

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 07/31/2023 (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 (Jul-Dec)	N/A	N/A	2.64	Very Wet	2.72	Very Wet	3.75	Very Wet
Multi Seasonal (Jul-Apr)	N/A	N/A	3.03	Wet	3.71	Wet	5.01	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:

3637 cfs 14-day running average for Lake Okeechobee Net Inflow through 07/30/2023. According to the classification in Tributary Hydrologic Conditions table, this condition is **Wet**.

-3.02 for Palmer Drought Index on 07/29/2023.

According to the classification in Tributary Hydrologic Conditions table, this condition is **Very Dry**.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 07/31/2023:

Lake Okeechobee Stage: **15.11 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.28	
Operational Band	High sub-band	15.85	
	Intermediate sub-band	15.42	
	Low sub-band	13.56	← 15.11 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.72	
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 07/31/2023 (ENSO Condition- El Niño):

Status for week ending 07/31/2023*:

Water Supply Risk Evaluation

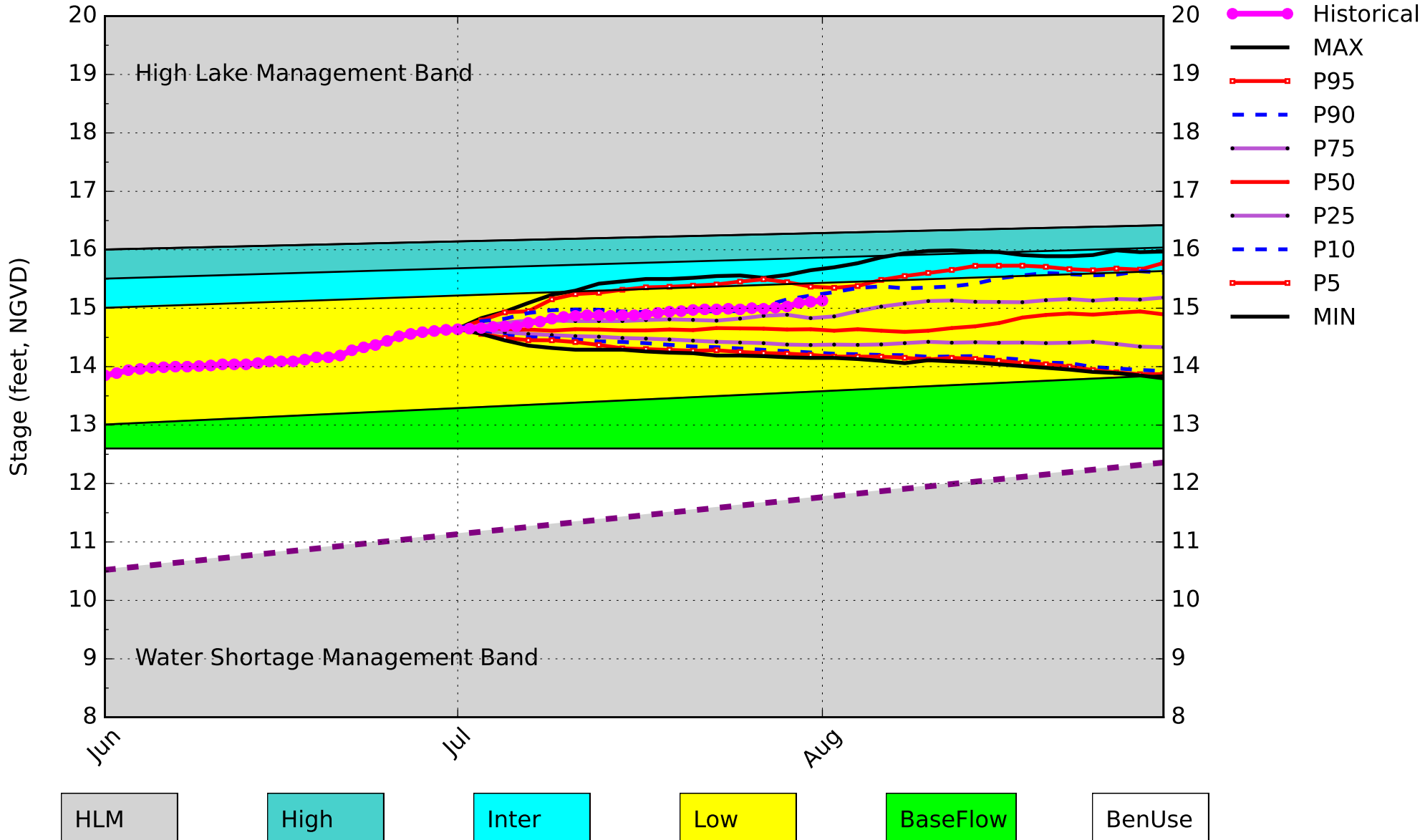
Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-band	L
	Palmer Drought Index for LOK Tributary Conditions	-3.02 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Equal Chances	L
		3 months: Equal Chances	L
	LOK Seasonal Net Inflow Outlook	2.72 ft	L
	ENSO Forecast	Normal to Extremely Wet	L
	LOK Multi-Seasonal Net Inflow Outlook	3.71 ft	L
	ENSO Forecast	Wet	L
WCAs	WCA 1: Site 1-8C	Above Line 1 (16.10 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (12.90 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.24 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.

*- S80 flow data for July 25 & 26 is not available from USACE Daily Reports and was substituted with alternative data source from USGS. WCA 1 site 1-8C had no reported data on July 31 and was substituted with the reported value from July 30. WCA 3 site 63 had inconsistent reporting, the average of only sites 64 and 65 were used for this report.

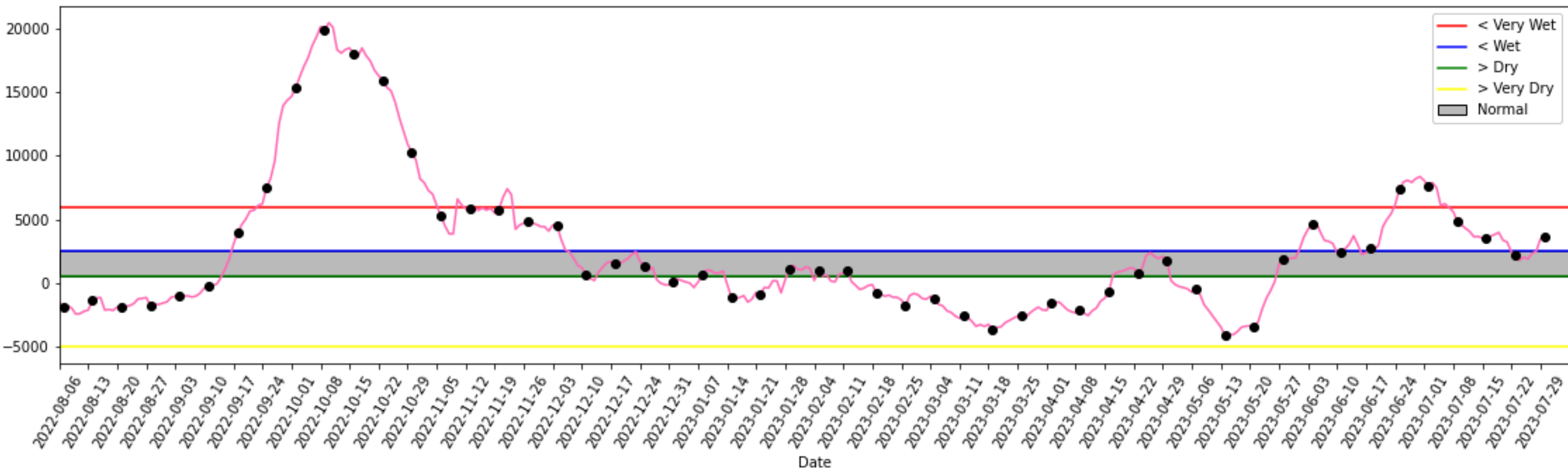
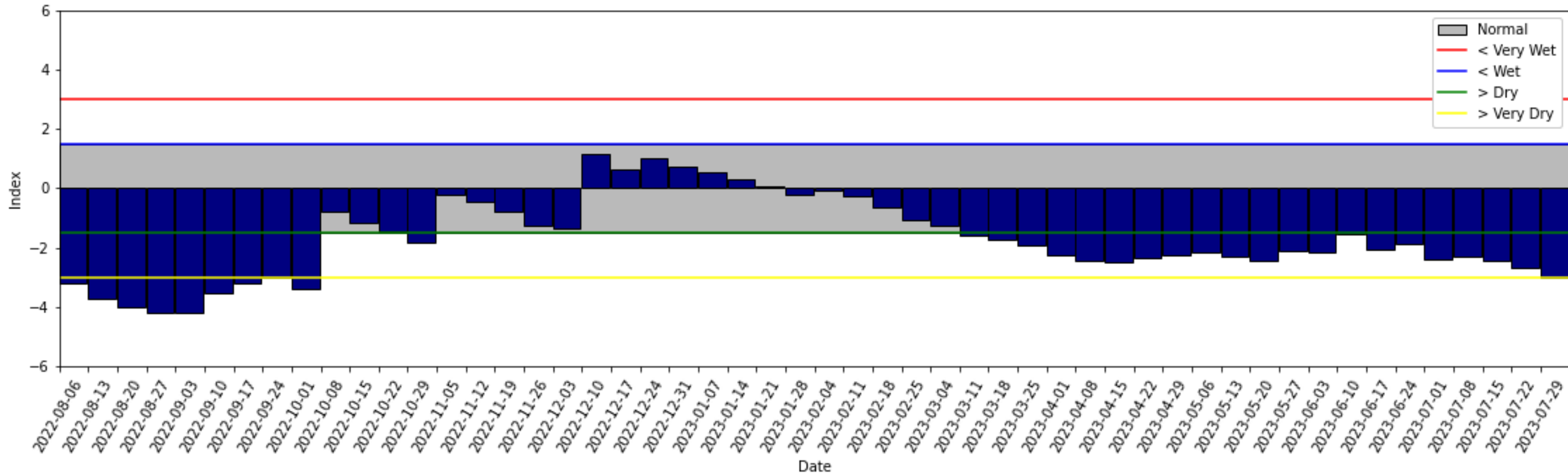
Lake Okeechobee SFWMM July 2023 Position Analysis

Percentiles PA



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of July 30 2023



2008 LORS

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

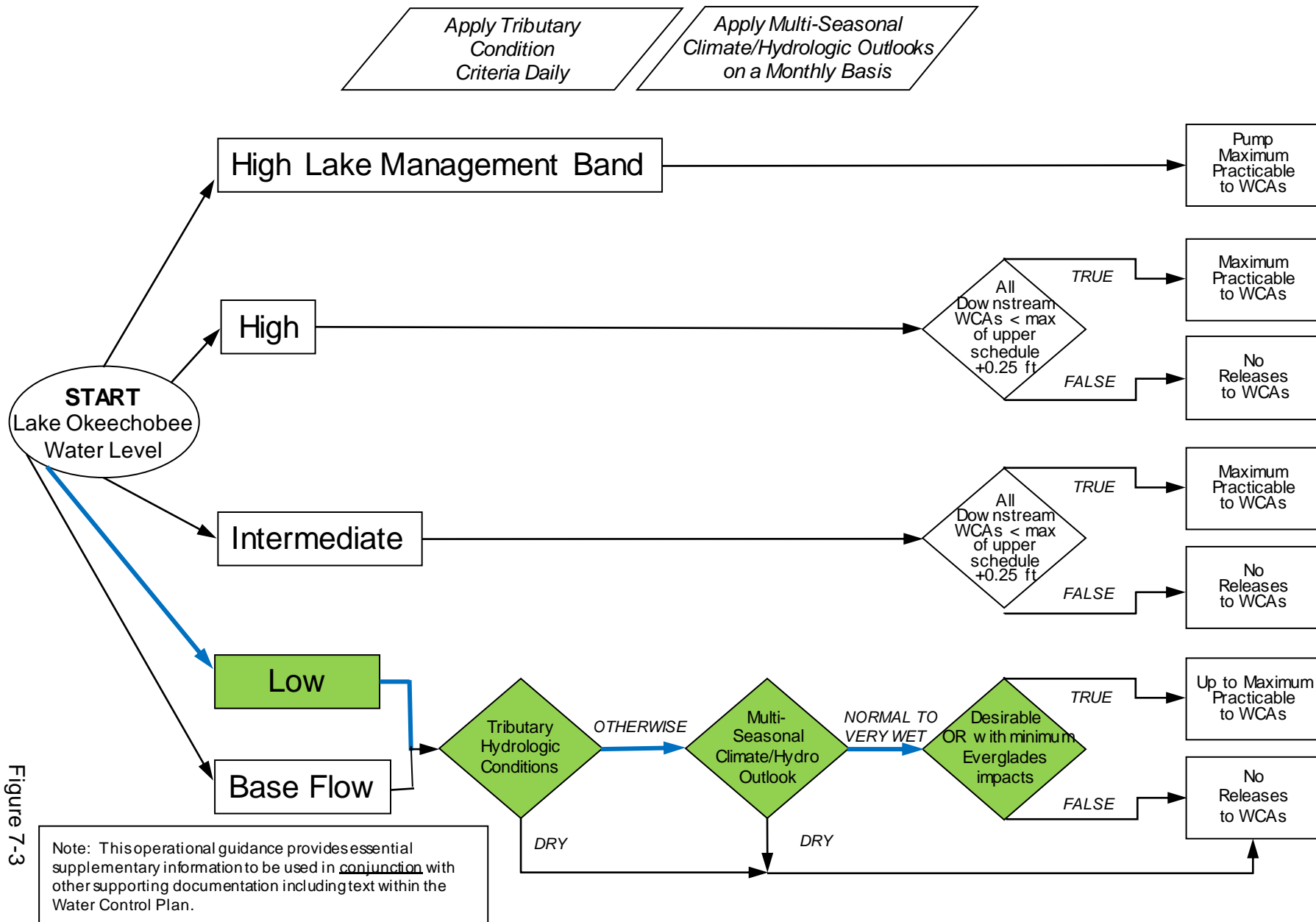


Figure 7-3

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

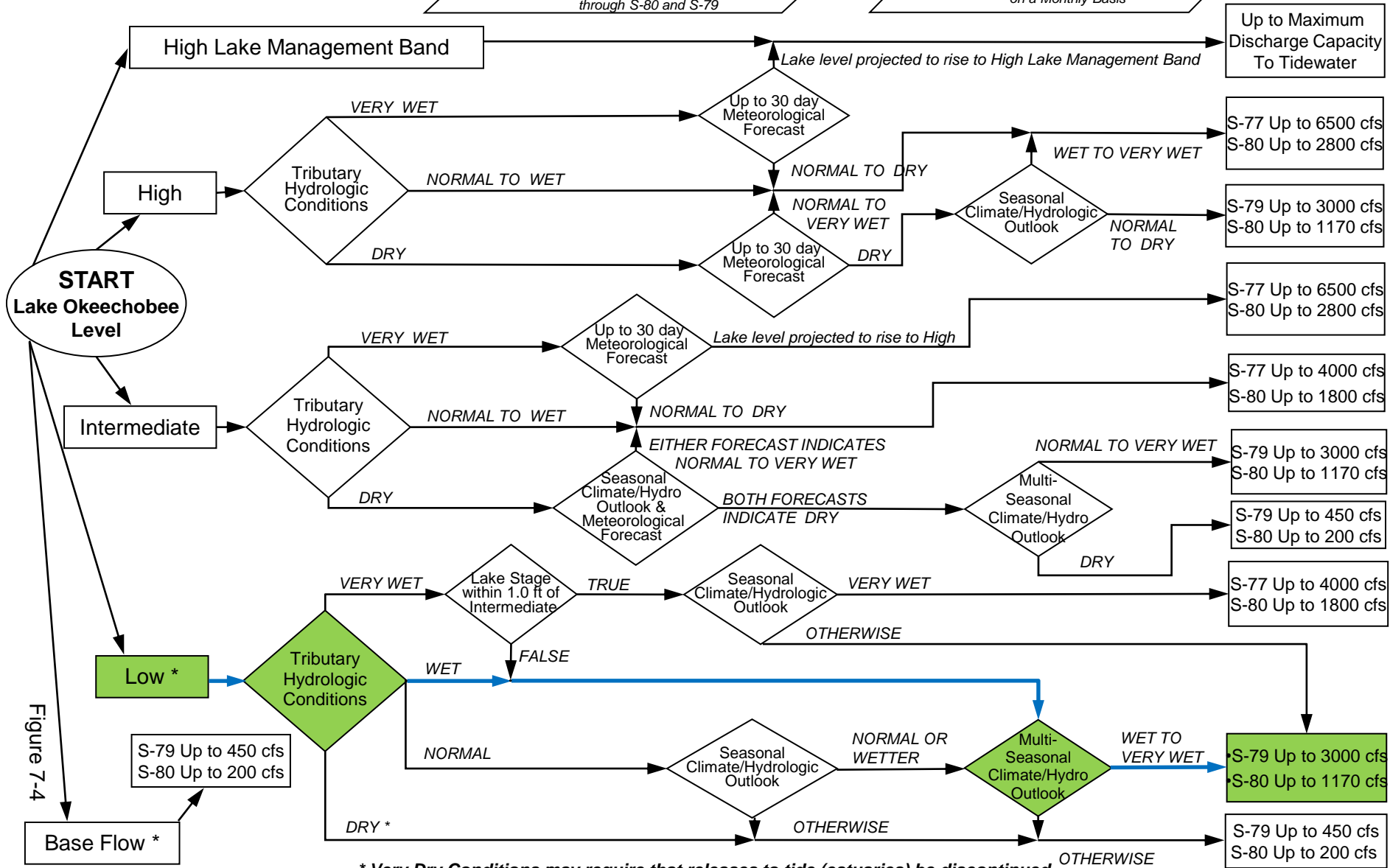
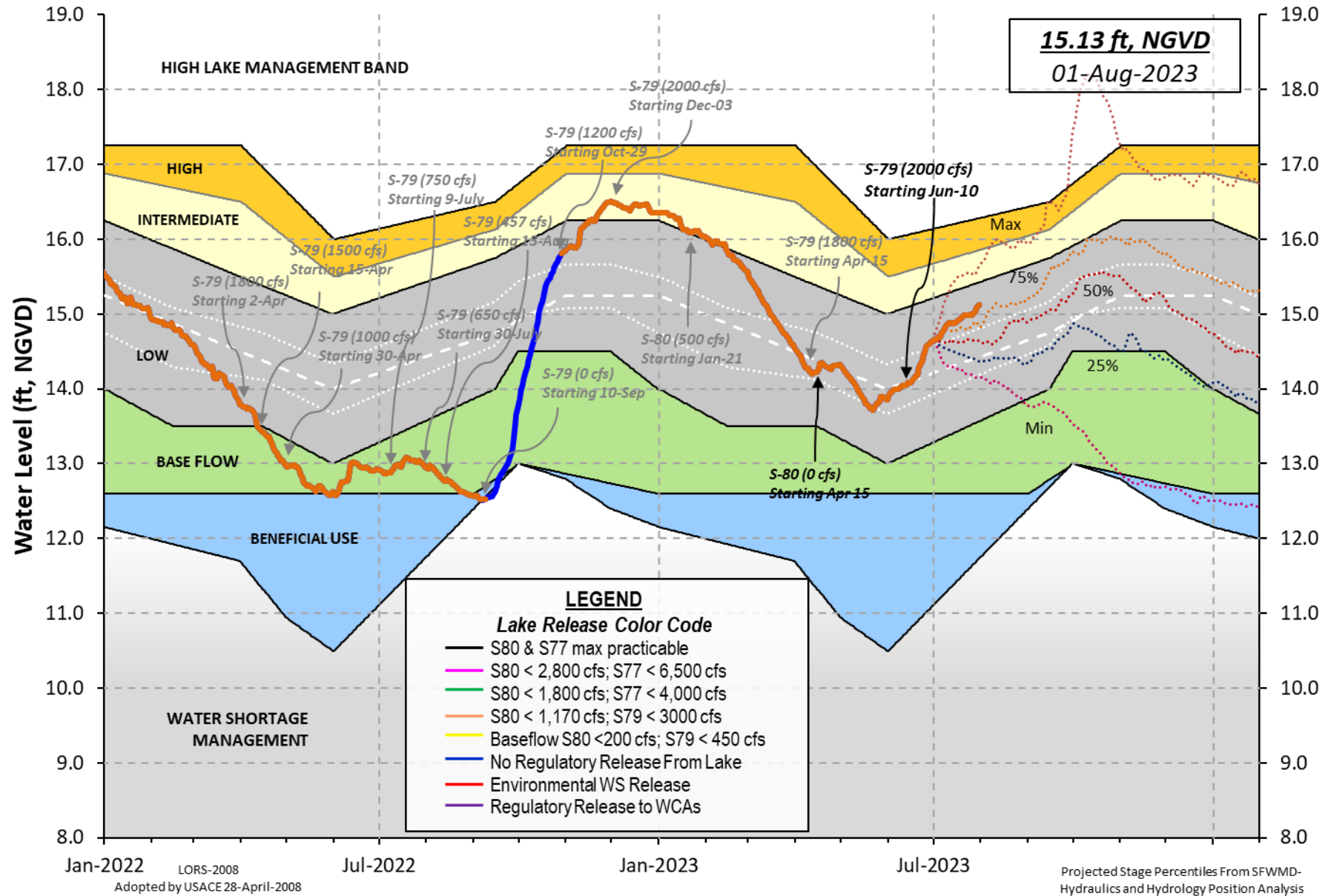


Figure 7-4

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

Lake Okeechobee Water Level History and Projected Stages



is equal to -NR-
 Lake Okeechobee (Change in Storage) Flow is 4336 cfs or 8600 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											
North East Shore											
S133 Pumps:	13.49	15.04	0	0	0	0	0	0	0	0	(cfs)
S193:											
S191:	18.87	14.97	32	0.0	0.0	0.0					
S135 Pumps:	13.52	15.13	0	0	0	0	0				(cfs)
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	21.05	14.63	1186	1.1	0.5	0.4	0.6	0.4	0.4		
S65EX1:	21.05	14.63	0								
S127 Pumps:	13.53	14.99	116	0	52	42	0	30			(cfs)
S127 Culvert:			0	0.0							
S129 Pumps:	12.94	15.08	0	0	0	0					(cfs)
S129 Culvert:			0	0.0							
S131 Pumps:	13.19	13.21	0	0	0						(cfs)
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		32.58	594								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.49	-NR-	0	0	0	0					(cfs)
S169:	15.05	-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	15.16		-1								
S3 Pumps:	10.57	15.13	0	0	0	0					(cfs)
S354:	15.13	10.57	0	0.0	0.0						
S2 Pumps:	10.44	15.28	0	0	0	0	0				(cfs)
S351:	15.28	10.44	0	0.0	0.0	0.0					
S352:	15.44	10.74	0	0.0	0.0						
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-	-NR-		
L8 Canal PT		14.56	-NR-								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.44	15.28	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-		
S352:	10.74	15.44	0	-NR-	-NR-	-NR-	-NR-				
S354:	10.57	15.13	0	-NR-	-NR-	-NR-	-NR-				

Caloosahatchee River (S77, S78, S79)

S47B:	13.71	13.42		1.5	1.5						
S47D:	12.47	11.27	0	0.0							
S77:											
Spillway and Sector Preferred Flow:	14.85	11.16	110	0.0	0.0	0.5	0.0				
Flow Due to Lockages+:			-NR-								

S78:

Spillway and Sector Flow:
 11.04 2.94 1455 2.0 0.0 2.5 0.0
 Flow Due to Lockages+: 6

S79:

Spillway and Sector Flow:
 3.15 0.53 2987 0.0 0.0 2.0 3.0 2.0 2.0 2.0 0.0
 Flow Due to Lockages+: 10
 Percent of flow from S77 4%
 Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:
 15.16 13.98 251 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 0

S153: 18.65 13.75 3 0.0 0.0

S80:

Spillway and Sector Flow:
 14.04 1.15 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 12
 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

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	276	7
S78:	-NR-	0.00	0.00	50	4
S79:	-NR-	0.00	0.00	51	9
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	316	11
S80:	-NR-	0.00	0.00	290	4
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 30 JUL 2023 15.11 Difference from 30JUL23
 30JUL23 -1 Day = 29 JUL 2023 15.09 -0.02

30JUL23	-2 Days =	28 JUL 2023	15.03	-0.08
30JUL23	-3 Days =	27 JUL 2023	15.01	-0.10
30JUL23	-4 Days =	26 JUL 2023	14.99	-0.12
30JUL23	-5 Days =	25 JUL 2023	15.00	-0.11
30JUL23	-6 Days =	24 JUL 2023	14.98	-0.13
30JUL23	-7 Days =	23 JUL 2023	14.99	-0.12
30JUL23	-30 Days =	30 JUN 2023	14.64	-0.47
30JUL23	-1 Year =	30 JUL 2022	12.98	-2.13
30JUL23	-2 Year =	30 JUL 2021	13.68	-1.43

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
30JUL23	Today =	30 JUL 2023	3530 MON	4697
30JUL23	-1 Day =	29 JUL 2023	3413 SUN	13364
30JUL23	-2 Days =	28 JUL 2023	2307 SAT	4688
30JUL23	-3 Days =	27 JUL 2023	2010 FRI	4673
30JUL23	-4 Days =	26 JUL 2023	1629 THU	-1578
30JUL23	-5 Days =	25 JUL 2023	1950 WED	5500
30JUL23	-6 Days =	24 JUL 2023	1474 TUE	-1369
30JUL23	-7 Days =	23 JUL 2023	2289 MON	2500
30JUL23	-8 Days =	22 JUL 2023	2861 SUN	0
30JUL23	-9 Days =	21 JUL 2023	4388 SAT	2118
30JUL23	-10 Days =	20 JUL 2023	4690 FRI	4235
30JUL23	-11 Days =	19 JUL 2023	5900 THU	-NR-
30JUL23	-12 Days =	18 JUL 2023	5163 WED	-NR-
30JUL23	-13 Days =	17 JUL 2023	4824 TUE	-NR-

S65E

Average Flow over previous 14 days				Avg-Daily Flow
30JUL23	Today=	30 JUL 2023	1719 MON	1334
30JUL23	-1 Day =	29 JUL 2023	1781 SUN	1428
30JUL23	-2 Days =	28 JUL 2023	1826 SAT	1380
30JUL23	-3 Days =	27 JUL 2023	1874 FRI	1122
30JUL23	-4 Days =	26 JUL 2023	1943 THU	1415
30JUL23	-5 Days =	25 JUL 2023	1986 WED	1554
30JUL23	-6 Days =	24 JUL 2023	2032 TUE	1594
30JUL23	-7 Days =	23 JUL 2023	2103 MON	1735
30JUL23	-8 Days =	22 JUL 2023	2147 SUN	1773
30JUL23	-9 Days =	21 JUL 2023	2222 SAT	2002
30JUL23	-10 Days =	20 JUL 2023	2283 FRI	2105
30JUL23	-11 Days =	19 JUL 2023	2349 THU	2295
30JUL23	-12 Days =	18 JUL 2023	2396 WED	2157
30JUL23	-13 Days =	17 JUL 2023	2473 TUE	2167

S65EX1

Average Flow over previous 14 days				Avg-Daily Flow
30JUL23	Today=	30 JUL 2023	0 MON	0
30JUL23	-1 Day =	29 JUL 2023	0 SUN	0
30JUL23	-2 Days =	28 JUL 2023	0 SAT	0
30JUL23	-3 Days =	27 JUL 2023	0 FRI	0
30JUL23	-4 Days =	26 JUL 2023	0 THU	0
30JUL23	-5 Days =	25 JUL 2023	0 WED	0
30JUL23	-6 Days =	24 JUL 2023	0 TUE	0
30JUL23	-7 Days =	23 JUL 2023	0 MON	0
30JUL23	-8 Days =	22 JUL 2023	0 SUN	0
30JUL23	-9 Days =	21 JUL 2023	0 SAT	0
30JUL23	-10 Days =	20 JUL 2023	0 FRI	0
30JUL23	-11 Days =	19 JUL 2023	0 THU	0
30JUL23	-12 Days =	18 JUL 2023	0 WED	0
30JUL23	-13 Days =	17 JUL 2023	0 TUE	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)
30 JUL 2023	-NR-	456	2895	5995
29 JUL 2023	-NR-	548	2533	5695
28 JUL 2023	-NR-	779	2325	3624
27 JUL 2023	-NR-	395	2600	4799
26 JUL 2023	437	722	3220	6252
25 JUL 2023	1512	1625	3217	4571
24 JUL 2023	1489	1786	3243	5196
23 JUL 2023	818	1047	3012	5208
22 JUL 2023	12	555	2819	4962
21 JUL 2023	7	945	3352	5514
20 JUL 2023	4	1068	4977	8139
19 JUL 2023	4	1045	4170	6532
18 JUL 2023	9	567	2859	4921
17 JUL 2023	5	501	2621	4707

	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)
30 JUL 2023	-3	0	0	0	-NR-
29 JUL 2023	-45	0	0	0	-NR-
28 JUL 2023	-3	0	0	0	-NR-
27 JUL 2023	-7	0	0	0	-NR-
26 JUL 2023	23	0	0	0	-NR-
25 JUL 2023	-63	0	0	0	-NR-
24 JUL 2023	-NR-	0	0	0	-NR-
23 JUL 2023	90	0	0	0	-NR-
22 JUL 2023	9	0	0	0	-NR-
21 JUL 2023	23	0	0	0	-NR-
20 JUL 2023	-37	0	0	0	-NR-
19 JUL 2023	-29	0	0	0	-NR-
18 JUL 2023	-36	0	0	0	-NR-
17 JUL 2023	-45	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)
30 JUL 2023	483	-NR-	23
29 JUL 2023	490	-NR-	62
28 JUL 2023	471	-NR-	34
27 JUL 2023	588	-NR-	34
26 JUL 2023	605	-NR-	-NR-
25 JUL 2023	1082	-NR-	-NR-
24 JUL 2023	4	-NR-	25
23 JUL 2023	7	-NR-	36
22 JUL 2023	8	-NR-	26
21 JUL 2023	4	-NR-	34
20 JUL 2023	5	-NR-	22
19 JUL 2023	-NR-	-NR-	34
18 JUL 2023	-NR-	-NR-	31
17 JUL 2023	-NR-	-NR-	19

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

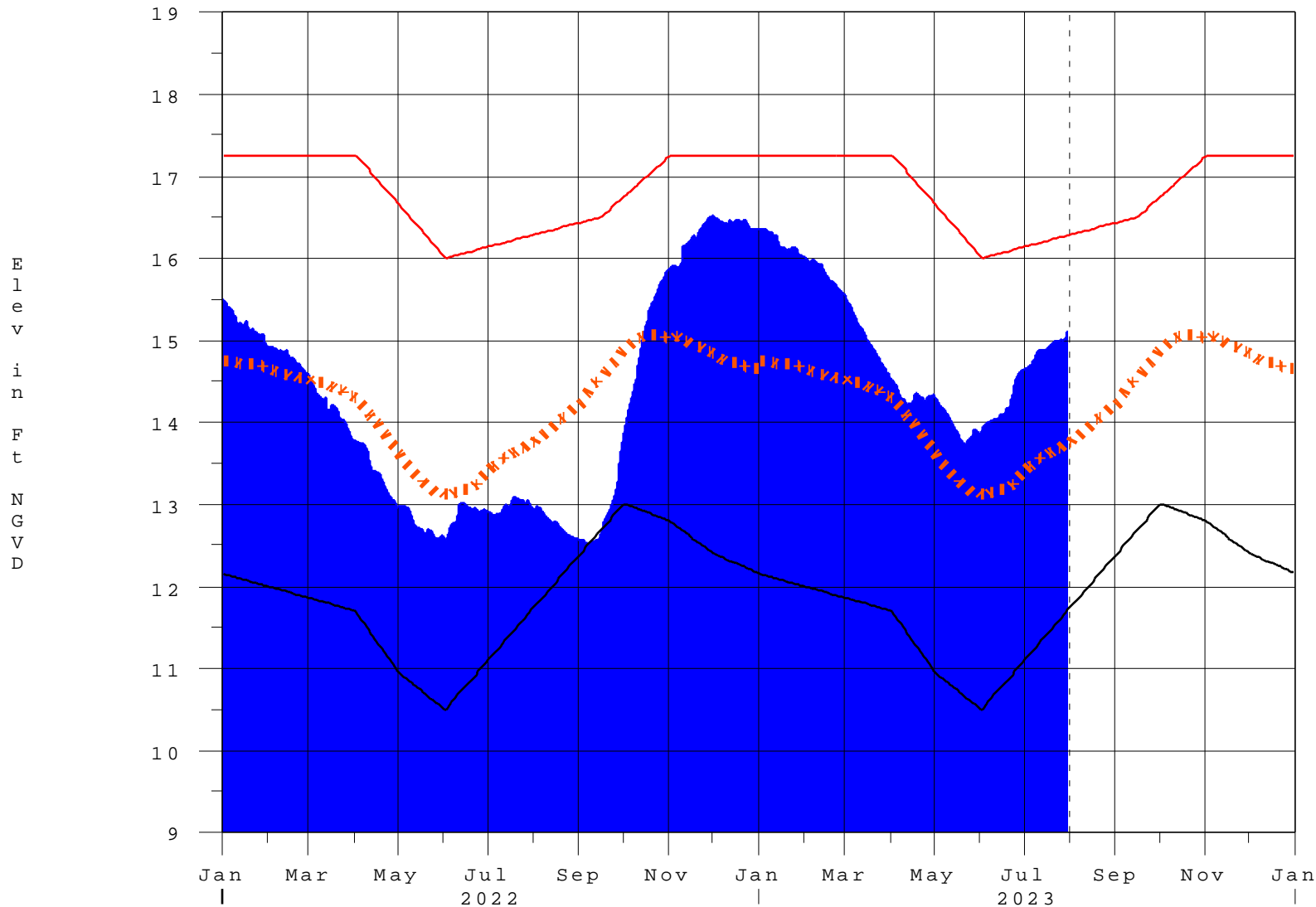
(I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

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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

Report Generated 31JUL2023 @ 08:45 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

31JUL23 09:00:22



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

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