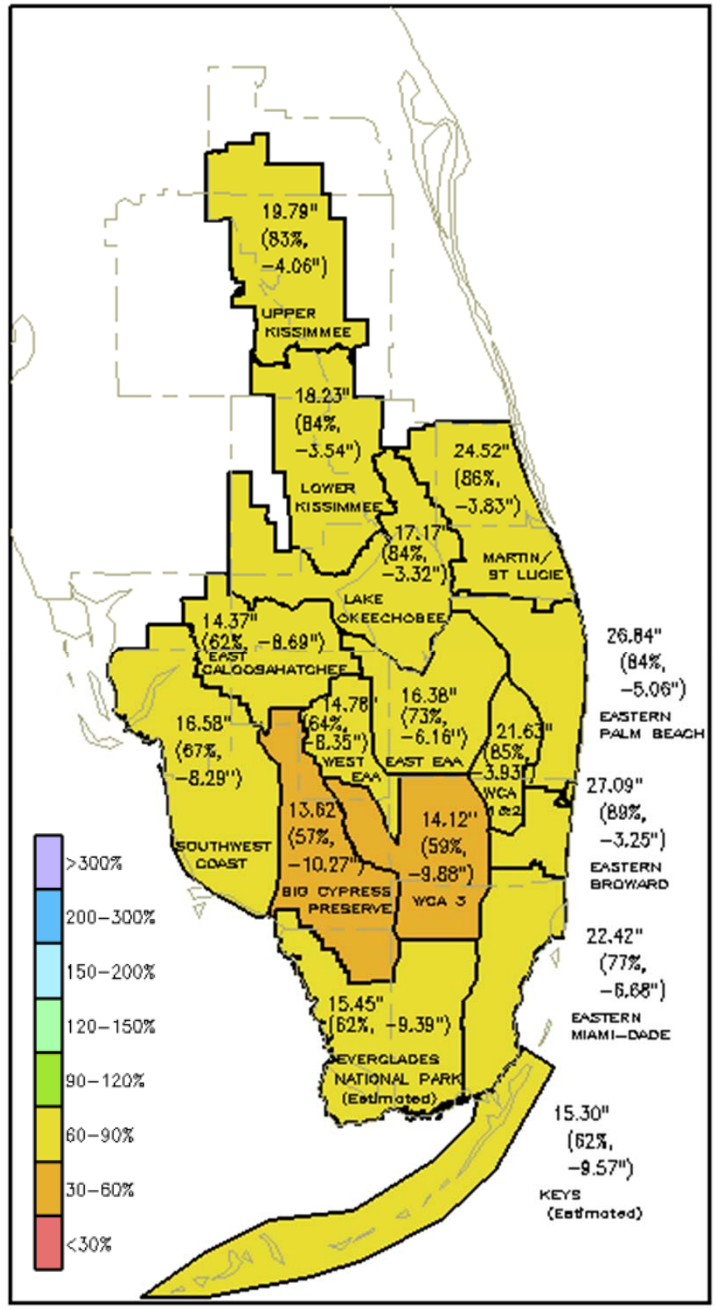
- 111 % of average, +0.29” surplus
- High spatial variability for the rain areas
- Basin with largest surplus is Martin/St. Lucie with +1.90”
- Big Cypress Preserve has the largest deficit, -1.44”

Dry Season Rainfall

02 Sep 2019 to 01 May 2020

DISTRICT-WIDE: 18.41"

- 75% of average, -6.21” deficit
- Eastern Broward is the closest to average rainfall (-3.25” deficit)
- Largest deficits are in Big Cypress Preserve (-10.27”) and WCA 3 (-9.88”)



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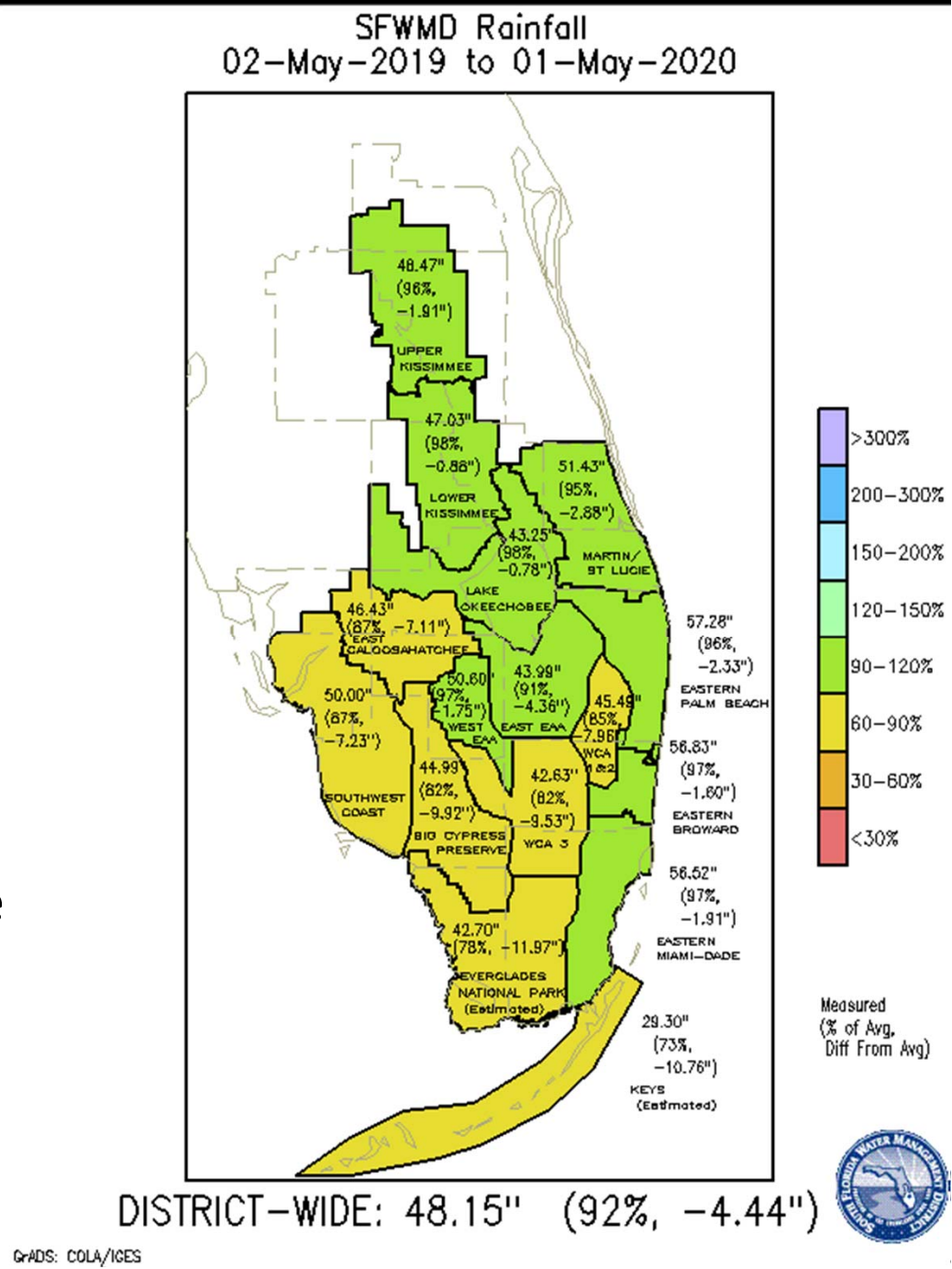
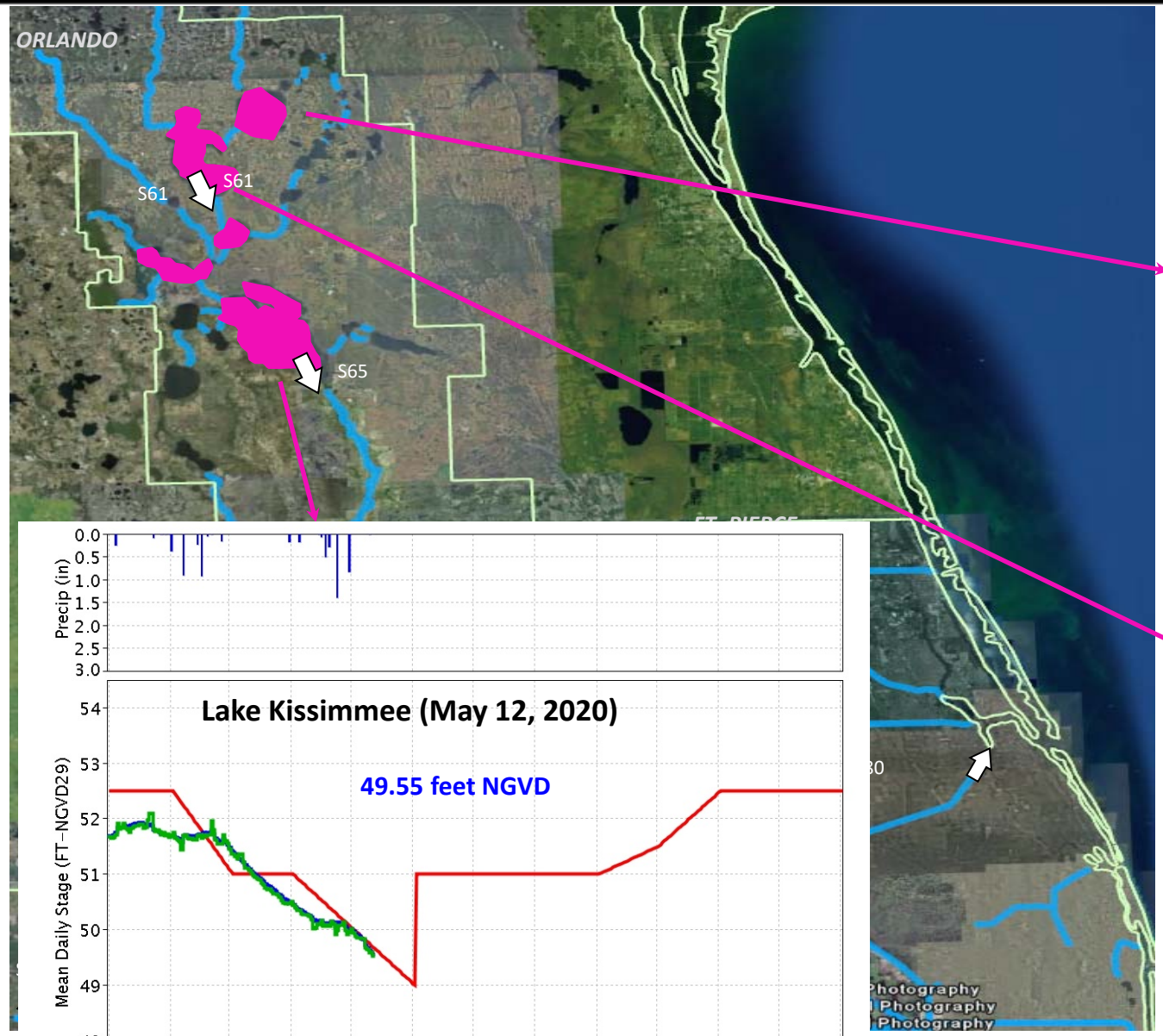
Water Year Rainfall Map

- Below average (92%), -4.44” deficit.
- Basins are 78 to 98% of average.
- Everglades and Lower West Coast have received the least of rainfall.
- Basins with largest deficit are ENP with -11.97”, Big Cypress Preserve with -9.92” and WCA 3 with -9.53”, with similar trends for the monthly and seasonal time scales.




ORLANDO
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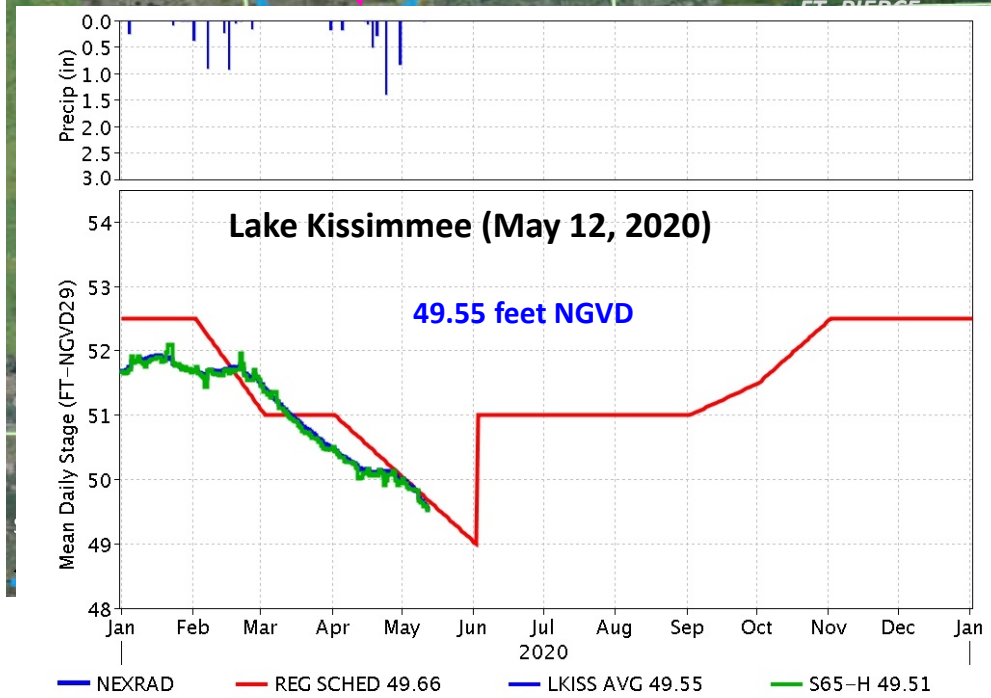
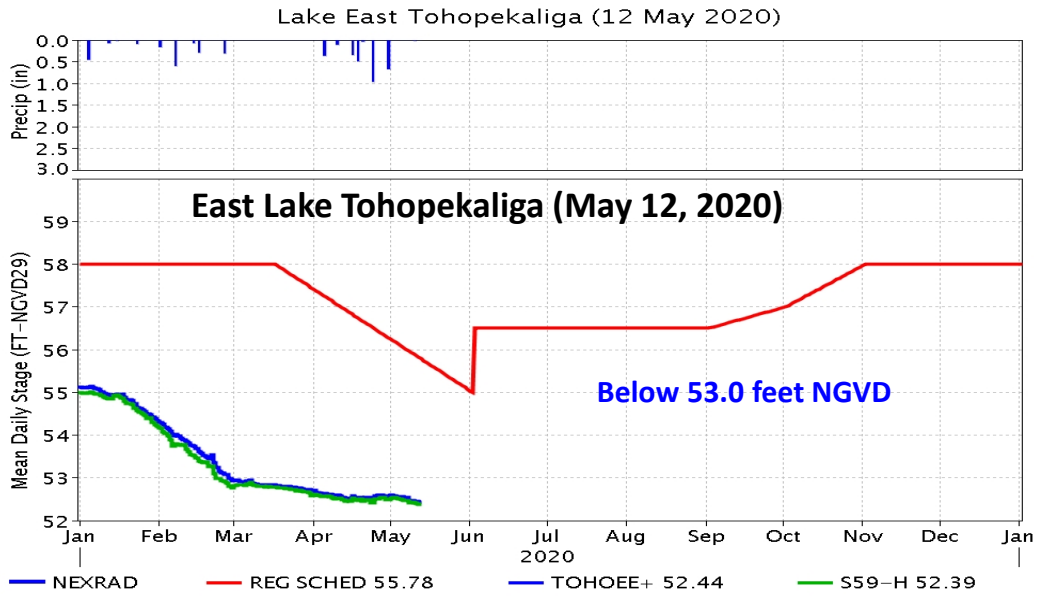
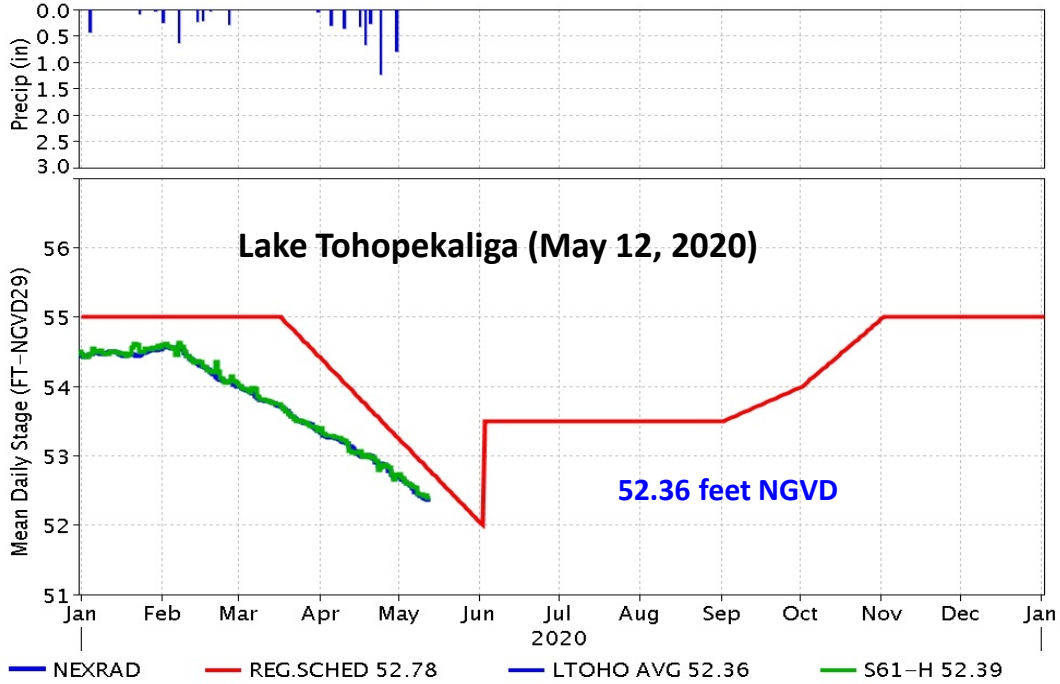
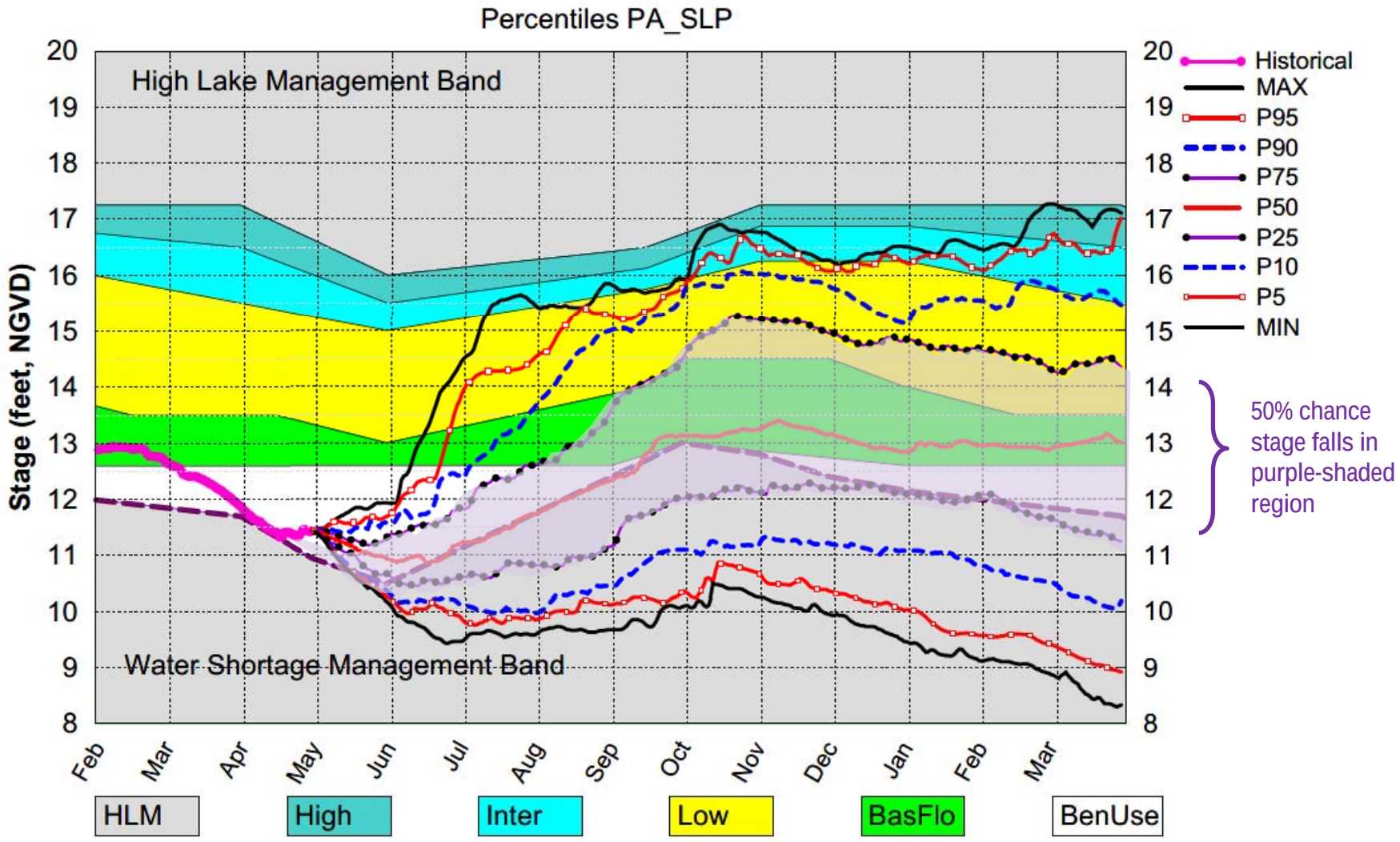

Precip (in)
Lake Kissimmee (May 12, 2020)
49.55 feet NGVD
Mean Daily Stage (FT-NGVD29)
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan
2020
NEXRAD
REG SCHED 49.66
LKISS AVG 49.55
S65-H 49.51


Lake East Tohopekaliga (12 May 2020)
Precip (in)
East Lake Tohopekaliga (May 12, 2020)
Below 53.0 feet NGVD
Mean Daily Stage (FT-NGVD29)
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan
2020
NEXRAD
REG SCHED 55.78
TOHOEE+ 52.44
S59-H 52.39


Precip (in)
Lake Tohopekaliga (May 12, 2020)
52.36 feet NGVD
Mean Daily Stage (FT-NGVD29)
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan
2020
NEXRAD
REG.SCHED 52.78
LTOHO AVG 52.36
S61-H 52.39

Lake Okeechobee SFWMM May 2020 Position Analysis



(See assumptions on the Position Analysis Results website)

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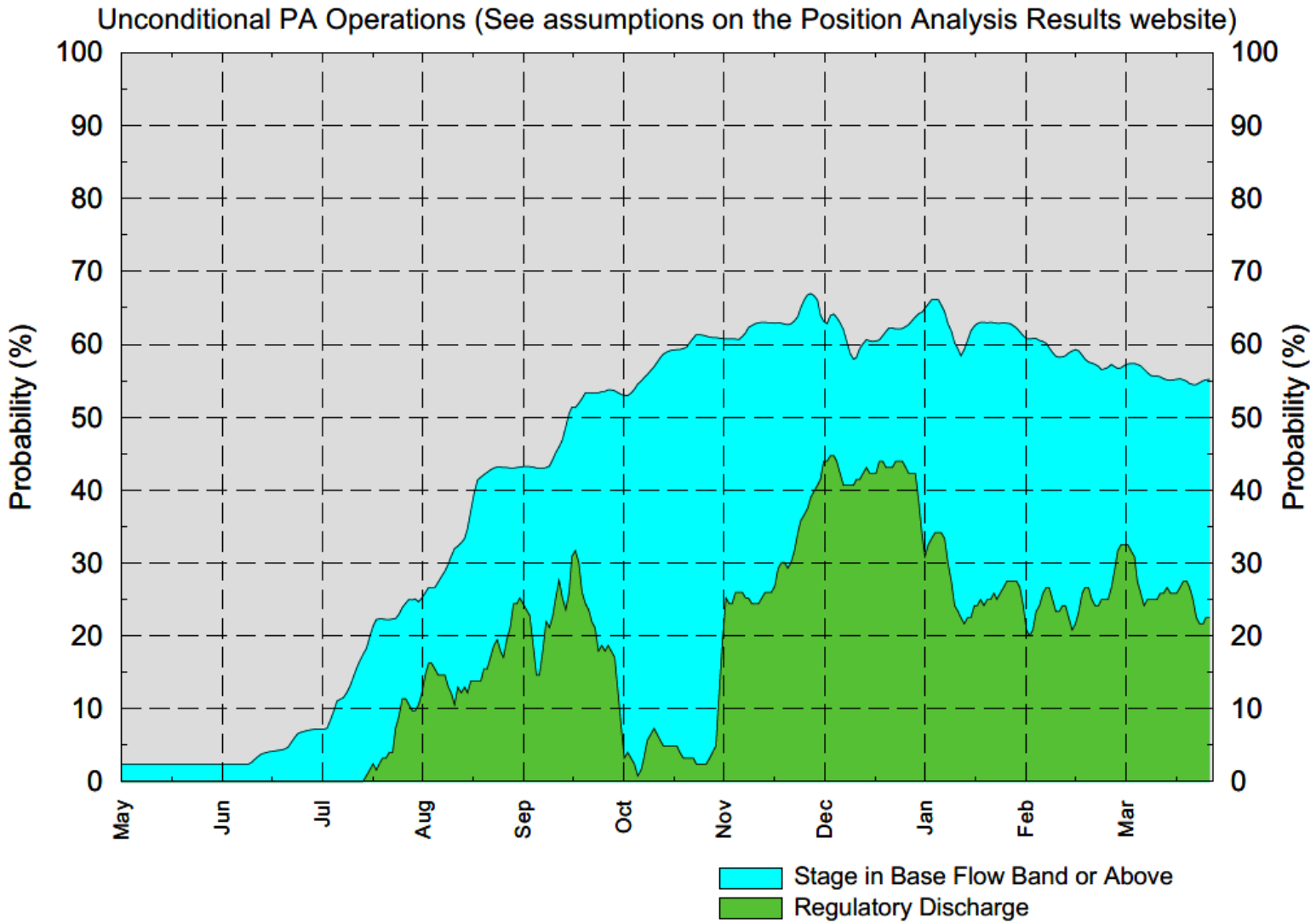
May 2020 Dynamic Position Analysis

Lake Okeechobee – LORS2008 Releases to the WCA's



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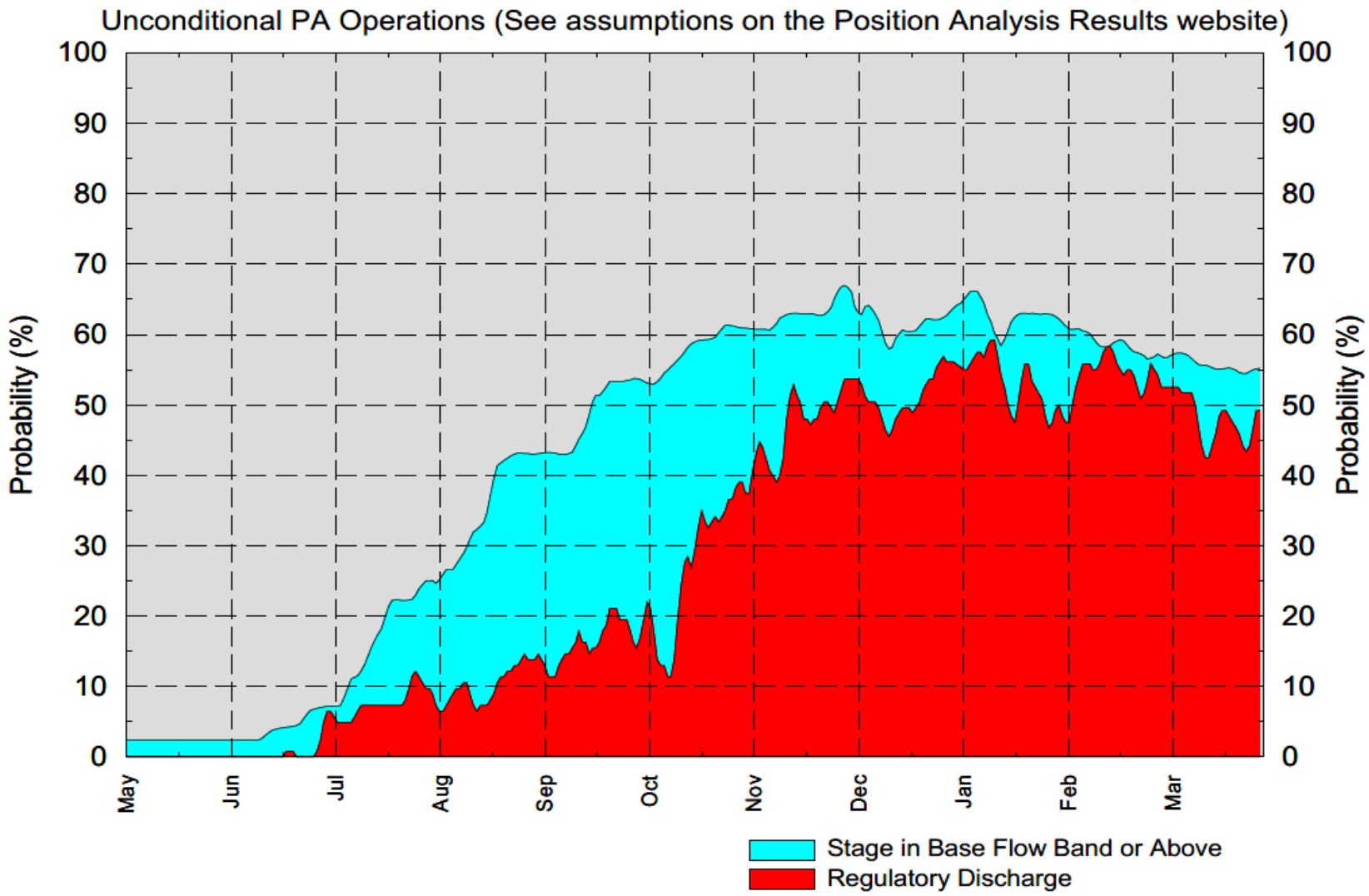
May 2020 Dynamic Position Analysis
Lake Okeechobee – LORS2008 Releases to the Estuaries



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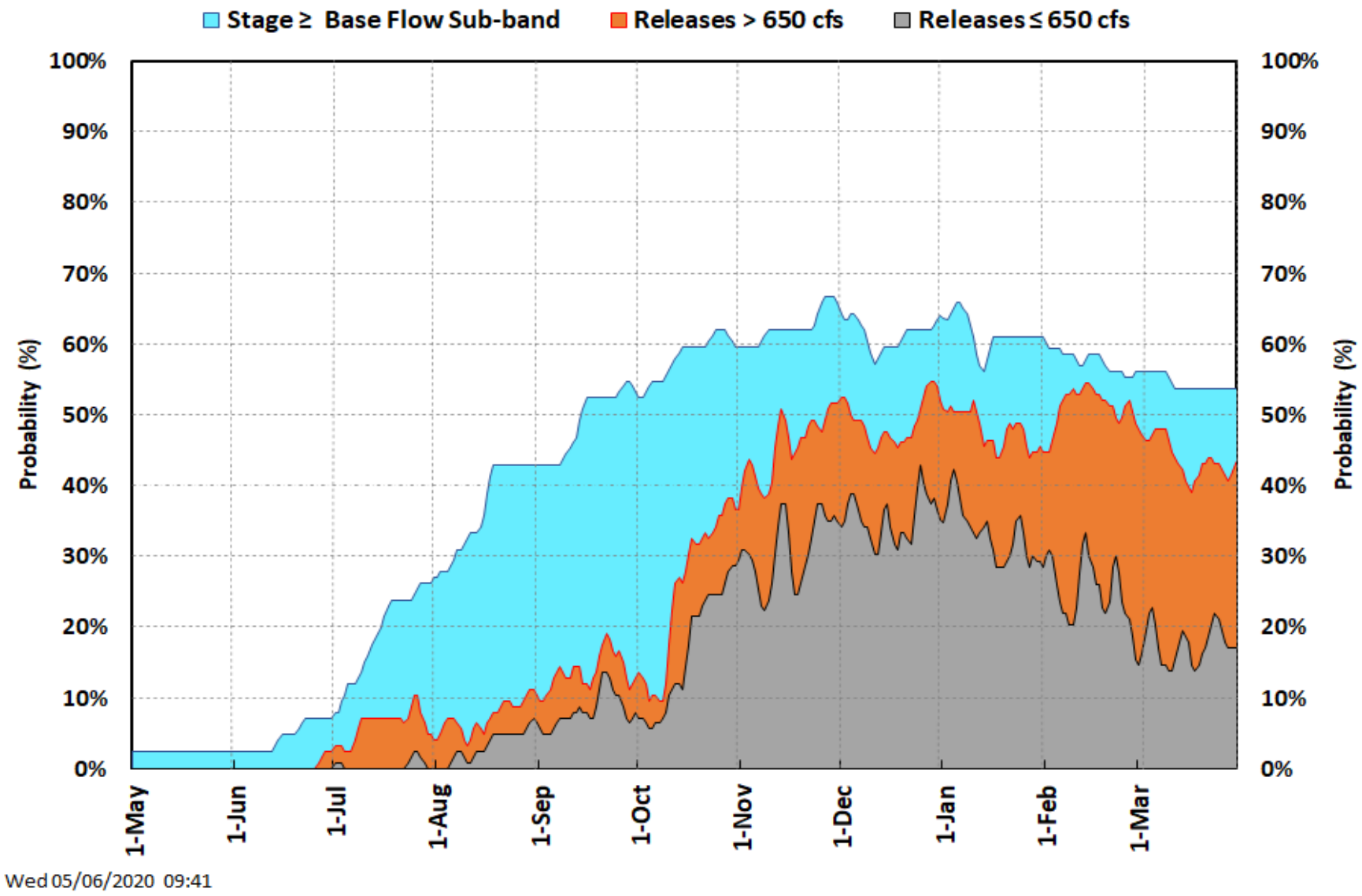
May 2020 DPA - Likelihood of Releases to the Caloosahatchee Estuary



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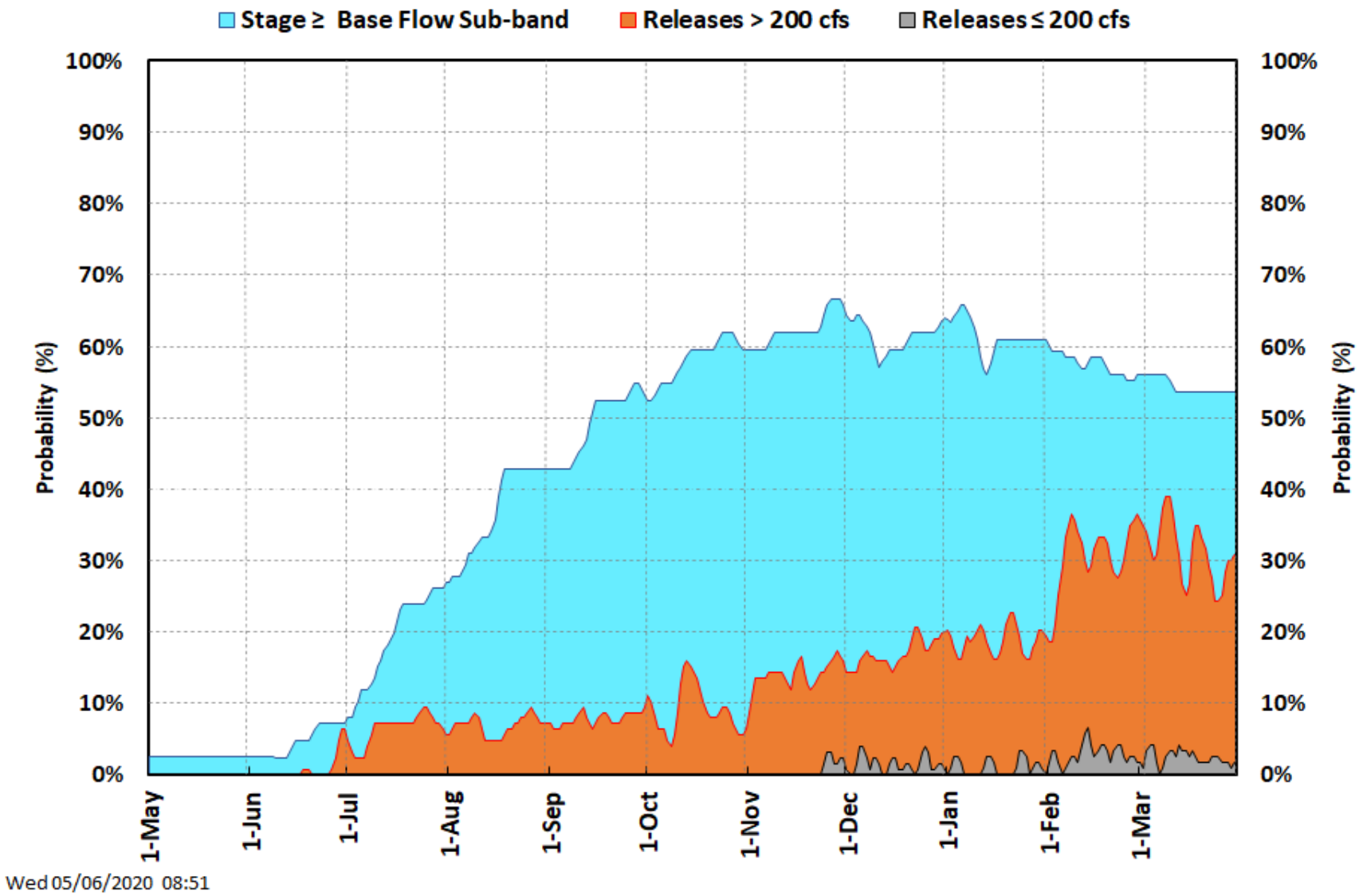
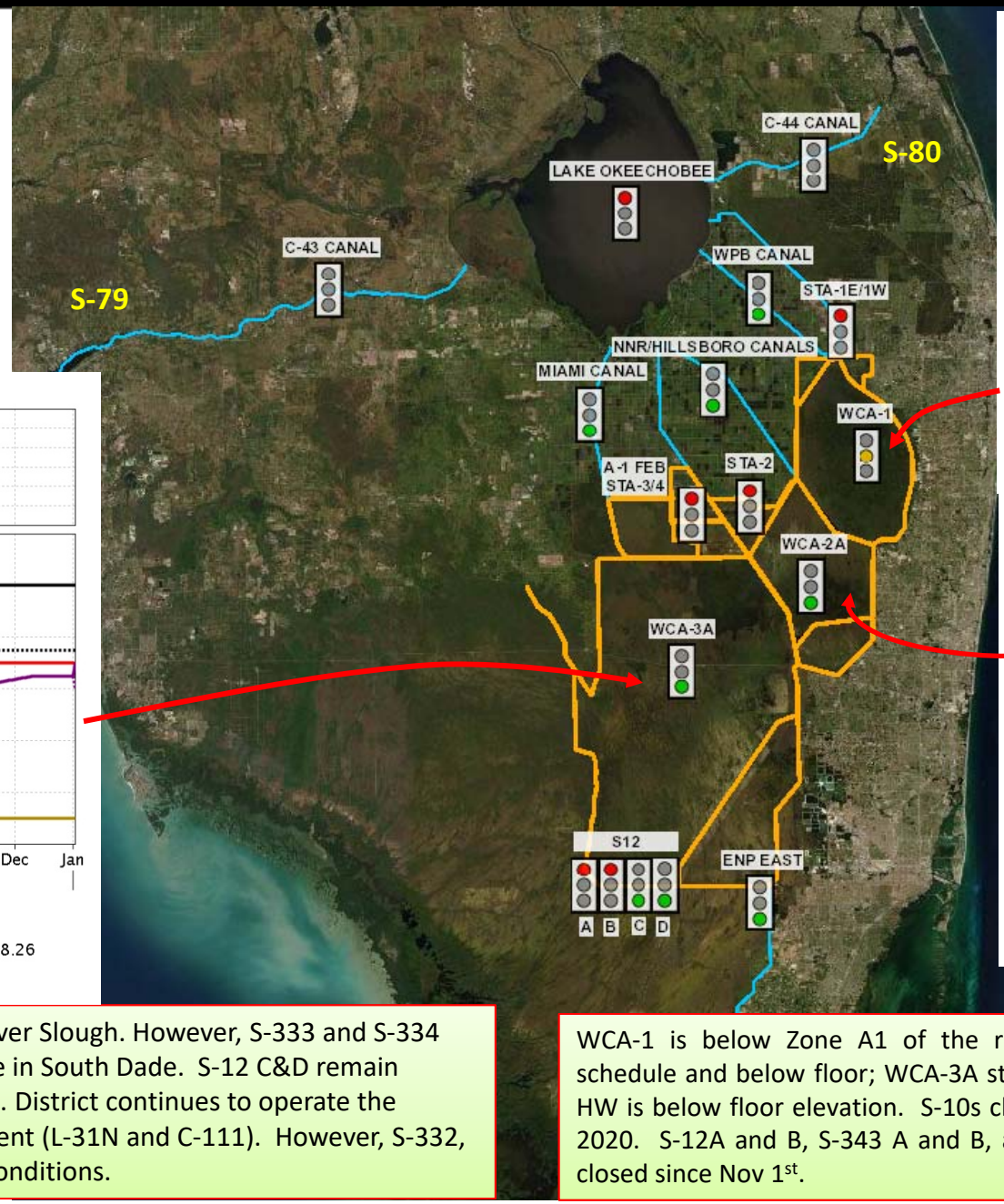
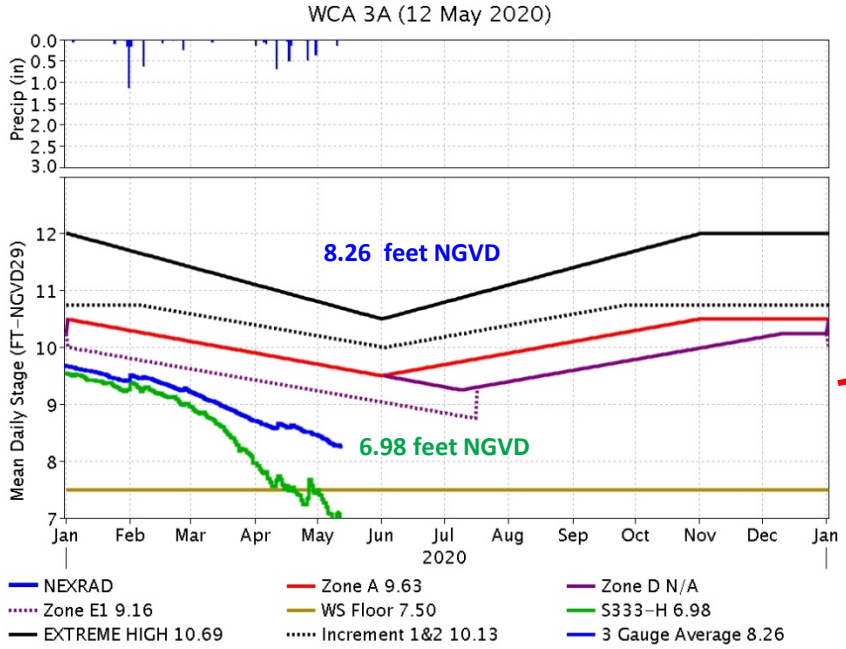
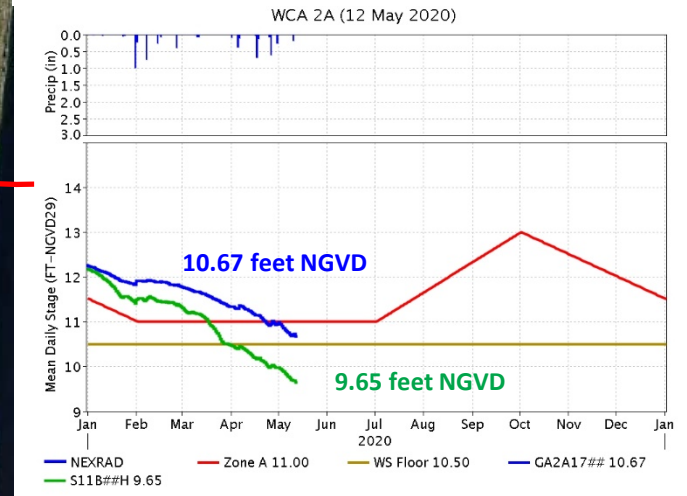
May 2020 DPA - Likelihood of Releases to the St. Lucie Estuary



Lake Okeechobee stage is in the Beneficial Use Sub-band. No regulatory releases south. Supplemental environmental releases to the Caloosahatchee Estuary. Environmental and water supply releases south.







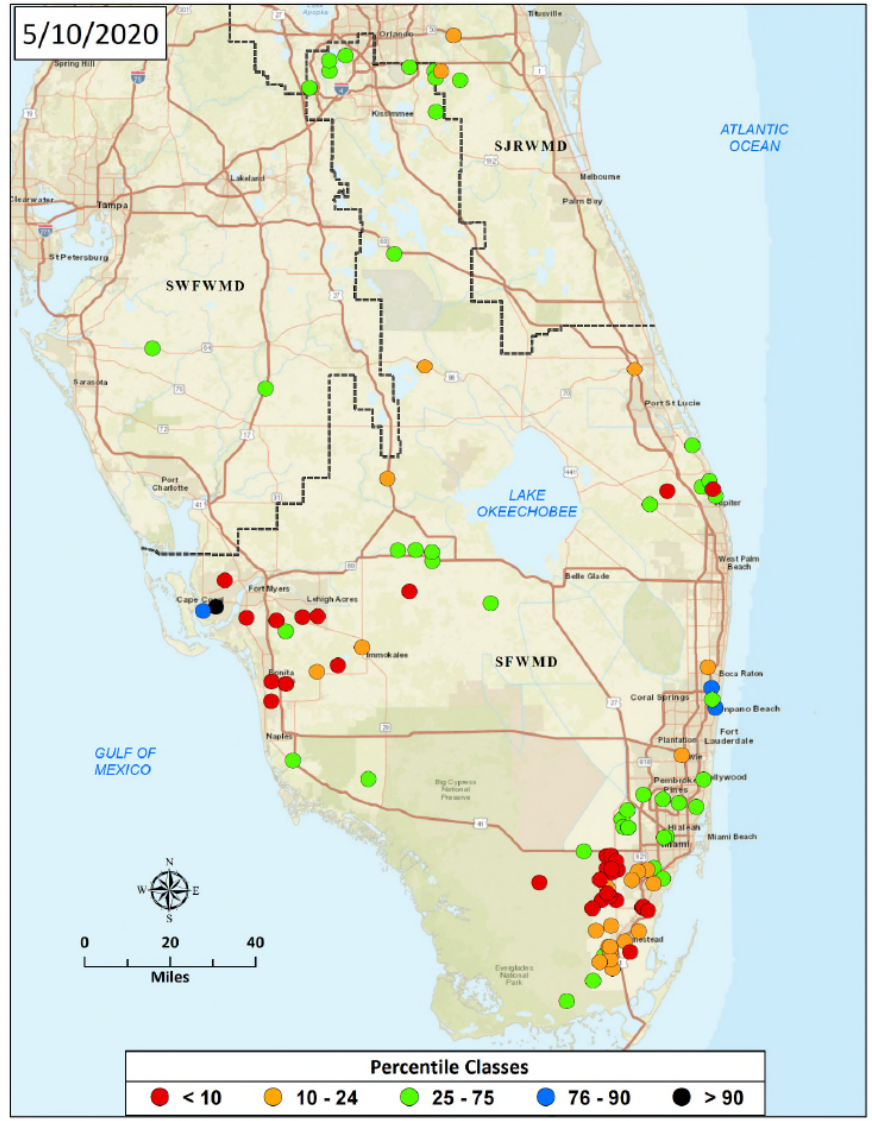
Rainfall Plan calls for no releases from WCA-3A to Shark River Slough. However, S-333 and S-334 are passing ~ 290 cfs daily average canal level maintenance in South Dade. S-12 C&D remain closed. L-29 canal stage constraint is 8.3 to 8.5 feet NGVD. District continues to operate the detention cells as necessary to provide seepage management (L-31N and C-111). However, S-332, S-199 and S-200 pumps have not run recently due to dry conditions.

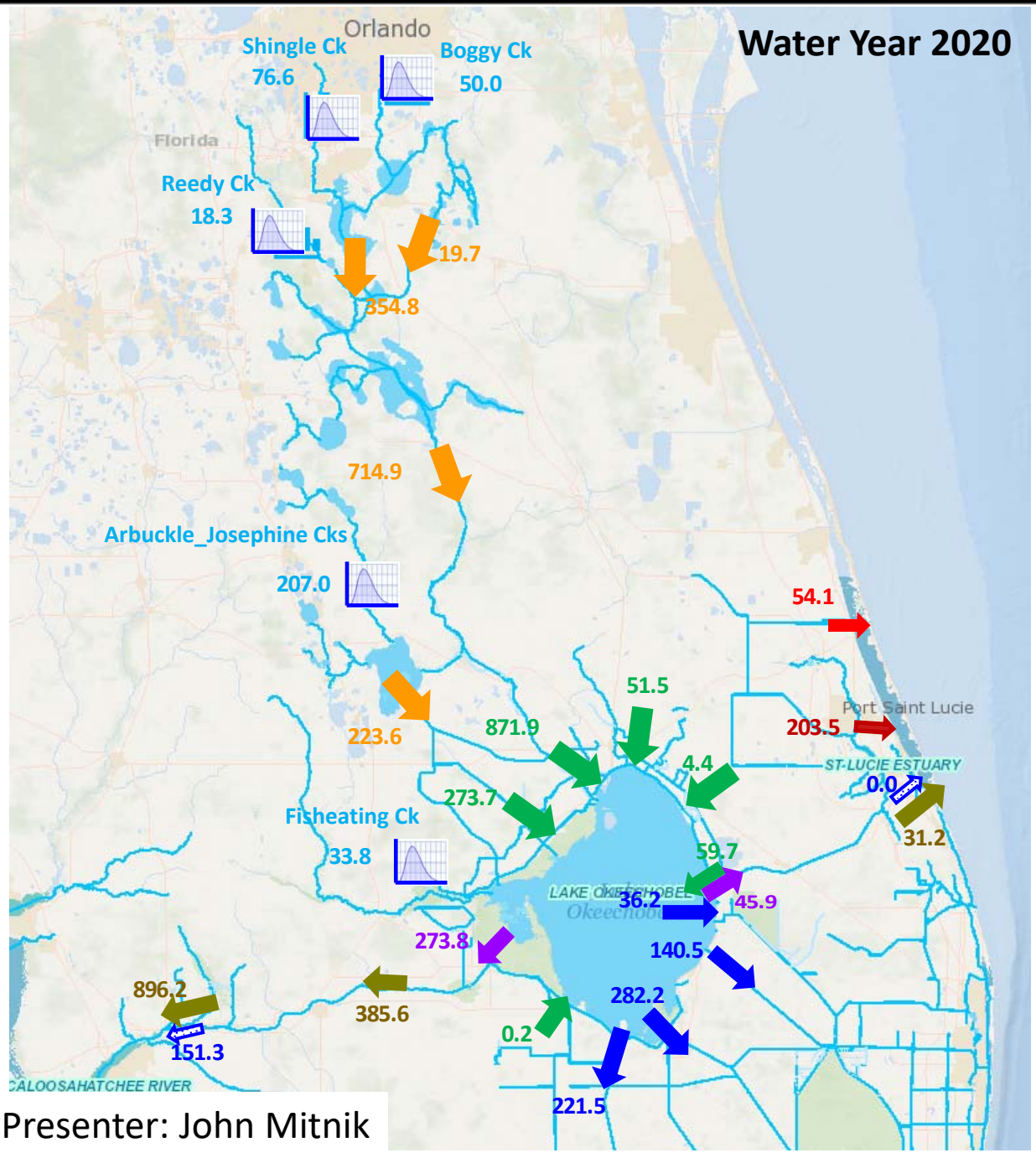
WCA-1 is below Zone A1 of the regulation schedule; WCA-2A is below regulation schedule and below floor; WCA-3A stage is in Zone E (no flood control releases). S-333 HW is below floor elevation. S-10s closed since Sep 4, 2019. S-11s closed since Jan 10, 2020. S-12A and B, S-343 A and B, and S-344 were closed on Oct 1, 2019. S-12 C&D closed since Nov 1st.

System considerations for sending water south for the period 05/25/2020 to 05/11/2020

Status of Groundwater Conditions

- 96% of Public Water Supply comes from groundwater
- Real-time groundwater levels
  - Each dot represents a monitoring site, continuously monitoring water levels
  - Color coding corresponds to statistical comparison of current water levels compared to historical for this time of year
  - Most of the District is average to below-average groundwater levels for this time of year
  - Lowest groundwater levels falling in the lowest percentile -- Southern Miami-Dade County, Cape Coral

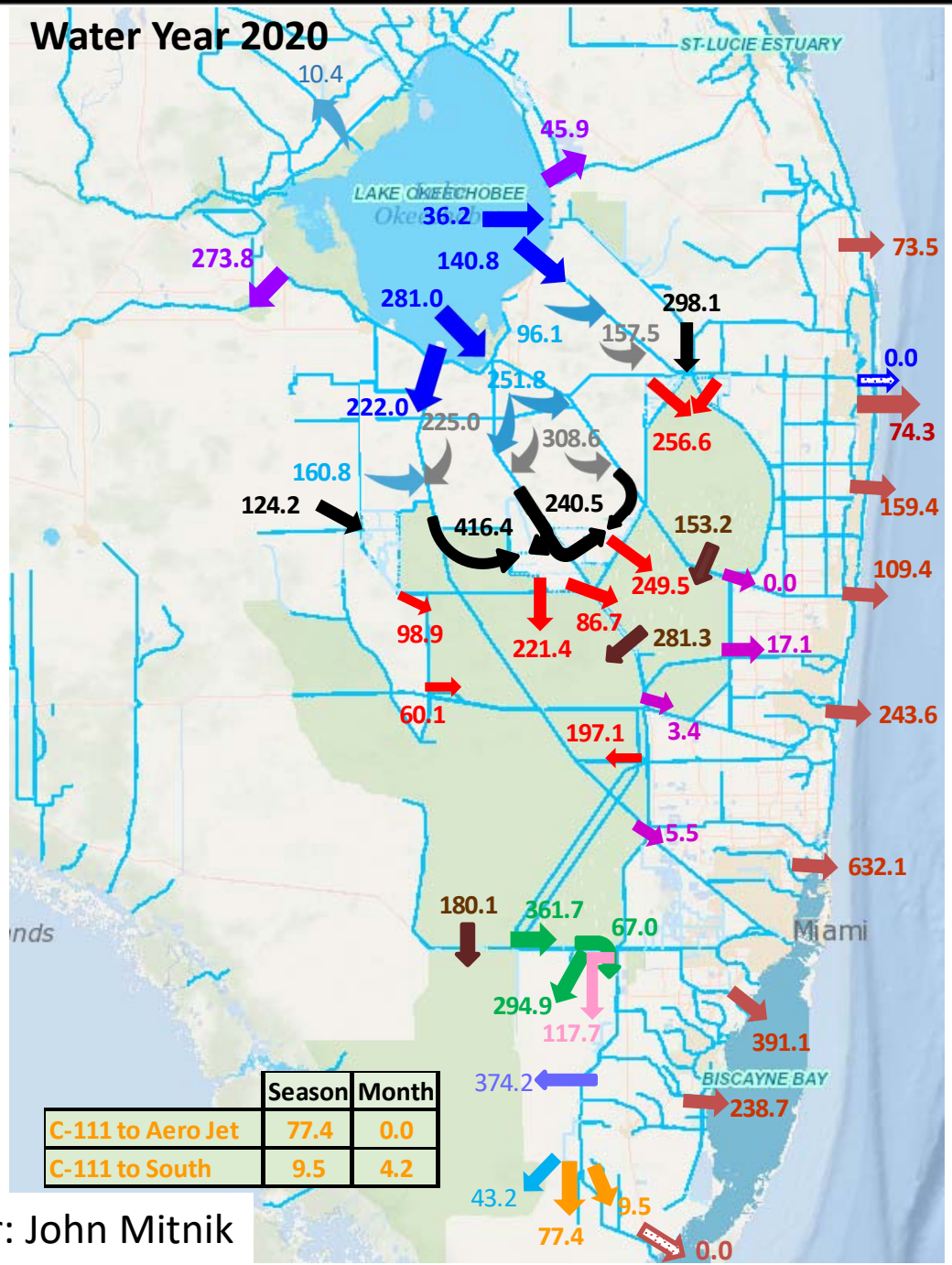




SFWMD – Selected Release Volumes
Water Years 2019 and 2020
(volumes in 1,000 acre-feet)

Symbol	Description	Volume (1,000 acre- feet)	
		WY 2019	WY 2020
	Upper Kissimmee to Lower Kissimmee	927.1	717.6
	Inflows to Lake Okeechobee	1629.8	1262.4
	Lake Releases and Basin Runoff	2188.0	927.4
	Lake Releases East and West	1230.4	319.7
	Lake Flood Control to Estuaries	1052.6	151.3
	Total Lake Releases South	966.1	680.2
	Releases to Indian River Lagoon	174.8	54.1
	Upper East Coast discharges to St. Lucie Estuary	268.1	203.5
	Uncontrolled flows (creeks)	651.3	386.9

1,000 acre-feet = 325.9 Million Gallons
Water Year is May to April



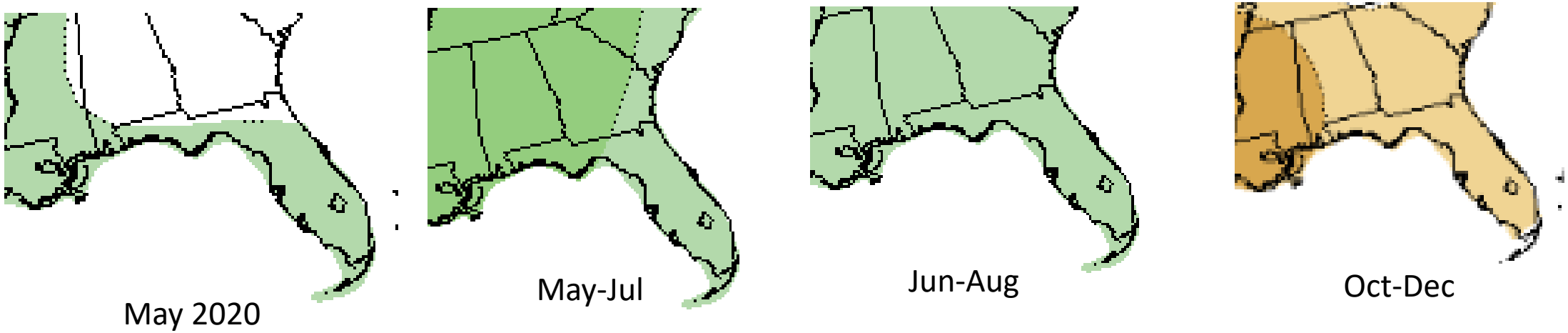
	Season	Month
C-111 to Aero Jet	77.4	0.0
C-111 to South	9.5	4.2

SFWMD – Selected Release Volumes
Water Years 2019 and 2020
(volumes in 1,000 acre-feet)

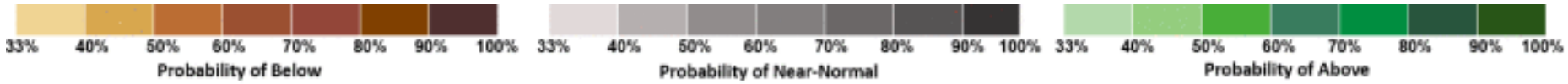
Symbol	Description	Volume (1000 acre-feet)	
		WY 2019	WY 2020
	Lake Releases East and West	1230.4	319.7
	Total Lake Releases South	966.1	680.2
	Lake Flood Control to Lake Worth Lagoon	39.5	0.0
	EAA Runoff	930.5	693.7
	Lake Delivery for Irrigation	396.3	519.7
	Inflows to STAs FEBs from Lake	494.1	152.3
	Inflows to STAs FEBs from Runoff +Other	1032.9	929.3
	Inflows to WCAs from STAs+Other	1734.4	1173.1
	Flood Control Releases WCA to WCA	1315.2	614.6
	WCA Flood Control to Intracoastal	296.7	26.0
	Urban areas flood control to Intracoastal	2701.0	1923.2
	WCA-3 Releases to ENP (L-29 Canal)	311.2	294.9
	L-31N Seepage to ENP	42.5	117.7
	Flow to Detention Cells	340.4	374.2
	Flows to Taylor Slough	29.7	43.2
	C-111 to Barnes Sound	35.5	0.0

1,000 acre-feet = 325.9 Million Gallons
Water Year is May to April

CPC Precipitation Outlook for South Florida

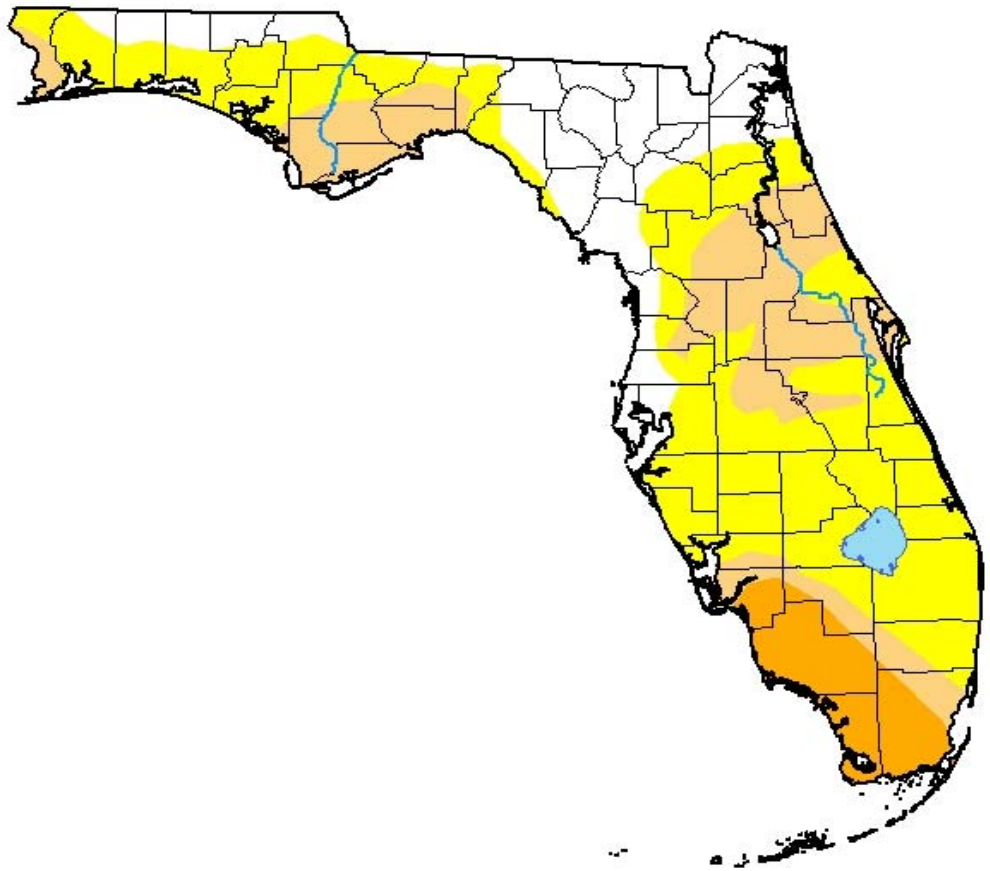


- The most recent CPC precipitation outlook for May 2020 calls for slightly increased chances of above-normal rainfall for the entire District.
- The 3-month windows of May-Jul and Jun-Aug also show slightly increased chances of above-normal rainfall for the entire District
- The outlook indicates increased chances of below-normal rainfall for the beginning of the 2020-2021 dry season.
- All the other the 3-month windows to the end of the 2020 wet season call for equal chances of above-normal, normal, or below-normal rainfall.



U.S. Drought Monitor

Florida



May 5, 2020

(Released Thursday, May. 7, 2020)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	22.19	77.81	30.78	8.72	0.00	0.00
Last Week *04-28-2020*	15.72	84.28	43.05	7.22	0.00	0.00
3 Months Ago *02-04-2020*	68.38	31.62	6.39	0.00	0.00	0.00
Start of Calendar Year *12-31-2019*	75.86	24.14	8.59	0.00	0.00	0.00
Start of Water Year *10-01-2019*	56.91	43.09	23.58	6.18	0.61	0.00
One Year Ago *05-07-2019*	73.78	26.22	4.51	0.00	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

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CPC/NOAA

droughtmonitor.unl.edu

QUESTIONS?