

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 06/20/2022 (ENSO Condition: La Niña)

Lake Okeechobee Net Inflow Outlook:

The Lake Okeechobee Net Inflow Outlook has been computed using 4 methods: Croley's method¹, the SFWMD empirical method², a sub-sampling of La Nina years³ and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with La Nina ENSO years⁴. The results for Croley's method and the SFWMD empirical method are based on the CPC Outlook.

Table of the Lake Okeechobee Net Inflow Outlooks in feet of equivalent depth. All methods are updated on a weekly basis with observed net inflow for the current month.

Season	Croley's Method ^{1*}		SFWMD Empirical Method ²		Sub-sampling of La Nina ENSO Years ³		Sub-sampling of AMO Warm + La Nina ENSO Years ⁴	
	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>
Current (Jun-Nov)	N/A	N/A	2.86	Very Wet	2.83	Very Wet	2.76	Very Wet
Multi Seasonal (Jun-Apr)	N/A	N/A	3.42	Wet	3.04	Wet	2.46	Normal

*Croley's Method Not Produced for This Report

See Seasonal and Multi-Seasonal tables for the classification of Lake Okeechobee Outlooks.

The recommended methods and values for estimating the Lake Okeechobee Net Inflow Outlook are shaded and should be used in the LORS2008 Release Guidance Flow Charts.

**Sub-sampling is a weighted average of ENSO conditions based on the ENSO forecast used.

Tributary Hydrologic Conditions Graph:

2568 cfs 14-day running average for Lake Okeechobee Net Inflow through 06/13/2022. According to the classification in Tributary Hydrologic Conditions table, this condition is wet.

-2.47 for Palmer Drought Index on 06/06/2022. According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

The wetter of the two conditions above is **Wet**.

LORS2008 Classification Tables:

Lake Okeechobee Stage on 06/20/2022:

Lake Okeechobee Stage: **12.94 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.08	
Operational Band	High sub-band	15.61	
	Intermediate sub-band	15.13	
	Low sub-band	13.18	
Base Flow sub-band		12.60	← 12.94 ft
Beneficial Use sub-band		10.87	
Water Shortage Management Band			

Part C of LORS2008: Discharge to WCAs

Up to Maximum Practicable to the WCAs if desirable or with minimum Everglades impact; otherwise no releases to WCAs.

Part D of LORS2008: Discharge to Tide

Up to 450 cfs at S-79 and up to 200 cfs at S-80.

**Lake Okeechobee Releases to the Caloosahatchee Estuary
for 2008 LORS Baseflow & for Environmental Water Supply**

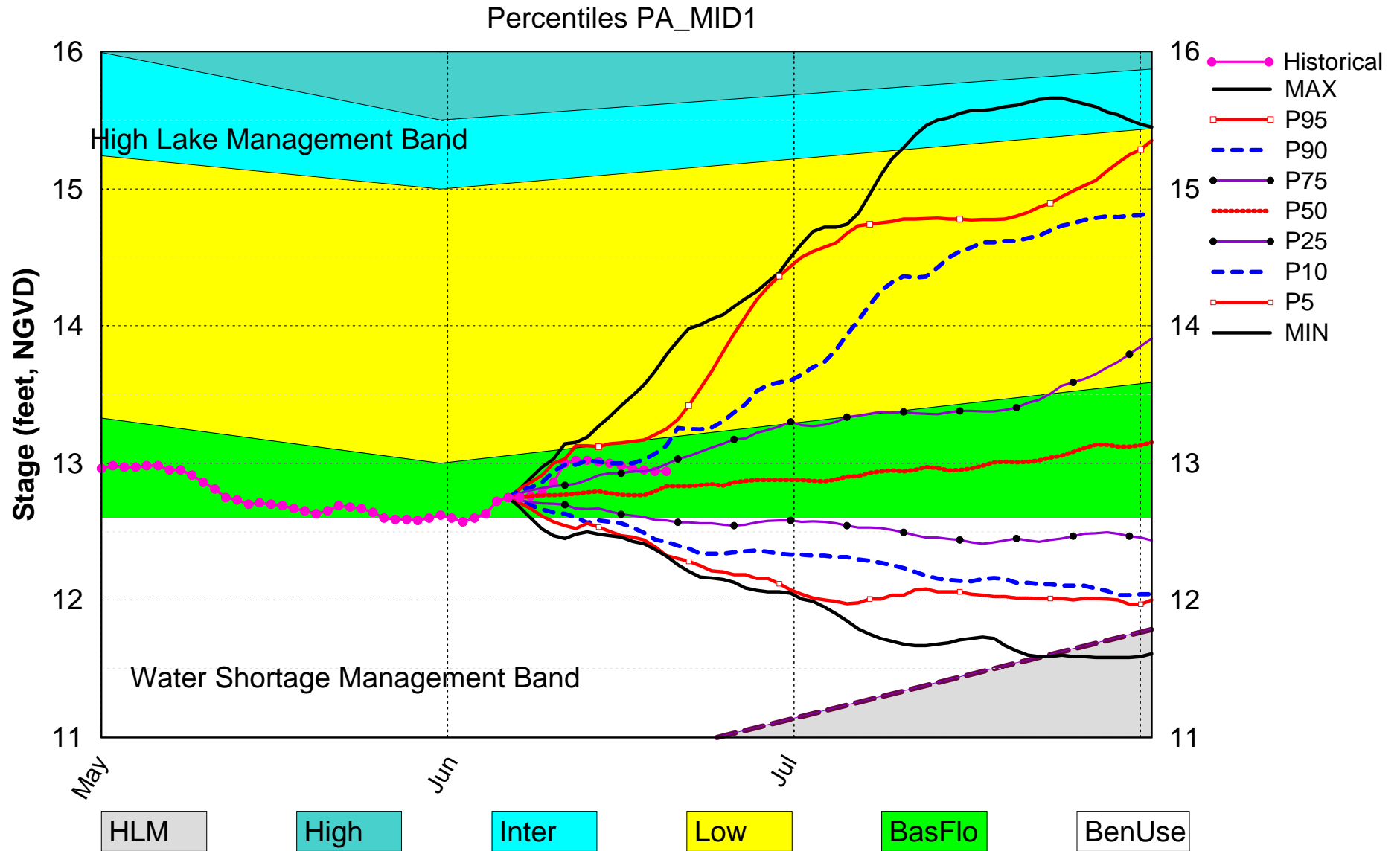
Guidance for Lake Okeechobee Releases to the Caloosahatchee Estuary indicates no S77 release to the Caloosahatchee Estuary unless the Governing Board recommends otherwise.

LORS2008 Implementation on 06/20/2022 (ENSO Condition- La Nina Watch):**Status for week ending 06/20/2022:****Water Supply Risk Evaluation**

Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Base Flow	M
	Palmer Drought Index for LOK Tributary Conditions	-2.47 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Normal	L
		3 months: Normal	L
	LOK Seasonal Net Inflow Outlook	2.83 ft	L
	ENSO Forecast	Normal to extremely wet	
	LOK Multi-Seasonal Net Inflow Outlook	3.04 ft	L
	ENSO Forecast	Wet	
WCAs	WCA 1: Site 1-8C	Above Line 1 (16.41 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (13.11 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (9.74 ft)	L
LEC	Service Area 1	Year-Round Irrigation Rule in effect	L
	Service Area 2	Year-Round Irrigation Rule in effect	L
	Service Area 3	Year-Round Irrigation Rule in effect	L

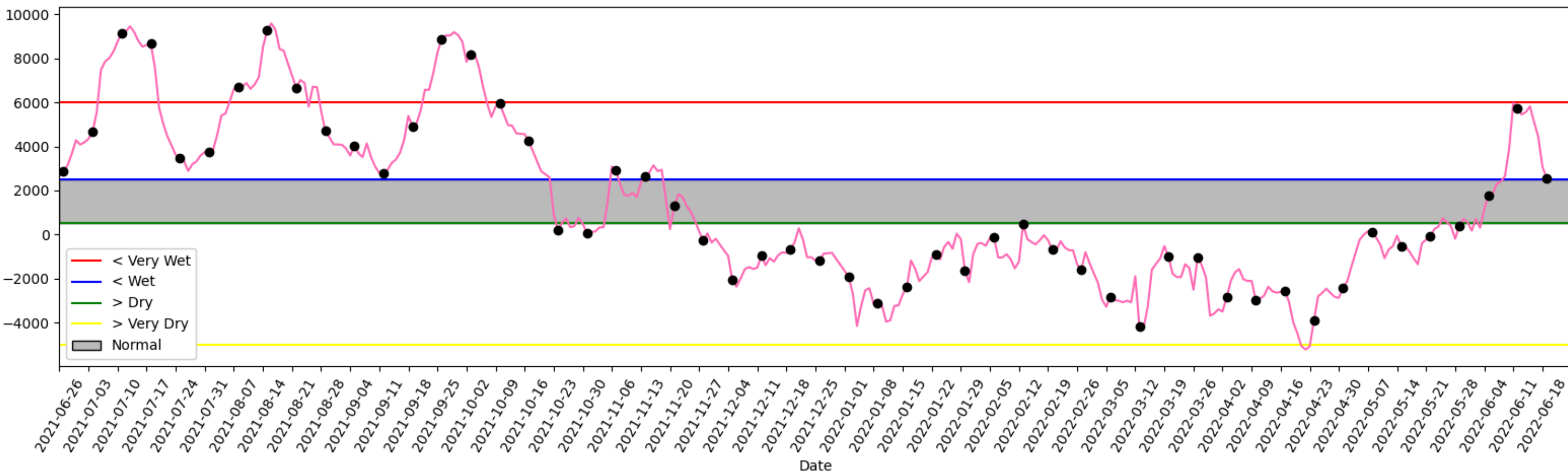
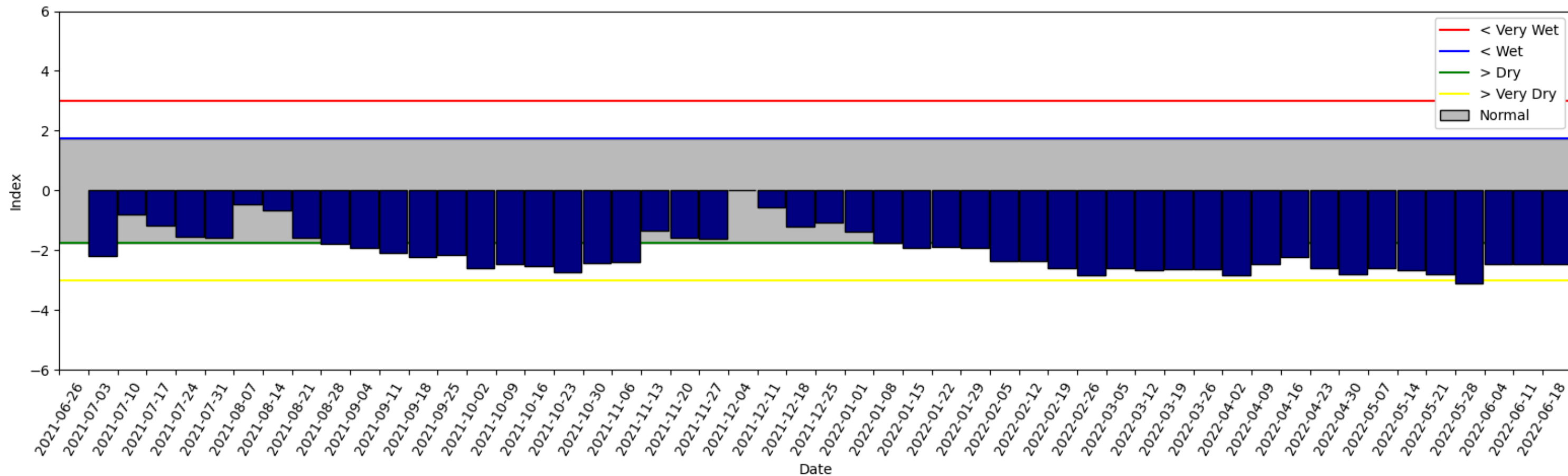
Note: The water supply risk classification based on the Palmer index, as well as the LOK seasonal and multi-seasonal net inflow outlooks use slightly different classification intervals than those used by the 2008-LORS.

Lake Okeechobee SFWMM June 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of June 19 2022



2008 LORS

Part C: Establish Allowable Lake Okeechobee Releases to the Water Conservation Areas

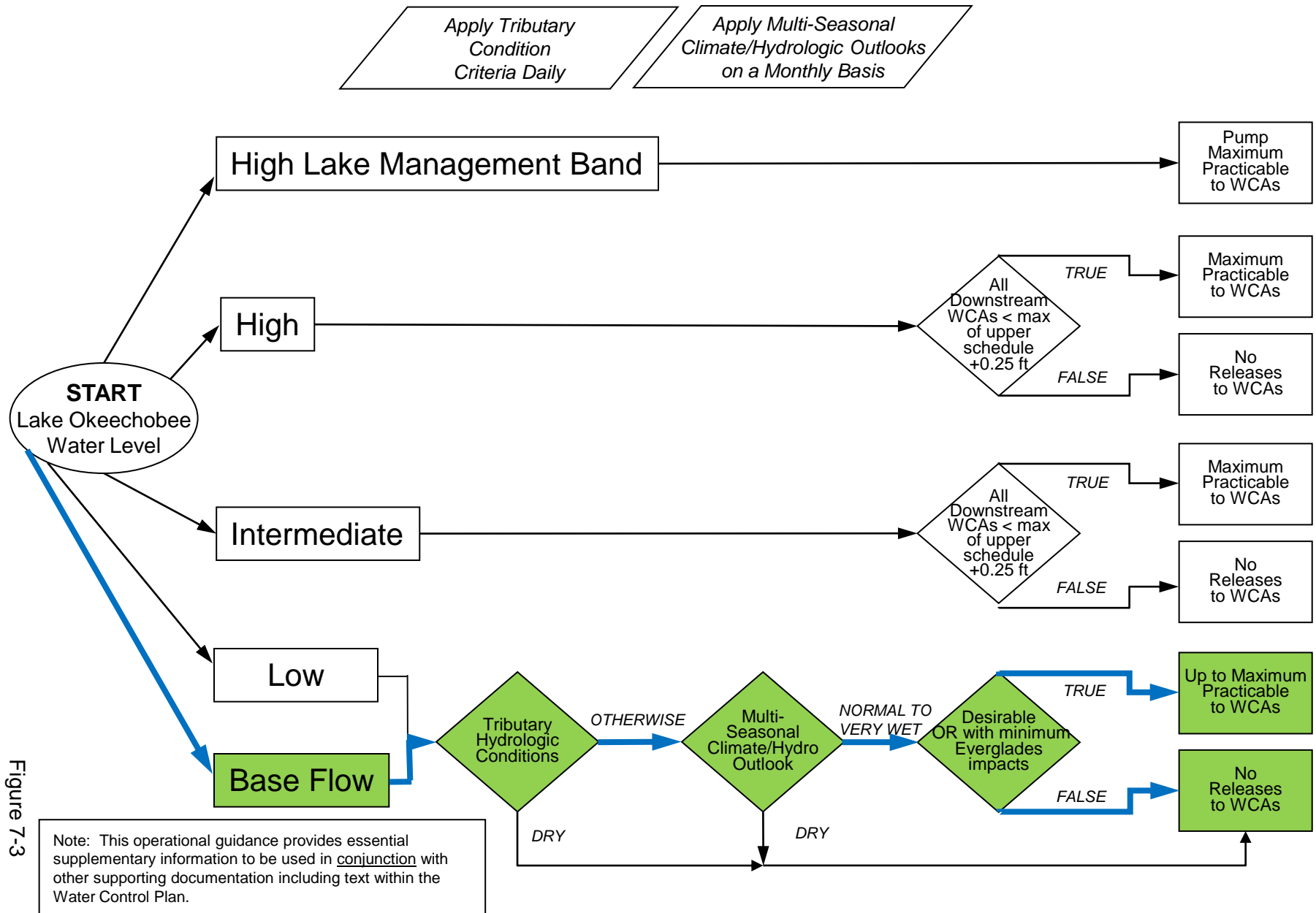


Figure 7-3

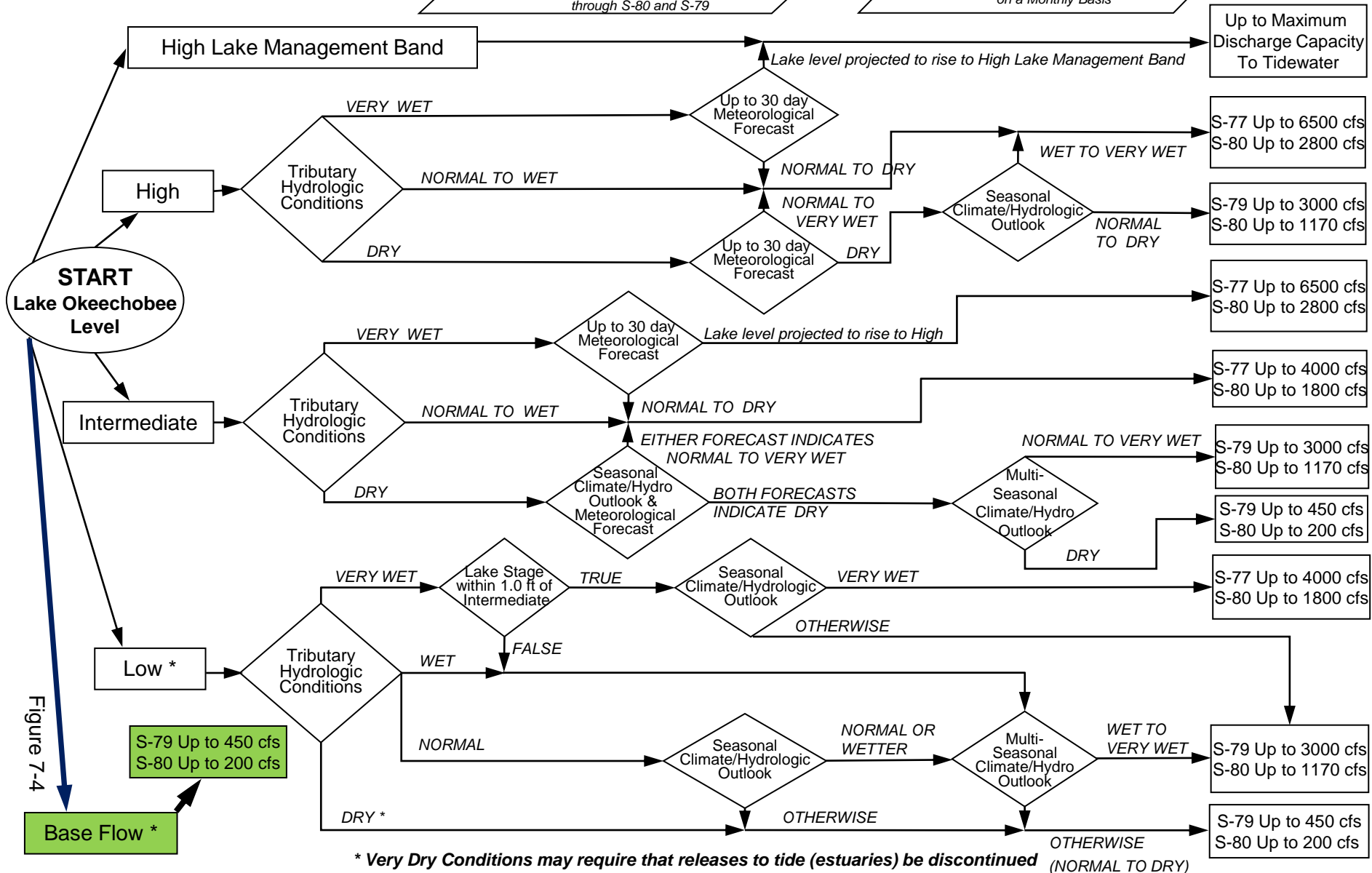
2008 LORS

Part D: Establish Allowable Lake Okeechobee Releases to Tide (Estuaries)

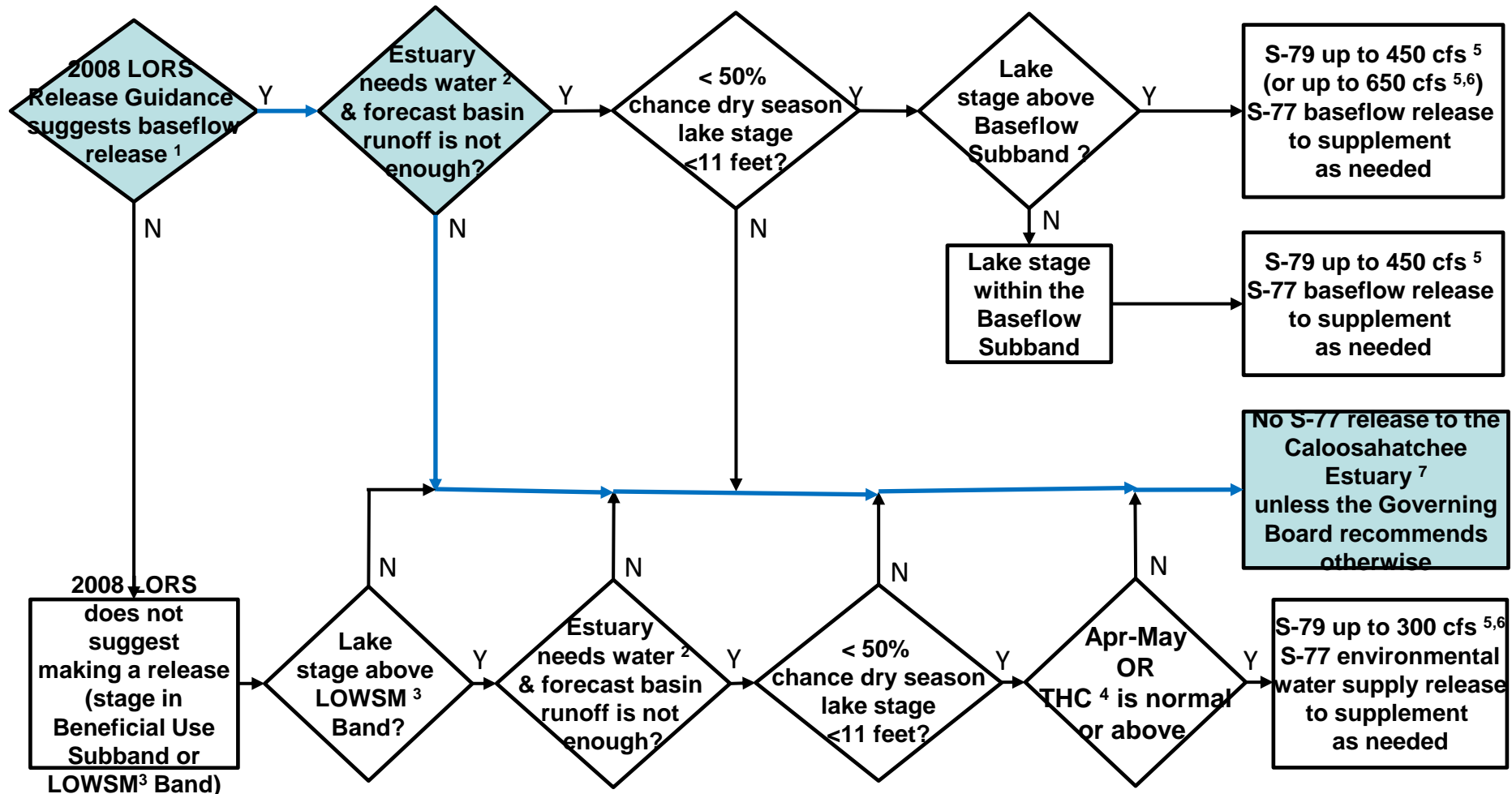
Note: This operational guidance provides essential supplementary information to be used in conjunction with other supporting documentation including text within the Water Control Plan.

When conducting Base Flow releases, flows can be distributed East and West up to 650 cfs as needed to minimize impacts or provide benefits through S-80 and S-79

Apply Meteorological Forecasts on a Weekly Basis; apply Seasonal and Multi-Seasonal Climate/Hydrologic Outlooks on a Monthly Basis



for 2008 LORS Baseflow & for Environmental Water Supply (revised 9-Aug-2012)



¹The 2008 LORS Release Guidance (Part D) can suggest baseflow releases in the Intermediate, Low, or Baseflow Subbands.

²Estuary “needs” water when the 30-day moving average salinity at I-75 bridge is projected to exceed 5 practical salinity units (psu) within 2 weeks.

³LOWSM = Lake Okeechobee Water Shortage Management.

⁴Tributary Hydrologic Condition (THC) is based on classification of Lake Okeechobee Net Inflow and Palmer Index.

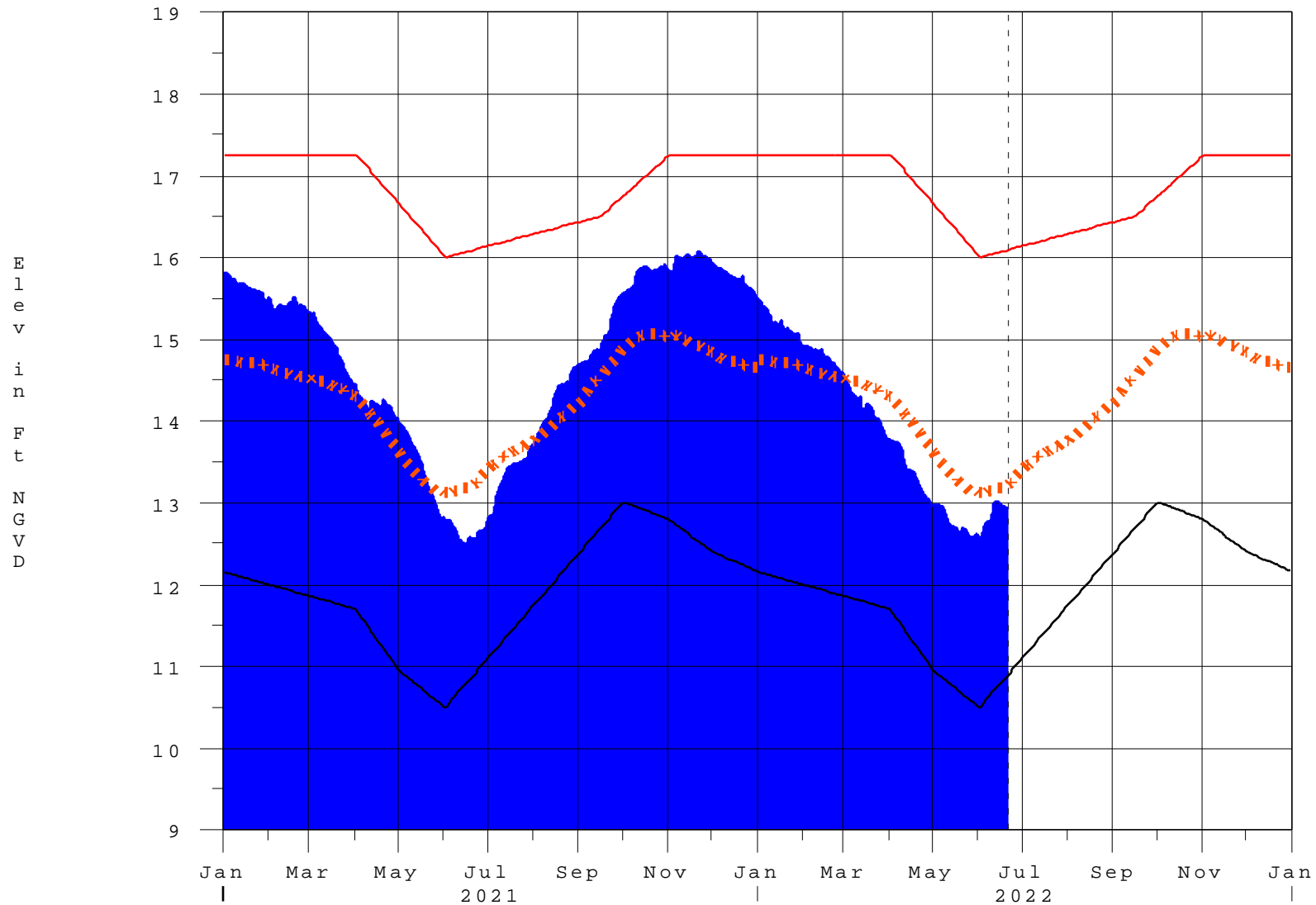
⁵Can release less than the “up to” limit if lower release is sufficient to reach or sustain desired estuary salinity; cfs = cubic feet per second.

⁶After reviewing conditions in Water Conservation Areas (WCAs), Stormwater Treatment Areas (STAs), ENP, St. Lucie Estuary and Lake Okeechobee.

⁷Should this condition be reached, the Governing Board will be briefed at their next regularly scheduled meeting as part of the State of the Water Resources agenda item.

Lake Okeechobee

21JUN22 13:45:28



- High Lake Management
- Okeechobee Avg Elev
- Average Elev [1965-2007]
- Water Shortage Management

U. S. Army Corps of Engineers, Jacksonville District
 Lake Okeechobee and Vicinity Report
 ** Preliminary Data - Subject to Revision **

Data Ending 2400 hours 20 JUN 2022

Okeechobee Lake Regulation	Elevation	Last Year	2YRS Ago
	(ft-NGVD)	(ft-NGVD)	(ft-NGVD)
*Okeechobee Lake Elevation	12.94	12.56	12.31 (Official Elv)
Bottom of High Lake Mngmt= 16.09 Top of Water Short Mngmt= 10.89			
Currently in Operational Management Band			
Simulated Average LORS2008 [1965-2000]		12.06	
Difference from Average LORS2008		0.88	
20JUN (1965-2007) Period of Record Average		13.22	
Difference from POR Average		-0.28	

Today Lake Okeechobee elevation is determined from the 4 Int & 4 Edge stations

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 6.88'

++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 5.08'

Bridge Clearance = 49.42'

4 Interior and 4 Edge Okeechobee Lake Average (Avg-Daily values):

L001	L005	L006	LZ40	S4	S352	S308	S133
12.94	12.96	12.95	12.94	12.92	13.02	12.90	12.87

*Combination Okeechobee Avg-Daily Lake Average = 12.94
 (*See Note)

Okeechobee Inflows (cfs):

S65E	208	S65EX1	0	Fisheating Cr	96
S154	0	S191	0	S135 Pumps	143
S84	40	S133 Pumps	0	S2 Pumps	0
S84X	13	S127 Pumps	0	S3 Pumps	0
S71	0	S129 Pumps	0	S4 Pumps	0
S72	33	S131 Pumps	0	C5	0
Total Inflows:		533			

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	-NR-
S127 Culverts	0	S351	0	S308	-533
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-NR-		
Total Outflows: No Report Due To Missing S77 or S308 Discharge Data					

S310: 12.91 38

S3 Pumps:	10.14	13.08	0	0	0	0		(cfs)
S354:	13.08	10.14	0	0.0	0.0			
S2 Pumps:	9.64	13.04	0	0	0	0	0	(cfs)
S351:	13.04	9.64	0	0.0	0.0	0.0		
S352:	12.99	9.93	0	0.0	0.0			
C10A:	-NR-	12.87		8.0	8.0	8.0	0.0	0.0
L8 Canal PT		13.02	-NR-					

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.64	13.04	0	-NR--NR--NR--NR--NR--NR-
S352:	9.93	12.99	0	-NR--NR--NR--NR-
S354:	10.14	13.08	0	-NR--NR--NR--NR-

Caloosahatchee River (S77, S78, S79)

S47B:	12.92	11.02		0.0	0.0
S47D:	10.98	10.97	-75	5.0	

S77:

Spillway and Sector Preferred Flow:

12.99	10.88	0	0.0	0.0	0.0	0.0
-------	-------	---	-----	-----	-----	-----

Flow Due to Lockages+: -NR-

S78:

Spillway and Sector Flow:

10.92	3.05	301	1.5	0.0	0.0	0.0
-------	------	-----	-----	-----	-----	-----

Flow Due to Lockages+: 11

S79:

Spillway and Sector Flow:

3.19	1.61	1335	0.0	0.0	1.0	2.0	2.0	0.0	0.0
------	------	------	-----	-----	-----	-----	-----	-----	-----

0.0

Flow Due to Lockages+: 3

Percent of flow from S77 0%

Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:

12.94	14.08	-530	0.0	0.0	0.0	0.0
-------	-------	------	-----	-----	-----	-----

Flow Due to Lockages+: -3

S153:	18.72	13.88	68	0.0	0.0
-------	-------	-------	----	-----	-----

S80:

Spillway and Sector Flow:

14.11	0.44	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-------	------	---	-----	-----	-----	-----	-----	-----	-----

Flow Due to Lockages+: 19

Percent of flow from S308 NA %

Steele Point Top Salinity (mg/ml) ****

Steele Point Bottom Salinity (mg/ml) ****

Speedy Point Top Salinity (mg/ml) ****

Speedy Point Bottom Salinity (mg/ml) ****

+ Flow Due to lockages is computed utilizing average daily headwater and tailwater along with total number of lockages for the day to calculate a volume which is then converted to an average discharge in cfs.
 ++ Preferred flow is determined from either the spillway discharge or the below flow meter daily

----- Wind ---					
Daily Precipitation Totals	1-Day	3-Day	7-Day	Direction	
Speed	(inches)	(inches)	(inches)	(Degø)	
(mph)					
S133 Pump Station:	-NR-	0.00	0.00		
S193:	-NR-	0.00	0.00	-NR-	-NR-
Okeechobee Field Station:	-NR-	0.00	0.00		
S135 Pump Station:	-NR-	0.00	0.00		
S127 Pump Station:	-NR-	0.00	0.00		
S129 Pump Station:	-NR-	0.00	0.00		
S131 Pump Station:	-NR-	0.00	0.00		
S77:	0.00	0.00	0.09	44	4
S78:	1.34	1.34	1.34	64	4
S79:	12.29	13.14	13.55	142	3
S4 Pump Station:	-NR-	0.00	0.00		
Clewiston Field Station:	-NR-	0.00	0.00		
S3 Pump Station:	-NR-	0.00	0.00		
S2 Pump Station:	-NR-	0.00	0.00		
S308:	2.85	3.44	3.44	4	2
S80:	17.86	17.86	17.86	8	1
Okeechobee Average	1.42	0.26	0.27		
(Sites S78, S79 and S80 not included)					
Oke Nexrad Basin Avg	-NR-	0.00	0.00		

Okeechobee Lake Elevations	20 JUN 2022	12.94	Difference from
20JUN22			
20JUN22 -1 Day =	19 JUN 2022	12.94	0.00
20JUN22 -2 Days =	18 JUN 2022	12.95	0.01
20JUN22 -3 Days =	17 JUN 2022	12.96	0.02
20JUN22 -4 Days =	16 JUN 2022	12.98	0.04
20JUN22 -5 Days =	15 JUN 2022	13.00	0.06
20JUN22 -6 Days =	14 JUN 2022	13.01	0.07
20JUN22 -7 Days =	13 JUN 2022	13.02	0.08
20JUN22 -30 Days =	21 MAY 2022	12.69	-0.25
20JUN22 -1 Year =	20 JUN 2021	12.56	-0.38
20JUN22 -2 Year =	20 JUN 2020	12.31	-0.63

Long Term Mean 30day Avearge ET for Lake Alfred (Inches) = -NR-

Lake Okeechobee Net Inflow (LONIN)
 Average Flow over the previous 14 days | Avg-Daily Flow

20JUN22	Today =	20 JUN 2022	2683	TUE		13
20JUN22	-1 Day =	19 JUN 2022	2682	MON		-1853
20JUN22	-2 Days =	18 JUN 2022	3235	SUN		-1825
20JUN22	-3 Days =	17 JUN 2022	4604	SAT		-3790
20JUN22	-4 Days =	16 JUN 2022	5426	FRI		-3813
20JUN22	-5 Days =	15 JUN 2022	5997	THU		-2049
20JUN22	-6 Days =	14 JUN 2022	5736	WED		-2015
20JUN22	-7 Days =	13 JUN 2022	5629	TUE		0
20JUN22	-8 Days =	12 JUN 2022	5925	MON		4235
20JUN22	-9 Days =	11 JUN 2022	6055	SUN		27326
20JUN22	-10 Days =	10 JUN 2022	4283	SAT		15428
20JUN22	-11 Days =	09 JUN 2022	3141	FRI		3933
20JUN22	-12 Days =	08 JUN 2022	2815	THU		0
20JUN22	-13 Days =	07 JUN 2022	2370	WED		1966

—

—

S65E						
				Average Flow over previous 14 days		Avg-Daily Flow
20JUN22	Today=	20 JUN 2022	354	TUE		241
20JUN22	-1 Day =	19 JUN 2022	365	MON		234
20JUN22	-2 Days =	18 JUN 2022	377	SUN		321
20JUN22	-3 Days =	17 JUN 2022	385	SAT		330
20JUN22	-4 Days =	16 JUN 2022	389	FRI		385
20JUN22	-5 Days =	15 JUN 2022	387	THU		410
20JUN22	-6 Days =	14 JUN 2022	392	WED		413
20JUN22	-7 Days =	13 JUN 2022	408	TUE		346
20JUN22	-8 Days =	12 JUN 2022	435	MON		391
20JUN22	-9 Days =	11 JUN 2022	462	SUN		480
20JUN22	-10 Days =	10 JUN 2022	481	SAT		391
20JUN22	-11 Days =	09 JUN 2022	515	FRI		354
20JUN22	-12 Days =	08 JUN 2022	555	THU		344
20JUN22	-13 Days =	07 JUN 2022	599	WED		323

—

—

S65EX1						
				Average Flow over previous 14 days		Avg-Daily Flow
20JUN22	Today=	20 JUN 2022	0	TUE		0
20JUN22	-1 Day =	19 JUN 2022	0	MON		0
20JUN22	-2 Days =	18 JUN 2022	0	SUN		0
20JUN22	-3 Days =	17 JUN 2022	0	SAT		0
20JUN22	-4 Days =	16 JUN 2022	0	FRI		0
20JUN22	-5 Days =	15 JUN 2022	0	THU		0
20JUN22	-6 Days =	14 JUN 2022	0	WED		0
20JUN22	-7 Days =	13 JUN 2022	0	TUE		0
20JUN22	-8 Days =	12 JUN 2022	0	MON		0
20JUN22	-9 Days =	11 JUN 2022	0	SUN		0
20JUN22	-10 Days =	10 JUN 2022	0	SAT		0
20JUN22	-11 Days =	09 JUN 2022	0	FRI		0
20JUN22	-12 Days =	08 JUN 2022	0	THU		0
20JUN22	-13 Days =	07 JUN 2022	0	WED		0

— Lake Okeechobee Outlets Last 14 Days

			S-77	Below S-77	S-78	S-79
			Discharge	Discharge	Discharge	Discharge
			(ALL DAY)	(ALL-DAY)	(ALL DAY)	(ALL DAY)
DATE			(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)
20 JUN 2022			-NR-	-56	639	2662
19 JUN 2022			5	-50	533	3503
18 JUN 2022			8	56	904	3537
17 JUN 2022			5	507	1690	4964
16 JUN 2022			5	726	1590	4621
15 JUN 2022			5	707	1832	6854
14 JUN 2022			4	1220	3277	6492
13 JUN 2022			3	1191	4117	9211
12 JUN 2022			5	1125	4928	10582
11 JUN 2022			3	1010	4796	12502
10 JUN 2022			4	293	2490	6323
09 JUN 2022			3	124	3545	7661
08 JUN 2022			3	82	3137	10500
07 JUN 2022			4	205	2312	3639

			S-310	S-351	S-352	S-354	L8 Canal Pt
			Discharge	Discharge	Discharge	Discharge	Discharge
			(ALL DAY)	(ALL DAY)	(ALL DAY)	(ALL DAY)	(ALL DAY)
DATE			(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)
20 JUN 2022			75	0	0	0	-NR-
19 JUN 2022			69	0	0	0	-NR-
18 JUN 2022			-63	0	0	0	-NR-
17 JUN 2022			6	0	0	0	-NR-
16 JUN 2022			-133	0	0	0	-NR-
15 JUN 2022			33	0	0	0	-NR-
14 JUN 2022			-157	0	0	0	-NR-
13 JUN 2022			-440	0	0	0	-NR-
12 JUN 2022			-637	0	0	0	-NR-
11 JUN 2022			-731	0	0	0	-NR-
10 JUN 2022			-744	0	0	0	-NR-
09 JUN 2022			-658	0	0	0	-NR-
08 JUN 2022			-NR-	0	0	0	-NR-
07 JUN 2022			-NR-	0	0	0	-NR-

			S-308	Below S-308	S-80
			Discharge	Discharge	Discharge
			(ALL DAY)	(ALL-DAY)	(ALL-DAY)
DATE			(AC-FT)	(AC-FT)	(AC-FT)
20 JUN 2022			-1013	-NR-	38
19 JUN 2022			-7	-NR-	35
18 JUN 2022			-4	-NR-	56
17 JUN 2022			-4	-NR-	44
16 JUN 2022			-5	-NR-	45
15 JUN 2022			-6	-NR-	46
14 JUN 2022			-3	-NR-	31
13 JUN 2022			-6	-NR-	46
12 JUN 2022			-354	-NR-	31
11 JUN 2022			-103	-NR-	38
10 JUN 2022			-5	-NR-	51
09 JUN 2022			-3	-NR-	33
08 JUN 2022			-5	-NR-	22
07 JUN 2022			-6	-NR-	51

*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate
and
Lockages Discharges from 0015 hrs to 2400 hrs.

—

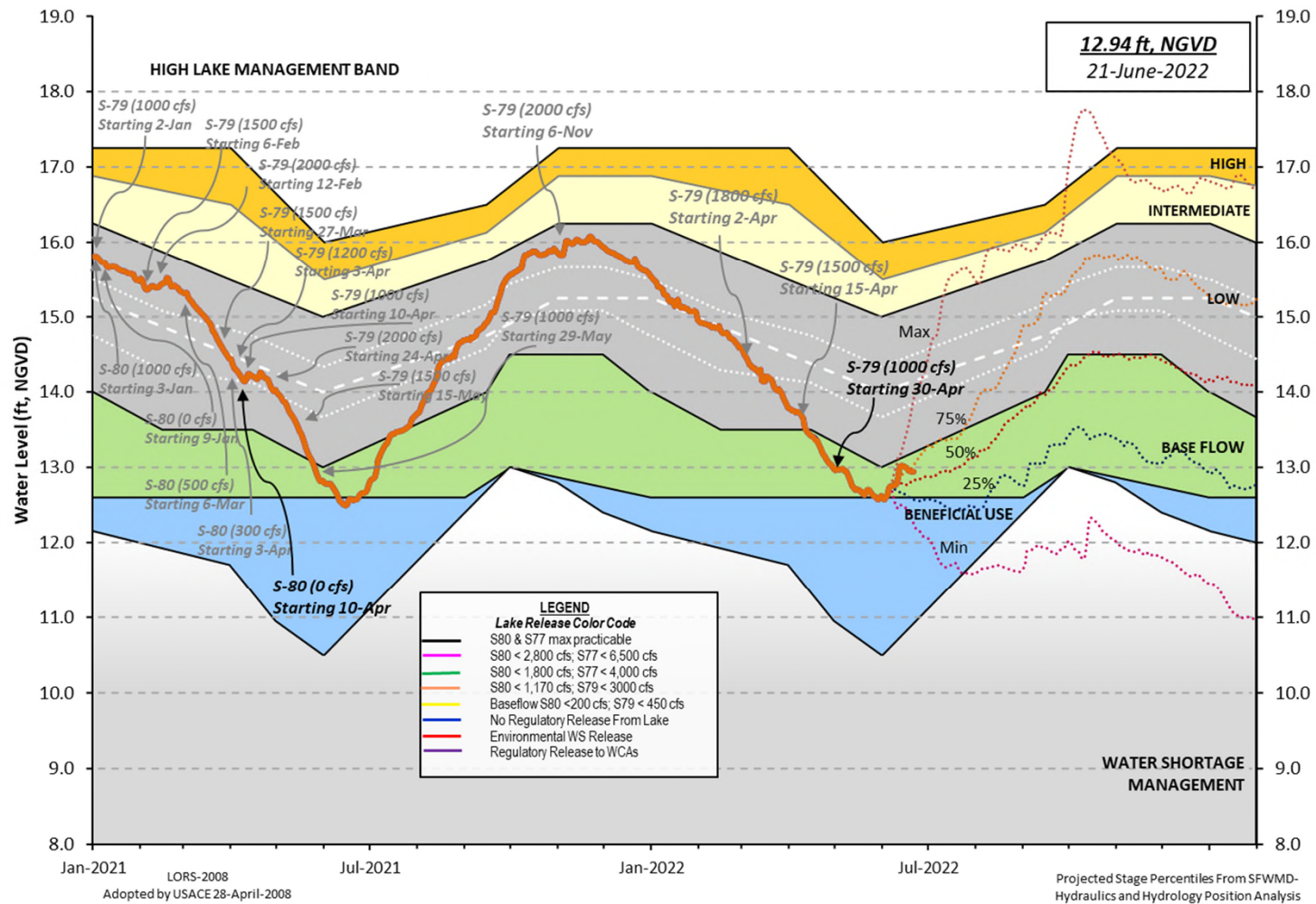
(I) - Flows preceded by "I" signify an instantaneous
flow computed from the single value reported for the day

—

* On 11 May 1999, Lake Okeechobee Elevation was switched from
Instantaneous 2400 value to an average-daily lake average.
On 14 Mar 2001, due to the isolation of various gages within the
standard
10 stations, the average of the interior 4 station gages was used
as the Lake Okeechobee Elevation.
On 05 November 2010, Lake Okeechobee Elevation was switched to a 9 gage
mix of interior and edge gages to obtain a more reliable representation
of the lake level.
On 09 May 2011, Lake Okeechobee Elevation was switched to a 8 gage
mix of interior and edge gages to obtain a more reliable representation
of the lake level due to isolation of S135 from low lake levels.
Today Lake Okechobee elevation is determined from the 4 Int & 4 Edge
stations
++ For more information see the Jacksonville District Navigation website
at <http://www.saj.usace.army.mil/>
\$ For information regarding Lake Okeechobee Service Area water
restrictions
please refer to www.sfwmd.gov

—
Report Generated 21JUN2022 @ 08:15 ** Preliminary Data - Subject to Revision
**

Lake Okeechobee Water Level History and Projected Stages



Classification Tables

Supplemental Tables used in conjunction with the LORS2008 Release

Guidance Flow Charts

- [Class Limits for Tributary Hydrologic Conditions](#)

Table K-2 in the Lake Okeechobee Water Control Plan

- [6-15 Day Precipitation Outlook Categories](#)

Table ?? in the Lake Okeechobee Water Control Plan

- [Classification of Lake Okeechobee Net Inflow for Seasonal Outlook](#)

Table K-3 in the Lake Okeechobee Water Control Plan

- [Classification of Lake Okeechobee Net Inflow for Multi-Seasonal Outlook](#)

Table K-4 in the Lake Okeechobee Water Control Plan

[**Back to Lake Okeechobee Operations Main Page**](#)

[**Back to U.S. Army Corps of Engineers Lake Okeechobee Operations Homepage**](#)

Tributary Hydrologic Classification*	Palmer Index Class Limits	2-wk Mean L.O. Net Inflow Class Limits
Very Wet	3.0 or greater	Greater \geq 6000 cfs
Wet	1.5 to 2.99	2500 - 5999 cfs
Near Normal	-1.49 to 1.49	500 - 2499 cfs
Dry	-2.99 to -1.5	-5000 – 500 cfs
Very Dry	-3.0 or less	Less than -5000 cfs

* use the wettest of the two indicators

Classification of Lake Okeechobee Net Inflow Seasonal Outlook*

Lake Net Inflow Prediction [million acre-feet]	Equivalent Depth** [feet]	Lake Okeechobee Net Inflow Seasonal Outlook
> 0.93	> 2.0	Very Wet
0.71 to 0.93	1.51 to 2.0	Wet
0.35 to 0.70	0.75 to 1.5	Normal
< 0.35	< 0.75	Dry

****Volume-depth conversion based on average lake surface area of 467,000 acres**

Classification of Lake Okeechobee Net Inflow Multi-Seasonal Outlook*

Lake Net Inflow Prediction [million acre-feet]	Equivalent Depth** [feet]	Lake Okeechobee Net Inflow Multi-Seasonal Outlook
> 2.0	> 4.3	Very Wet
1.18 to 2.0	2.51 to 4.3	Wet
0.5 to 1.17	1.1 to 2.5	Normal
< 0.5	< 1.1	Dry

****Volume-depth conversion based on average lake surface area of 467,000 acres**

6-15 Day Precipitation Outlook Categories*

6-15 Day Precipitation Outlook Categories	WSE Decision Tree Categories
Above Normal	Wet to Very Wet
Normal	Normal
Below Normal	Dry

*** Corresponds to Table 7-6 in the Lake Okeechobee Water Control Plan**