

# Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 06/19/2023 (ENSO Condition: El Niño)

## Lake Okeechobee Net Inflow Outlook:

The Lake Okeechobee Net Inflow Outlook has been computed using methods described in the LORS2008 Water Control Plan: Croley's method, the SFWMD empirical method, a sub-sampling of El Niño years and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with El Niño ENSO years. 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*		SFWMD Empirical Method		Sub-sampling of El Niño ENSO Years**		Sub-sampling of AMO Warm + El Niño ENSO Years***	
	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	3.08	Very Wet	2.89	Very Wet	3.96	Very Wet
Multi Seasonal (Jun-Apr)	N/A	N/A	3.59	Wet	3.80	Wet	5.60	Very Wet

\*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 IRI ENSO forecast published.

\*\*\*Sub-sampling based on combination of ENSO and AMO conditions. For this predominant ENSO categorization is used instead of weights.

### **Tributary Hydrologic Conditions:**

**2735 cfs** 14-day running average for Lake Okeechobee Net Inflow through 06/18/2023. According to the classification in Tributary Hydrologic Conditions table, this condition is Wet.

**-2.05** for Palmer Drought Index on 06/17/2023.

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 06/19/2023:**

Lake Okeechobee Stage: **14.16 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.08	
Operational Band	High sub-band	15.60	
	Intermediate sub-band	15.13	
	Low sub-band	13.17	← 14.16 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		10.85	
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 3000 cfs at S-79 and up to 1170 cfs at S-80.

**LORS2008 Implementation on 06/19/2023 (ENSO Condition- El Niño):**

**Status for week ending 06/19/2023:**

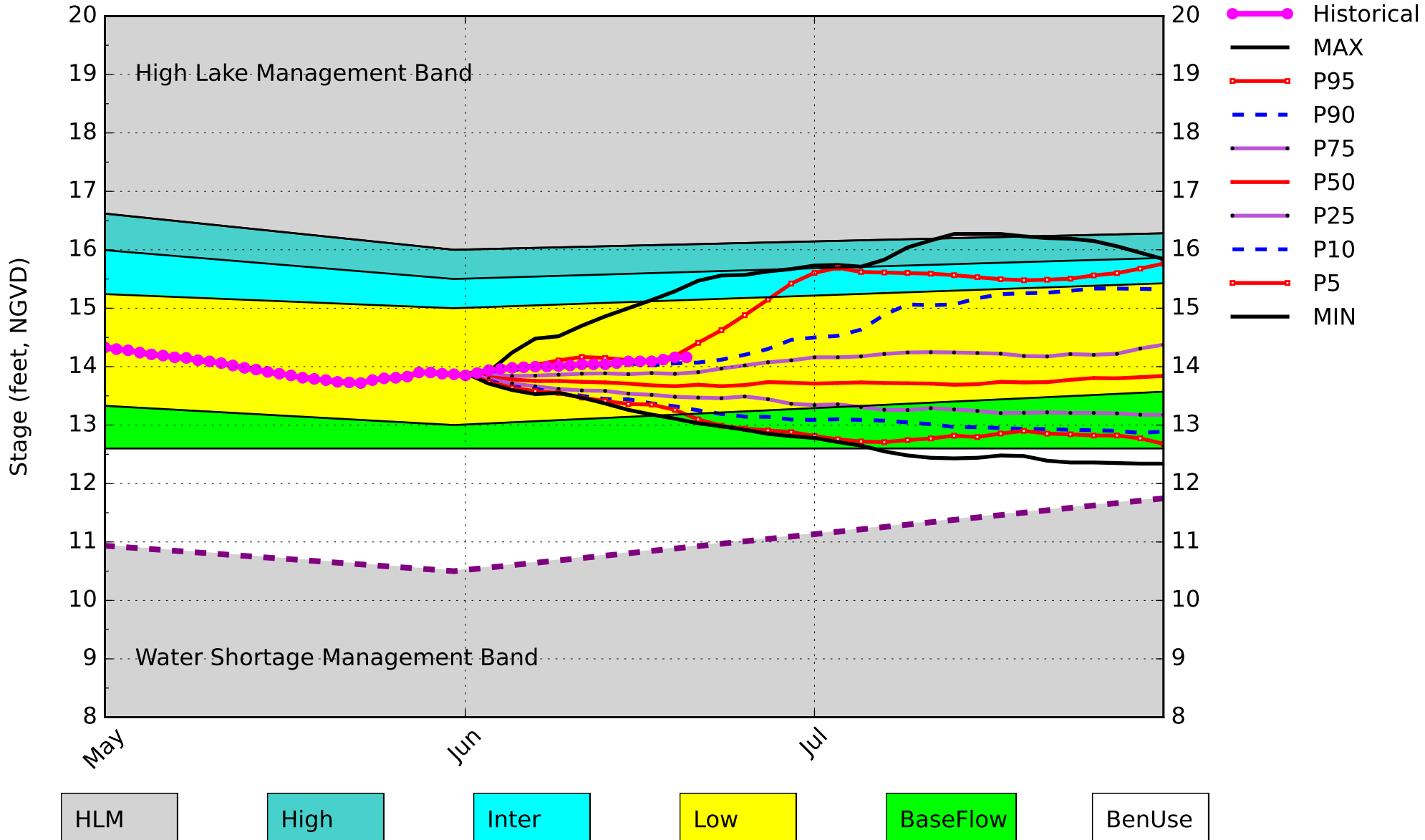
**Water Supply Risk Evaluation**

Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-band	L
	Palmer Drought Index for LOK Tributary Conditions	-2.05 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Equal Chances	L
		3 months: Above Normal	L
	LOK Seasonal Net Inflow Outlook	2.89 ft	L
	ENSO Forecast	Normal to Extremely Wet	L
	LOK Multi-Seasonal Net Inflow Outlook	3.80 ft	L
	ENSO Forecast	Wet	L
WCAs	WCA 1: 3 Station Average (Site 1-8C)	Above Line 1 (16.01 ft)	L
	WCA 2A: Site S-11B	Above Line 1 (11.93 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (9.41 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.

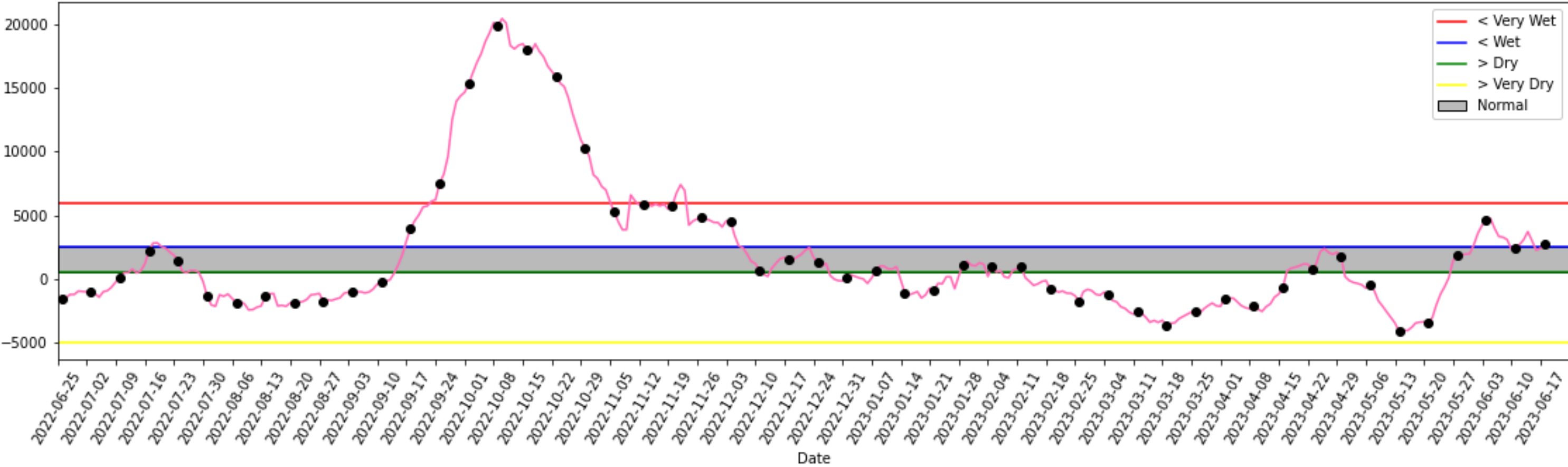
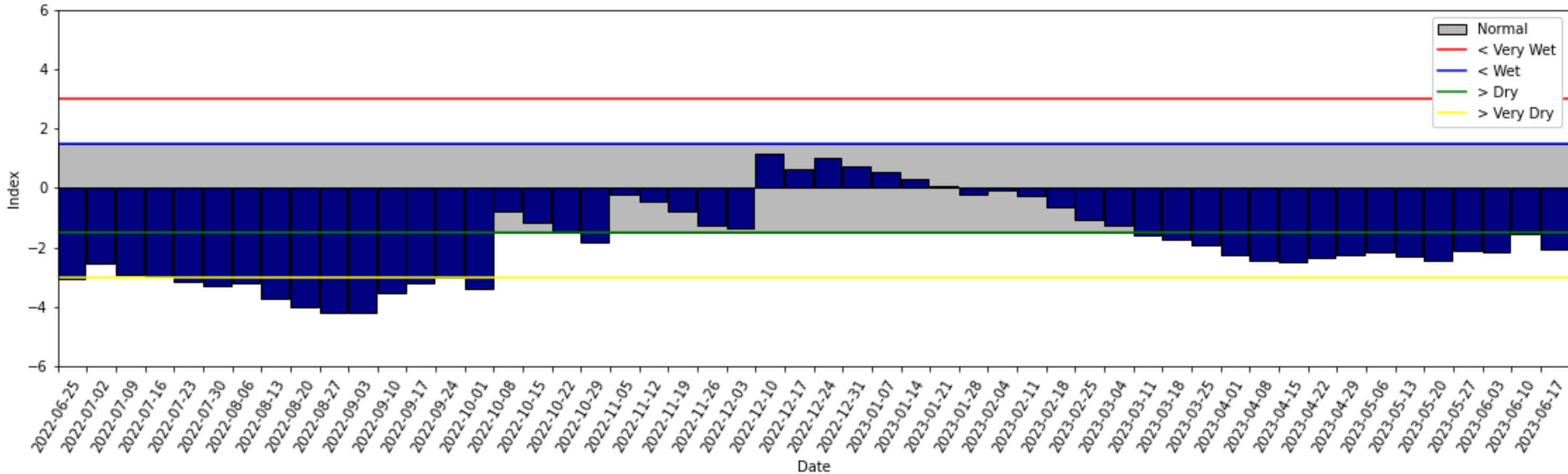
# Lake Okeechobee SFWMM June 2023 Position Analysis

Percentiles PA



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of June 18 2023



# 2008 LORS

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

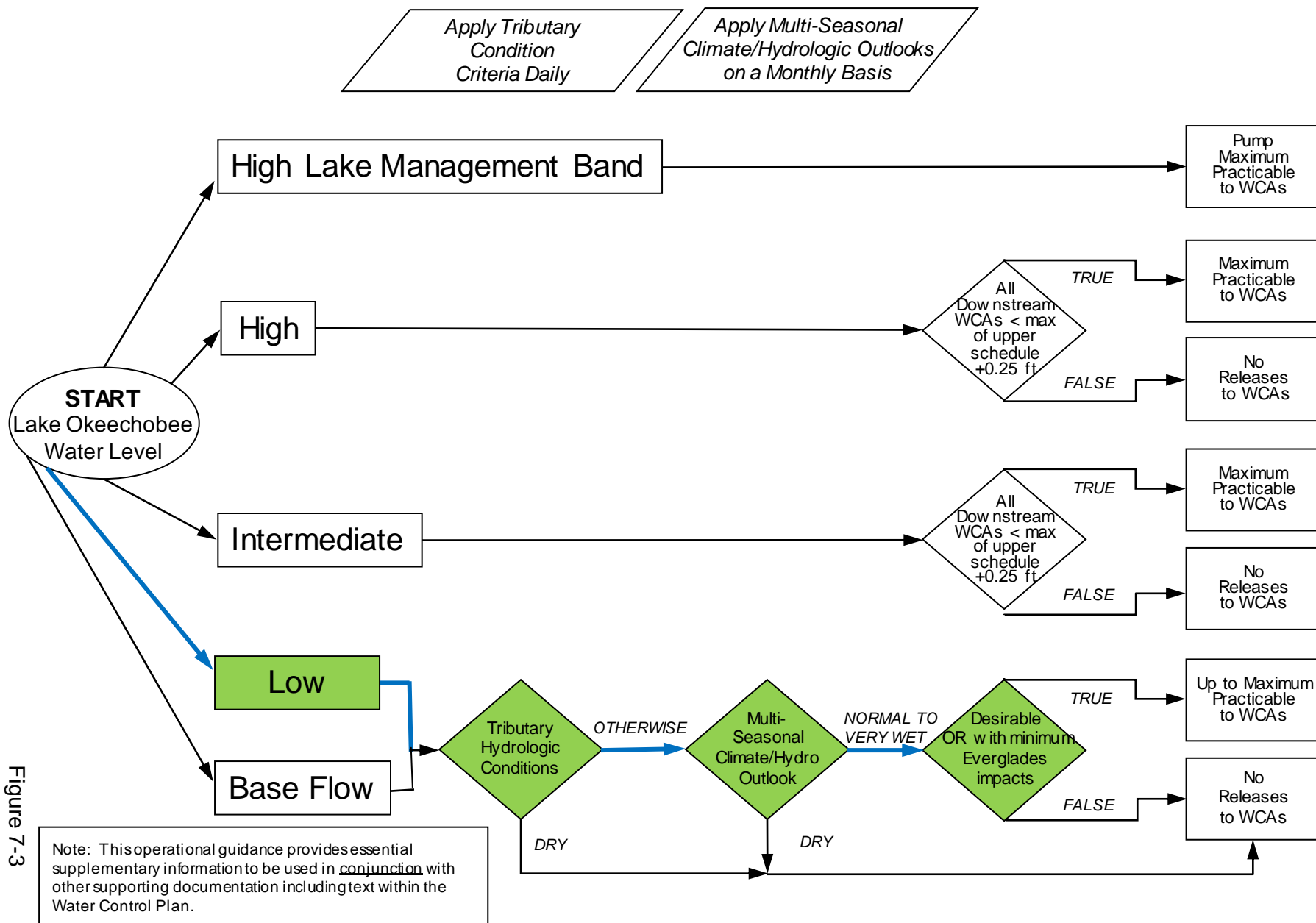


Figure 7-3

# 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

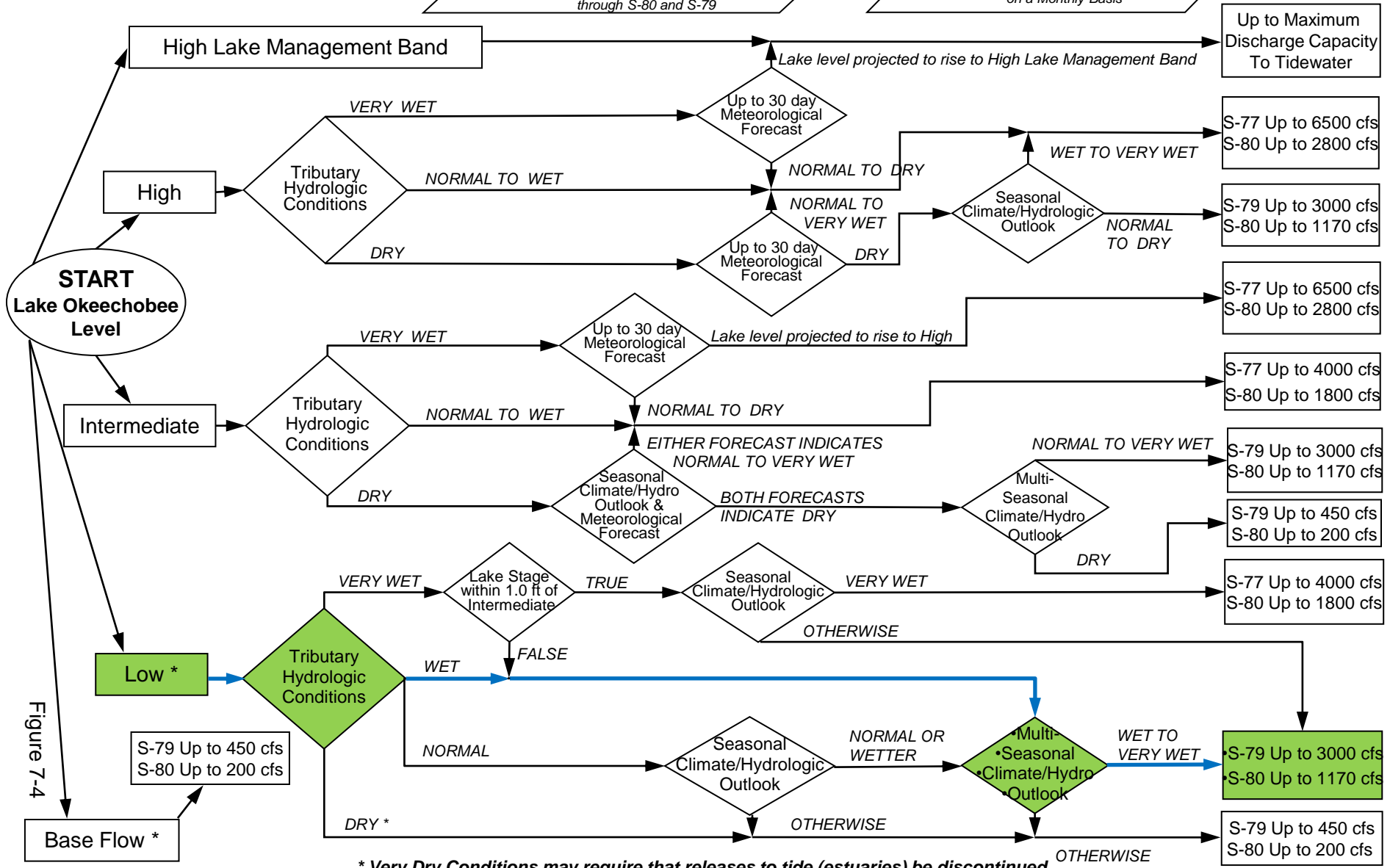


Figure 7-4

\* Very Dry Conditions may require that releases to tide (estuaries) be discontinued (NORMAL TO DRY)





is equal to -NR-  
 Lake Okeechobee (Change in Storage) Flow is 8672 cfs or 17200 AC-FT

	Headwater Elevation (ft-msl)	Tailwater Elevation (ft-msl)	Disch (cfs)	----- Gate Positions -----							
				#1 (ft)	#2 (ft)	#3 (ft)	#4 (ft)	#5 (ft)	#6 (ft)	#7 (ft)	#8 (ft)
(I) see note at bottom											
<b>North East Shore</b>											
S133 Pumps:	13.40	14.31	104	19	24	36	25	0	(cfs)		
S193:											
S191:	18.51	14.31	168	0.0	0.0	0.0					
S135 Pumps:	13.23	14.21	106	44	25	19	19		(cfs)		
S135 Culverts:			0	0.0	0.0						
<b>North West Shore</b>											
S65E:	21.03	14.40	1081	0.3	0.3	0.7	0.5	0.3	0.6		
S65EX1:	21.03	14.40	0								
S127 Pumps:	13.38	14.17	59	6	0	0	33	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	12.85	14.06	48	19	31	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	12.88	13.15	34	0	-NR-				(cfs)		
S131 Culvert:			0								
<b>Fisheating Creek</b>											
nr Palmdale		31.81	212								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
<b>South Shore</b>											
S4 Pumps:	11.30	-NR-	0	0	0	0			(cfs)		
S169:	14.03	-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	13.96		12								
S3 Pumps:	10.24	13.98	0	0	0	0			(cfs)		
S354:	13.98	10.24	0	0.0	0.0						
S2 Pumps:	10.61	14.06	0	0	0	0	0		(cfs)		
S351:	14.06	10.61	0	0.0	0.0	0.0					
S352:	14.24	10.11	0	0.0	0.0						
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-			
L8 Canal PT		14.25	-85								

#### S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.61	14.06	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-	
S352:	10.11	14.24	0	-NR-	-NR-	-NR-	-NR-			
S354:	10.24	13.98	0	-NR-	-NR-	-NR-	-NR-			

#### Caloosahatchee River (S77, S78, S79)

S47B:	13.36	10.99		0.5	0.5					
S47D:	10.97	10.90	278	6.5						
S77:										
Spillway and Sector Preferred Flow:										
	14.08	10.85	0	0.0	0.0	0.0	0.0			
Flow Due to Lockages+:			-NR-							

S78:

Spillway and Sector Flow:  
 10.85 2.98 806 1.0 0.0 0.0 1.5  
 Flow Due to Lockages+: 14

S79:

Spillway and Sector Flow:  
 3.19 1.14 1335 0.0 0.0 1.0 1.0 2.0 1.0 1.0 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:  
 14.25 14.49 0 0.0 0.0 0.0 0.0  
 Flow Due to Lockages+: -0

S153: 18.73 14.27 0 0.0 0.0

S80:

Spillway and Sector Flow:  
 14.59 1.82 13 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 Flow Due to Lockages+: 22  
 Percent of flow from S308 0%

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

Daily Precipitation Totals	1-Day (inches)	3-Day (inches)	7-Day (inches)	----- Wind -----	
				Direction (Deg)	Speed (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:	-NR-	0.00	0.00	210	7
S78:	-NR-	0.00	0.00	204	5
S79:	-NR-	0.00	0.00	115	2
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:	-NR-	0.00	0.00	197	9
S80:	-NR-	0.00	0.00	190	3
Okeechobee Average (Sites S78, S79 and S80 not included)	-NR-	0.00	0.00		
-----					
Oke Nexrad Basin Avg	-NR-	0.00	0.00		
-----					

Okeechobee Lake Elevations 18 JUN 2023 14.16 Difference from 18JUN23  
 18JUN23 -1 Day = 17 JUN 2023 14.12 -0.04

18JUN23	-2 Days =	16 JUN 2023	14.09	-0.07
18JUN23	-3 Days =	15 JUN 2023	14.09	-0.07
18JUN23	-4 Days =	14 JUN 2023	14.09	-0.07
18JUN23	-5 Days =	13 JUN 2023	14.06	-0.10
18JUN23	-6 Days =	12 JUN 2023	14.04	-0.12
18JUN23	-7 Days =	11 JUN 2023	14.04	-0.12
18JUN23	-30 Days =	19 MAY 2023	13.77	-0.39
18JUN23	-1 Year =	18 JUN 2022	12.95	-1.21
18JUN23	-2 Year =	18 JUN 2021	12.58	-1.58

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
18JUN23	Today =	18 JUN 2023	2822 MON	8672
18JUN23	-1 Day =	17 JUN 2023	2505 SUN	6453
18JUN23	-2 Days =	16 JUN 2023	2347 SAT	0
18JUN23	-3 Days =	15 JUN 2023	3103 FRI	0
18JUN23	-4 Days =	14 JUN 2023	3802 THU	6353
18JUN23	-5 Days =	13 JUN 2023	3170 WED	4235
18JUN23	-6 Days =	12 JUN 2023	2782 TUE	0
18JUN23	-7 Days =	11 JUN 2023	2483 MON	385
18JUN23	-8 Days =	10 JUN 2023	2464 SUN	4932
18JUN23	-9 Days =	09 JUN 2023	3192 SAT	2126
18JUN23	-10 Days =	08 JUN 2023	3375 FRI	2118
18JUN23	-11 Days =	07 JUN 2023	3437 THU	0
18JUN23	-12 Days =	06 JUN 2023	4064 WED	2118
18JUN23	-13 Days =	05 JUN 2023	4837 TUE	2118

S65E

Average Flow over previous 14 days				Avg-Daily Flow
18JUN23	Today=	18 JUN 2023	612 MON	1234
18JUN23	-1 Day =	17 JUN 2023	562 SUN	929
18JUN23	-2 Days =	16 JUN 2023	536 SAT	997
18JUN23	-3 Days =	15 JUN 2023	507 FRI	609
18JUN23	-4 Days =	14 JUN 2023	500 THU	189
18JUN23	-5 Days =	13 JUN 2023	512 WED	0
18JUN23	-6 Days =	12 JUN 2023	531 TUE	460
18JUN23	-7 Days =	11 JUN 2023	518 MON	580
18JUN23	-8 Days =	10 JUN 2023	509 SUN	564
18JUN23	-9 Days =	09 JUN 2023	506 SAT	635
18JUN23	-10 Days =	08 JUN 2023	493 FRI	671
18JUN23	-11 Days =	07 JUN 2023	477 THU	632
18JUN23	-12 Days =	06 JUN 2023	470 WED	566
18JUN23	-13 Days =	05 JUN 2023	480 TUE	504

S65EX1

Average Flow over previous 14 days				Avg-Daily Flow
18JUN23	Today=	18 JUN 2023	90 MON	0
18JUN23	-1 Day =	17 JUN 2023	90 SUN	0
18JUN23	-2 Days =	16 JUN 2023	90 SAT	0
18JUN23	-3 Days =	15 JUN 2023	90 FRI	0
18JUN23	-4 Days =	14 JUN 2023	90 THU	443
18JUN23	-5 Days =	13 JUN 2023	59 WED	622
18JUN23	-6 Days =	12 JUN 2023	14 TUE	202
18JUN23	-7 Days =	11 JUN 2023	0 MON	0
18JUN23	-8 Days =	10 JUN 2023	0 SUN	0
18JUN23	-9 Days =	09 JUN 2023	0 SAT	0
18JUN23	-10 Days =	08 JUN 2023	0 FRI	0
18JUN23	-11 Days =	07 JUN 2023	0 THU	0
18JUN23	-12 Days =	06 JUN 2023	0 WED	0
18JUN23	-13 Days =	05 JUN 2023	0 TUE	0

## Lake Okeechobee Outlets Last 14 Days

DATE	S-77 Discharge (ALL DAY) (AC-FT)	Below S-77 Discharge (ALL-DAY) (AC-FT)	S-78 Discharge (ALL DAY) (AC-FT)	S-79 Discharge (ALL DAY) (AC-FT)
18 JUN 2023	-NR-	275	1627	2653
17 JUN 2023	-NR-	137	1879	3329
16 JUN 2023	7	622	2672	4292
15 JUN 2023	11	1007	3486	5331
14 JUN 2023	8	1017	3228	5802
13 JUN 2023	5	649	2119	4537
12 JUN 2023	10	329	2415	5026
11 JUN 2023	301	763	2735	5449
10 JUN 2023	1304	1382	3006	5651
09 JUN 2023	6	319	3690	7253
08 JUN 2023	40	623	3998	7395
07 JUN 2023	10	1118	3911	7749
06 JUN 2023	9	786	4452	7454
05 JUN 2023	5	515	4582	8825

DATE	S-310 Discharge (ALL DAY) (AC-FT)	S-351 Discharge (ALL DAY) (AC-FT)	S-352 Discharge (ALL DAY) (AC-FT)	S-354 Discharge (ALL DAY) (AC-FT)	L8 Canal Pt Discharge (ALL DAY) (AC-FT)
18 JUN 2023	23	0	0	0	-169
17 JUN 2023	-37	0	0	0	-262
16 JUN 2023	-93	0	0	0	-119
15 JUN 2023	-115	0	0	0	-131
14 JUN 2023	-170	0	0	0	-217
13 JUN 2023	-181	0	0	0	-233
12 JUN 2023	-172	0	0	0	-174
11 JUN 2023	-281	0	0	0	-47
10 JUN 2023	-228	0	0	0	-65
09 JUN 2023	14	0	0	0	-28
08 JUN 2023	-8	0	0	0	-83
07 JUN 2023	-95	0	0	0	-126
06 JUN 2023	-237	0	0	0	-228
05 JUN 2023	-285	0	0	0	-428

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
18 JUN 2023	-0	-NR-	43
17 JUN 2023	0	-NR-	23
16 JUN 2023	-0	-NR-	50
15 JUN 2023	-1	-NR-	50
14 JUN 2023	-3	-NR-	55
13 JUN 2023	-1	-NR-	31
12 JUN 2023	-2	-NR-	42
11 JUN 2023	-2	-NR-	37
10 JUN 2023	-1	-NR-	40
09 JUN 2023	-1	-NR-	515
08 JUN 2023	-1	-NR-	37
07 JUN 2023	-2	-NR-	36
06 JUN 2023	-2	-NR-	49
05 JUN 2023	-2	-NR-	35

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

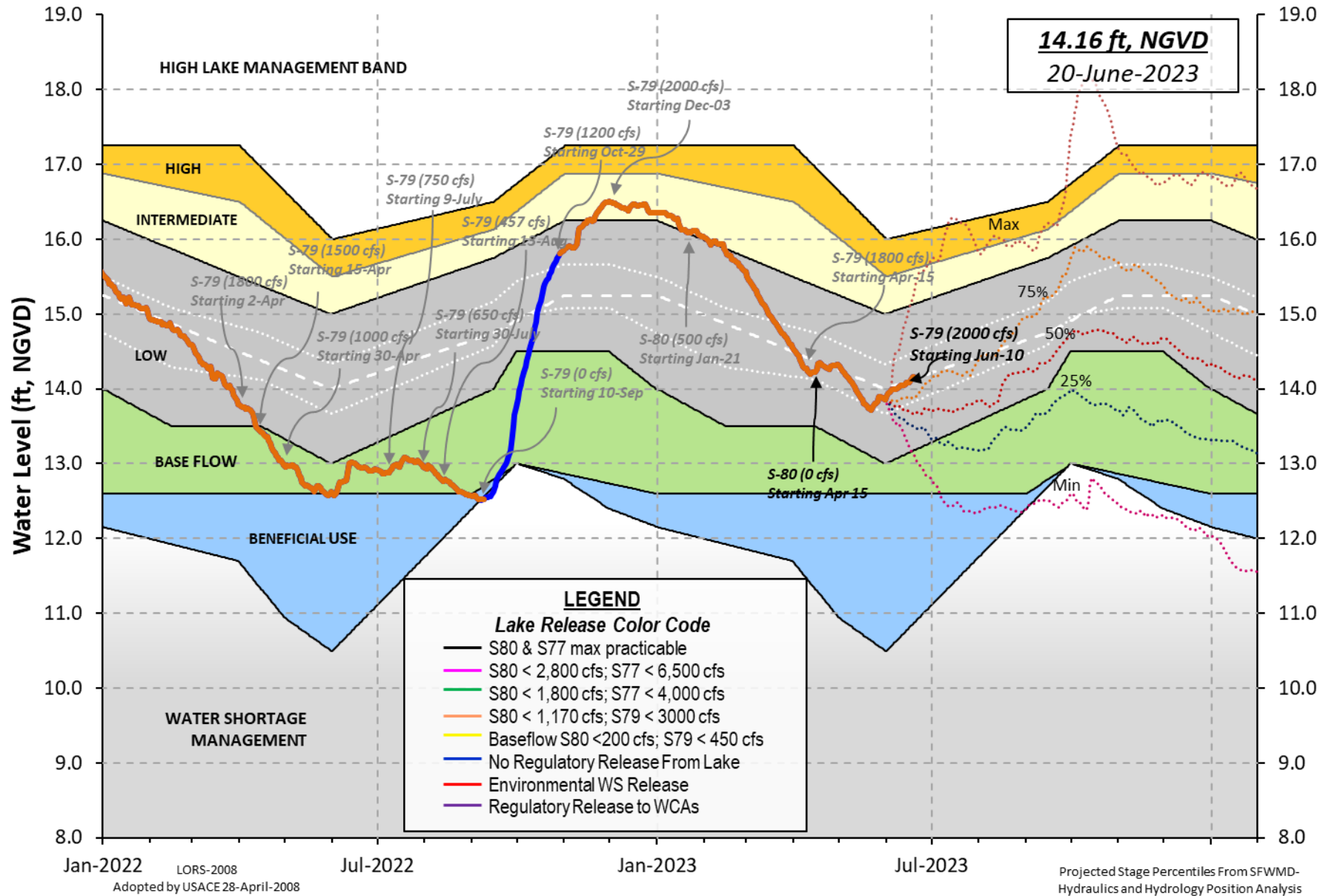
(I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

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- \* 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 Okeechobee 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](http://www.sfwmd.gov)

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Report Generated 19JUN2023 @ 09:07 \*\* Preliminary Data - Subject to Revision \*\*

# Lake Okeechobee Water Level History and Projected Stages



# Classification Tables

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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

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[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\***

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

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

Classification of Lake Okeechobee Net Inflow Multi-Seasonal Outlook\*

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

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

## 6-15 Day Precipitation Outlook Categories\*

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

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