Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 06/26/2023 (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)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (Jun-Nov)	N/A	N/A	3.34	Very Wet	3.13	Very Wet	4.16	Very Wet
Multi Seasonal (Jun-Apr)	N/A	N/A	3.84	Wet	4.04	Wet	5.80	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:

7325 cfs 14-day running average for Lake Okeechobee Net Inflow through 06/25/2023.
According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

-1.89 for Palmer Drought Index on 06/24/2023.
According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 06/26/2023:

Lake Okeechobee Stage: **14.52 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.11	
Operational Band	High sub-band	15.64	
	Intermediate sub-band	15.18	
	Low sub-band	13.23	← 14.52 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.00	
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 4000 cfs at S-77 and up to 1800 cfs at S-80.

LORS2008 Implementation on 06/26/2023 (ENSO Condition- El Niño):

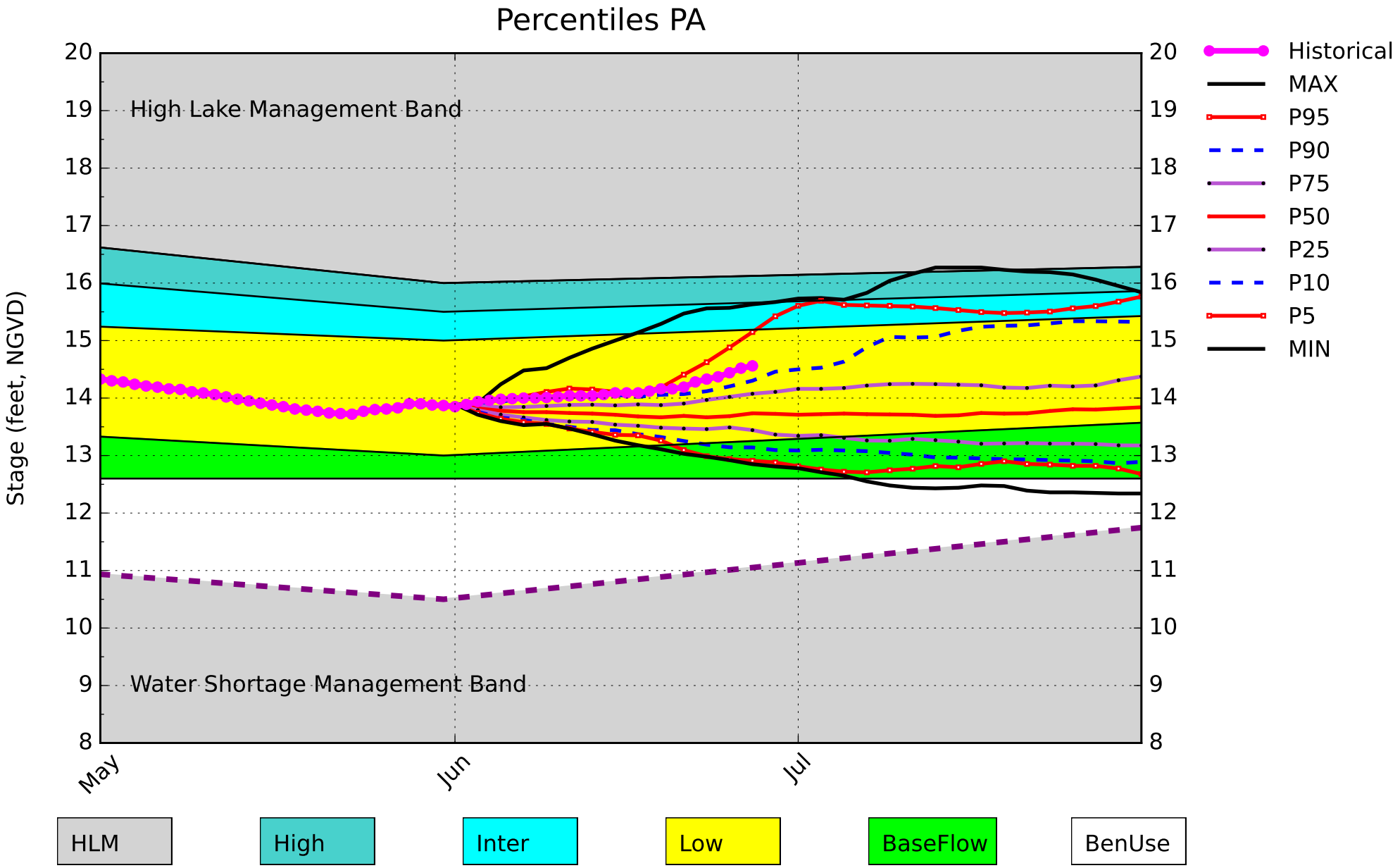
Status for week ending 06/26/2023:

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	-1.89 (Dry)	M
	CPC Precipitation Outlook	1 month: Equal Chances	L
		3 months: Above Normal	L
	LOK Seasonal Net Inflow Outlook	3.13 ft	L
	ENSO Forecast	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	4.04 ft	L
	ENSO Forecast	Wet	
WCAs	WCA 1: 3 Station Average (Site 1-8C)	Above Line 1 (16.17 ft)	L
	WCA 2A: Site S-11B	Above Line 1 (11.62 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.06 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.

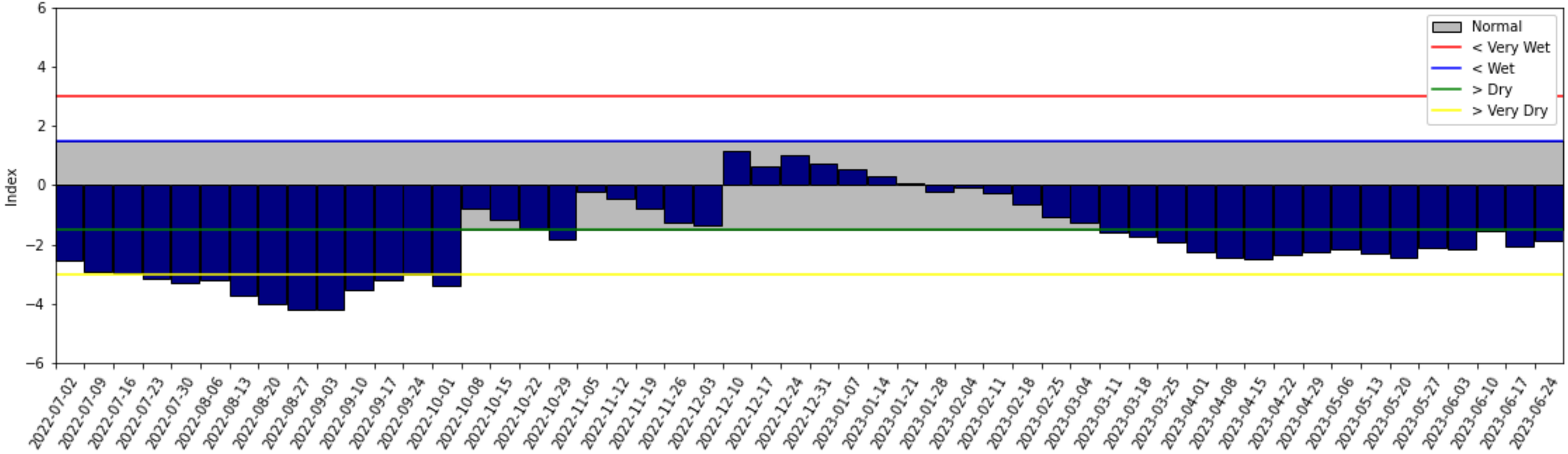
Lake Okeechobee SFWMM June 2023 Position Analysis

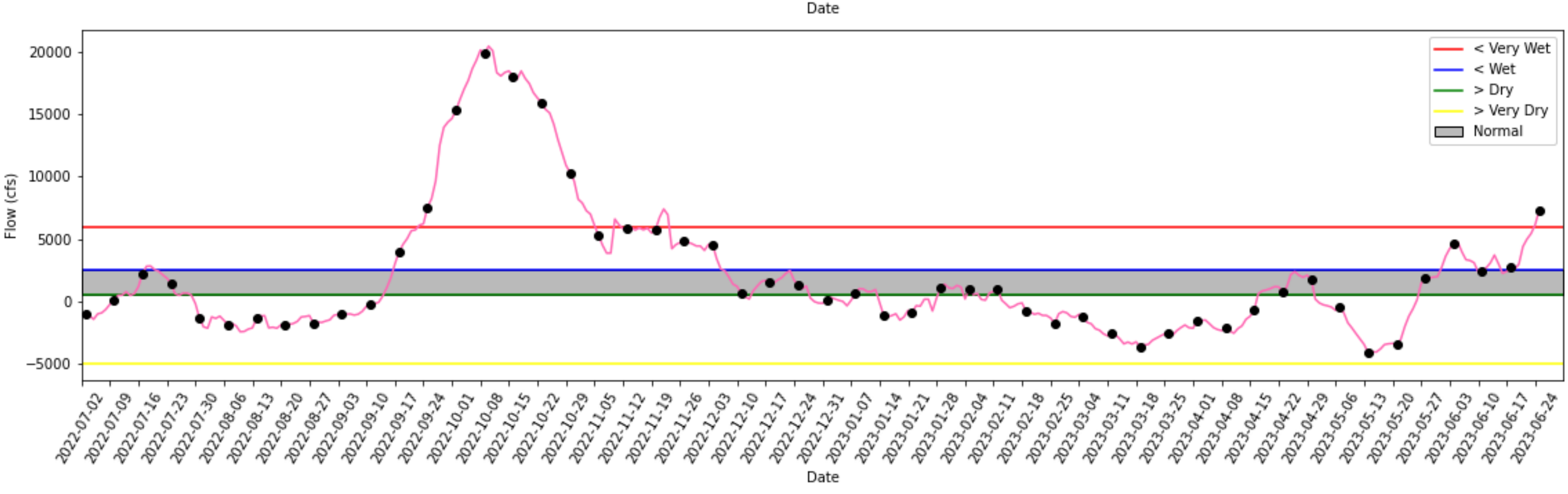


(See assumptions on the Position Analysis Results website)

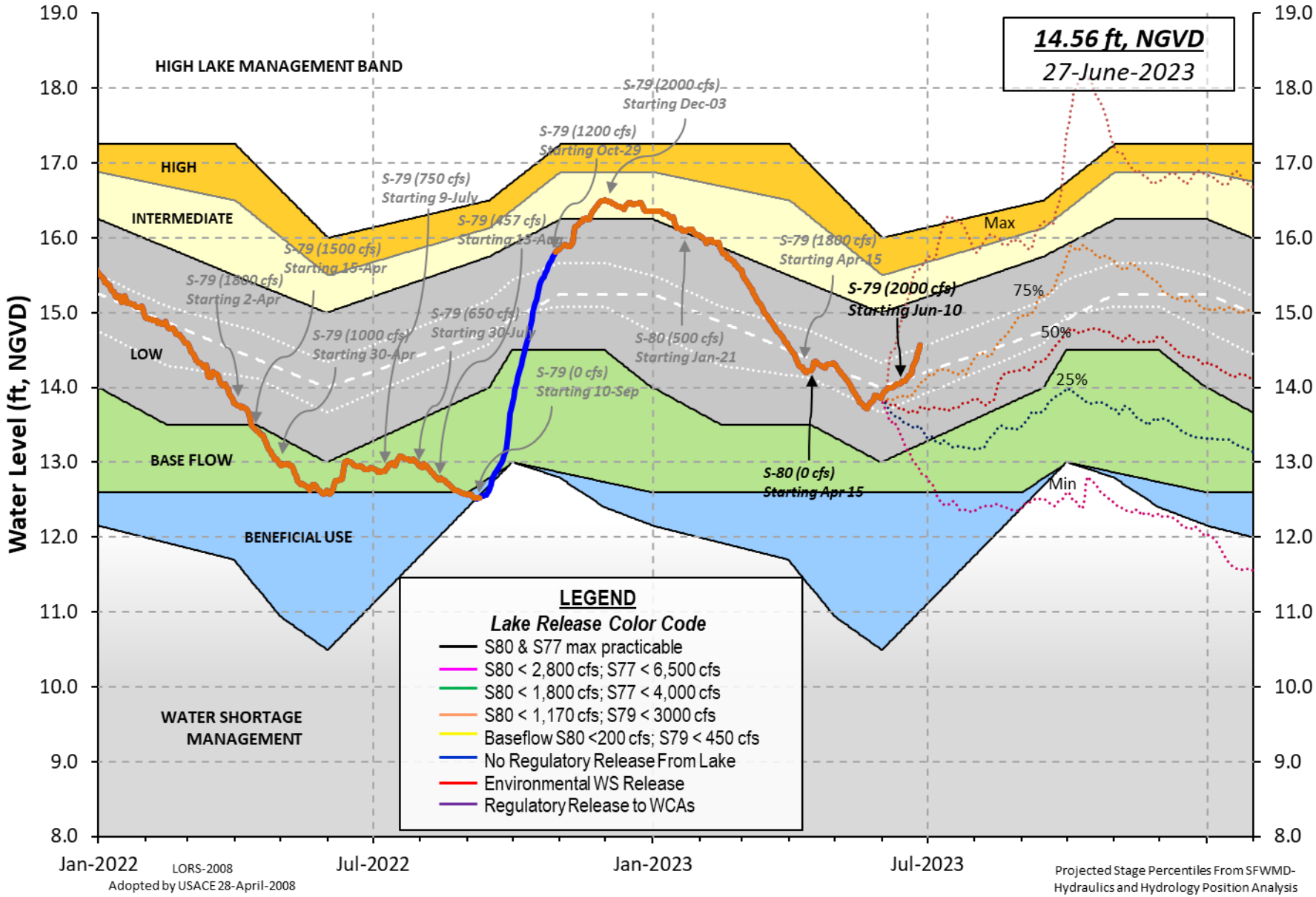
06/27/23 08:01:51

Tributary Basin Condition Indicators as of June 25 2023





Lake Okeechobee Water Level History and Projected Stages



2008 LORS

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

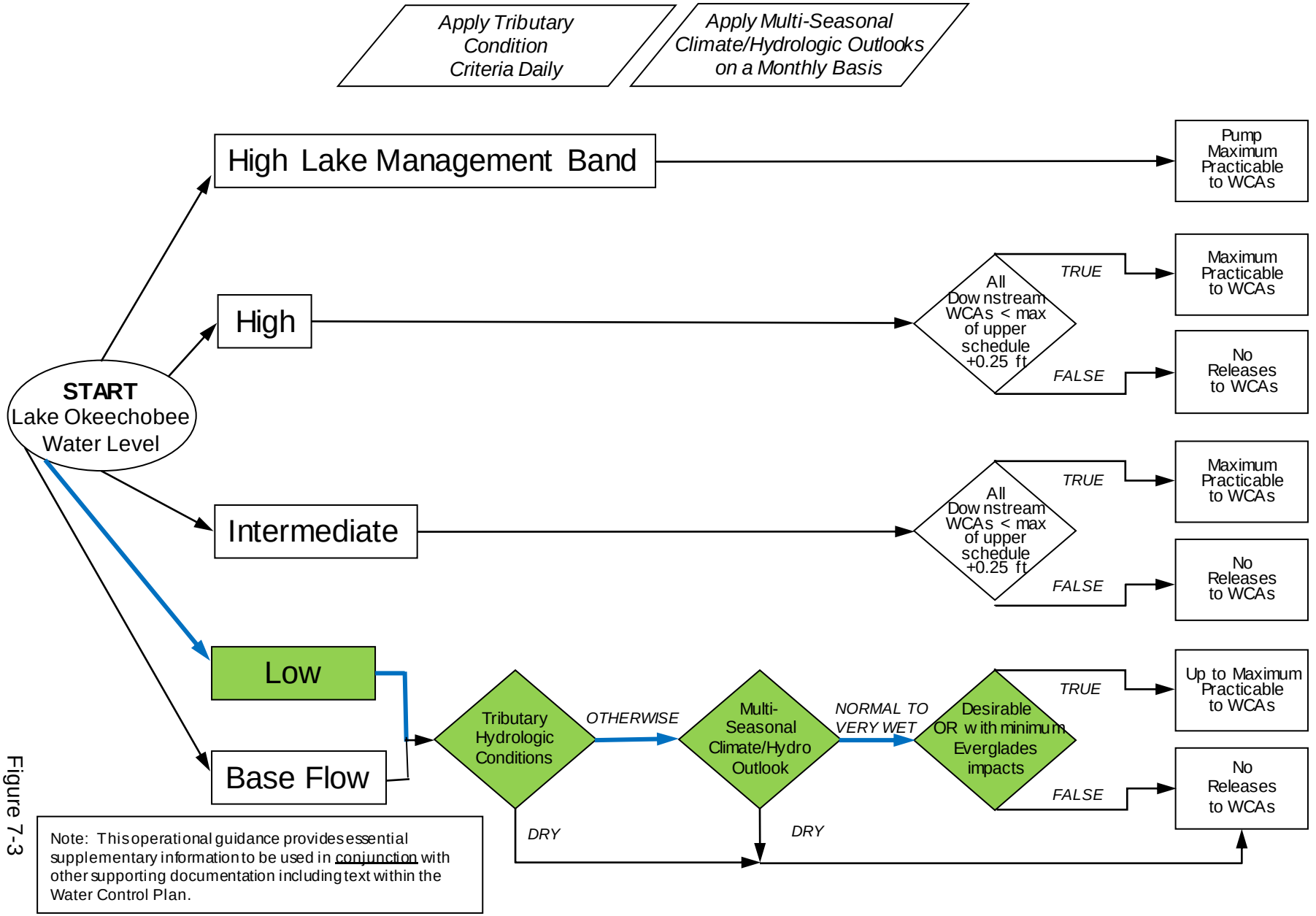


Figure 7-3

2008 LORS

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

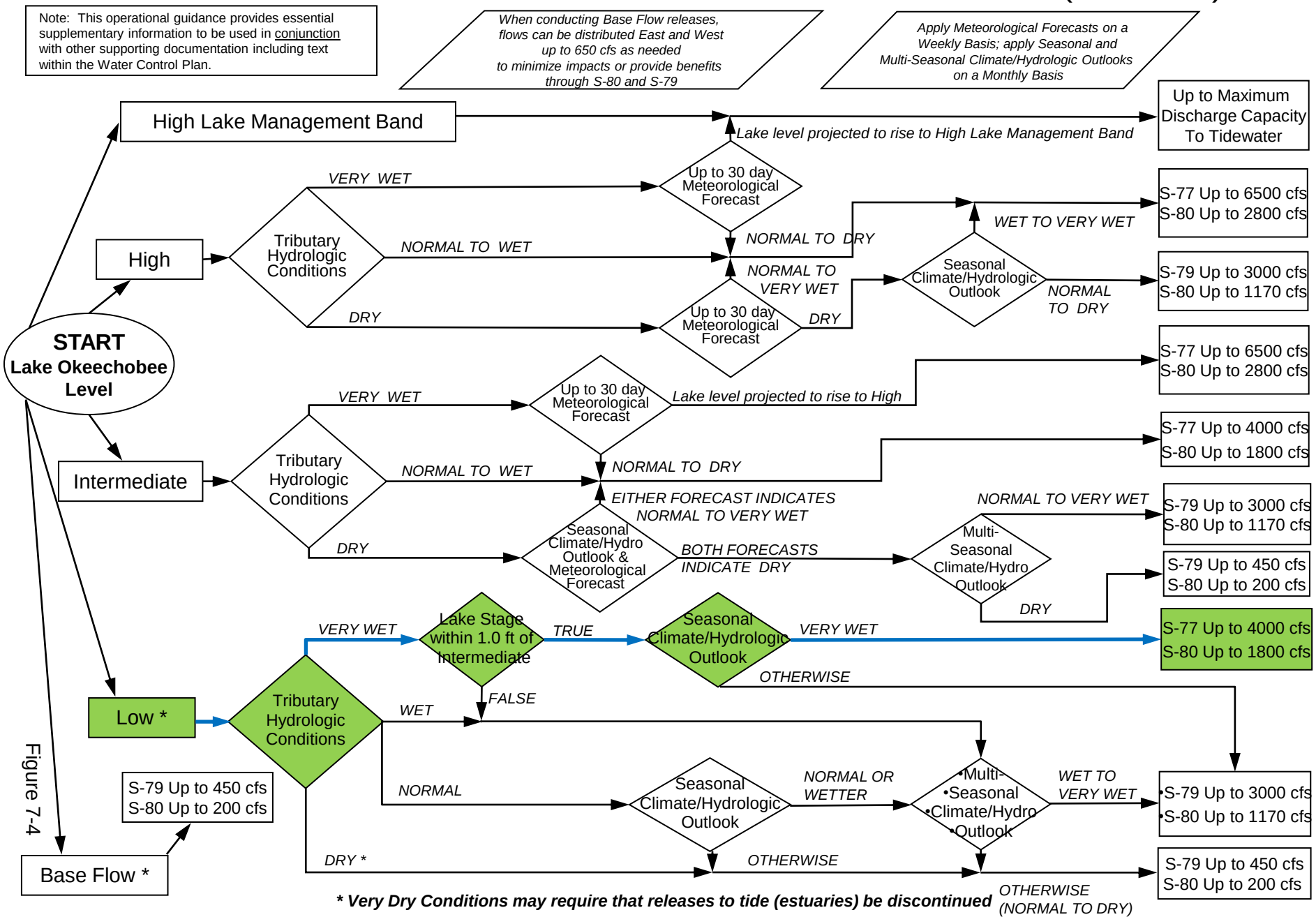


Figure 7-4

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

Data Ending 2400 hours 25 JUN 2023

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	14.52	12.90	12.65 (Official Elv)

Bottom of High Lake Mngmt= 16.11 Top of Water Short Mngmt= 11.00
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 12.16
Difference from Average LORS2008 2.36

25JUN (1965-2007) Period of Record Average 13.30
Difference from POR Average 1.22

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ◆ 8.46'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ◆ 6.66'
Bridge Clearance = 49.15'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
14.59	14.51	14.52	14.46	14.45	14.64	14.55	14.48

*Combination Okeechobee Avg-Daily Lake Average = 14.52 (*See Note)

Okeechobee Inflows (cfs):

S65E	2222	S65EX1	0	Fisheating Cr	464
S154	95	S191	181	S135 Pumps	119
S84	842	S133 Pumps	144	S2 Pumps	0
S84X	320	S127 Pumps	187	S3 Pumps	0
S71	1116	S129 Pumps	161	S4 Pumps	0
S72	790	S131 Pumps	55	C5	0

Total Inflows: 6697

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	3
S127 Culverts	0	S351	0	S308	0
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-NR-		

Total Outflows: 3

****S77 structure flow is being used to compute Total Outflow.
****S308 structure flow is being used to compute Total Outflow.

Okeechobee Pan Evaporation (inches):

S77	0.00	S308	0.20

Average Pan Evap x 0.75 Pan Coefficient = 0.08" = 0.01'

Lake Average Precipitation using NEXRAD: = -NR-" = -NR-'

Evaporation - Precipitation: = -NR-" = -NR-'
Evaporation - Precipitation using Lake Area of 730 square miles

is equal to -NR-
Lake Okeechobee (Change in Storage) Flow is 17243 cfs or 34200 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:	13.28	14.38	144	0	28	0	0	121				(cfs)
S193:												
S191:	18.81	14.44	181	0.0	0.5	0.0						
S135 Pumps:	13.41	14.41	119	25	75	25	6					(cfs)
S135 Culverts:			0	0.0	0.0							
North West Shore												
S65E:	20.98	14.20	2222	1.3	0.9	1.2	1.3	0.6	0.6			
S65EX1:	20.98	14.20	0									
S127 Pumps:	13.28	14.62	187	84	27	35	52	0				(cfs)
S127 Culvert:			0	0.0								
S129 Pumps:	12.77	14.63	161	49	86	25						(cfs)
S129 Culvert:			0	0.0								
S131 Pumps:	12.83	-NR-	55	-NR-	0							(cfs)
S131 Culvert:			0									
Fisheating Creek												
nr Palmdale		32.37	464									
nr Lakeport												
C5:		-NR-	0	-NR-	-NR-	-NR-						
South Shore												
S4 Pumps:	13.14	-NR-	0	0	0	0						(cfs)
S169:	14.54	-NR-	-NR-	-NR-	-NR-	-NR-						
S310:	14.40		-149									
S3 Pumps:	11.91	14.56	0	0	0	0						(cfs)
S354:	14.56	11.91	0	0.0	0.0							
S2 Pumps:	11.55	14.54	0	0	0	0	0					(cfs)
S351:	14.54	11.55	0	0.0	0.0	0.0						
S352:	14.63	10.47	0	0.0	0.0							
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-				
L8 Canal PT		8.58	-NR-									
S351 and S352 Temporary Pumps/S354 Spillway												
S351:	11.55	14.54	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-			
S352:	10.47	14.63	0	-NR-	-NR-	-NR-	-NR-					
S354:	11.91	14.56	0	-NR-	-NR-	-NR-	-NR-					
Caloosahatchee River (S77, S78, S79)												
S47B:	13.34	12.68		7.5	7.4							
S47D:	11.80	11.63	242	6.5								
S77:												
Spillway and Sector Preferred Flow:	14.34	11.44	0	0.0	0.0	0.0	0.0					
Flow Due to Lockages+:			3									
S78:												

```
     Spillway and Sector Flow:
               11.45      3.21    1316    0.5  2.5  2.5  0.0
     Flow Due to Lockages+:          17

   S79:
     Spillway and Sector Flow:
                3.31      1.68    2824    0.0  1.0  2.0  2.0  2.0  2.0  2.0  2.0
     Flow Due to Lockages+:           7
     Percent of flow from S77         0%
     Chloride            (ppm)      0


 St. Lucie Canal (S308, S80)
   S308:
     Spillway and Sector Preferred Flow:
               14.66     14.35       0  0.0  0.0  0.0  0.0
     Flow Due to Lockages+:           0

   S153:        18.86     14.06       0    0.0  0.0
   S80:
     Spillway and Sector Flow:
               14.31      0.50     422    0.0  0.0  0.0  0.0  0.0  0.0  0.0
     Flow Due to Lockages+:          27
     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	295	2
S78:	-NR-	0.00	0.00	17	1
S79:	-NR-	0.00	0.00	71	1
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	102	2
S80:	-NR-	0.00	0.00	67	2
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  25 JUN 2023          14.52 Difference from 25JUN23
    25JUN23  -1 Day  =       24 JUN 2023          14.44            -0.08
```

25JUN23 -2 Days =	23 JUN 2023	14.37	-0.15
25JUN23 -3 Days =	22 JUN 2023	14.33	-0.19
25JUN23 -4 Days =	21 JUN 2023	14.28	-0.24
25JUN23 -5 Days =	20 JUN 2023	14.19	-0.33
25JUN23 -6 Days =	19 JUN 2023	14.16	-0.36
25JUN23 -7 Days =	18 JUN 2023	14.16	-0.36
25JUN23 -30 Days =	26 MAY 2023	13.83	-0.69
25JUN23 -1 Year =	25 JUN 2022	12.90	-1.62
25JUN23 -2 Year =	25 JUN 2021	12.65	-1.87

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
25JUN23 Today =	25 JUN 2023	5795	MON	-NR-
25JUN23 -1 Day =	24 JUN 2023	5344	SUN	-NR-
25JUN23 -2 Days =	23 JUN 2023	5312	SAT	-NR-
25JUN23 -3 Days =	22 JUN 2023	5085	FRI	10588
25JUN23 -4 Days =	21 JUN 2023	4480	THU	19772
25JUN23 -5 Days =	20 JUN 2023	3067	WED	7670
25JUN23 -6 Days =	19 JUN 2023	2671	TUE	0
25JUN23 -7 Days =	18 JUN 2023	2822	MON	8672
25JUN23 -8 Days =	17 JUN 2023	2505	SUN	6453
25JUN23 -9 Days =	16 JUN 2023	2347	SAT	0
25JUN23 -10 Days =	15 JUN 2023	3103	FRI	0
25JUN23 -11 Days =	14 JUN 2023	3802	THU	6353
25JUN23 -12 Days =	13 JUN 2023	3170	WED	4235
25JUN23 -13 Days =	12 JUN 2023	2782	TUE	0

S65E

	Average Flow over previous 14 days			Avg-Daily Flow
25JUN23 Today=	25 JUN 2023	1387	MON	2450
25JUN23 -1 Day =	24 JUN 2023	1253	SUN	2508
25JUN23 -2 Days =	23 JUN 2023	1114	SAT	2413
25JUN23 -3 Days =	22 JUN 2023	988	FRI	2300
25JUN23 -4 Days =	21 JUN 2023	871	THU	2285
25JUN23 -5 Days =	20 JUN 2023	753	WED	1850
25JUN23 -6 Days =	19 JUN 2023	661	TUE	1168
25JUN23 -7 Days =	18 JUN 2023	614	MON	1235
25JUN23 -8 Days =	17 JUN 2023	564	SUN	922
25JUN23 -9 Days =	16 JUN 2023	538	SAT	1007
25JUN23 -10 Days =	15 JUN 2023	508	FRI	622
25JUN23 -11 Days =	14 JUN 2023	500	THU	197
25JUN23 -12 Days =	13 JUN 2023	512	WED	0
25JUN23 -13 Days =	12 JUN 2023	531	TUE	460

S65EX1

	Average Flow over previous 14 days			Avg-Daily Flow
25JUN23 Today=	25 JUN 2023	90	MON	0
25JUN23 -1 Day =	24 JUN 2023	90	SUN	0
25JUN23 -2 Days =	23 JUN 2023	90	SAT	0
25JUN23 -3 Days =	22 JUN 2023	90	FRI	0
25JUN23 -4 Days =	21 JUN 2023	90	THU	0
25JUN23 -5 Days =	20 JUN 2023	90	WED	0
25JUN23 -6 Days =	19 JUN 2023	90	TUE	0
25JUN23 -7 Days =	18 JUN 2023	90	MON	0
25JUN23 -8 Days =	17 JUN 2023	90	SUN	0
25JUN23 -9 Days =	16 JUN 2023	90	SAT	0
25JUN23 -10 Days =	15 JUN 2023	90	FRI	0
25JUN23 -11 Days =	14 JUN 2023	90	THU	443
25JUN23 -12 Days =	13 JUN 2023	59	WED	622
25JUN23 -13 Days =	12 JUN 2023	14	TUE	202

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)
25 JUN 2023	6	513	2657	5660
24 JUN 2023	6	497	2117	5829
23 JUN 2023	4	1231	3167	5267
22 JUN 2023	6	1106	2937	5234
21 JUN 2023	567	1317	3235	5911
20 JUN 2023	1569	2313	3413	4233
19 JUN 2023	8	952	2182	3054
18 JUN 2023	-NR-	275	1627	2651
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

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)
25 JUN 2023	-296	0	0	0	-NR-
24 JUN 2023	-133	0	0	0	-NR-
23 JUN 2023	-94	0	0	0	-NR-
22 JUN 2023	-157	0	0	0	-315
21 JUN 2023	-174	0	0	0	-NR-
20 JUN 2023	-135	0	0	0	-NR-
19 JUN 2023	-120	0	0	0	-256
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

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
25 JUN 2023	0	-NR-	890
24 JUN 2023	1	-NR-	244
23 JUN 2023	0	-NR-	654
22 JUN 2023	-1	-NR-	1274
21 JUN 2023	-0	-NR-	39
20 JUN 2023	-1	-NR-	908
19 JUN 2023	-0	-NR-	39
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

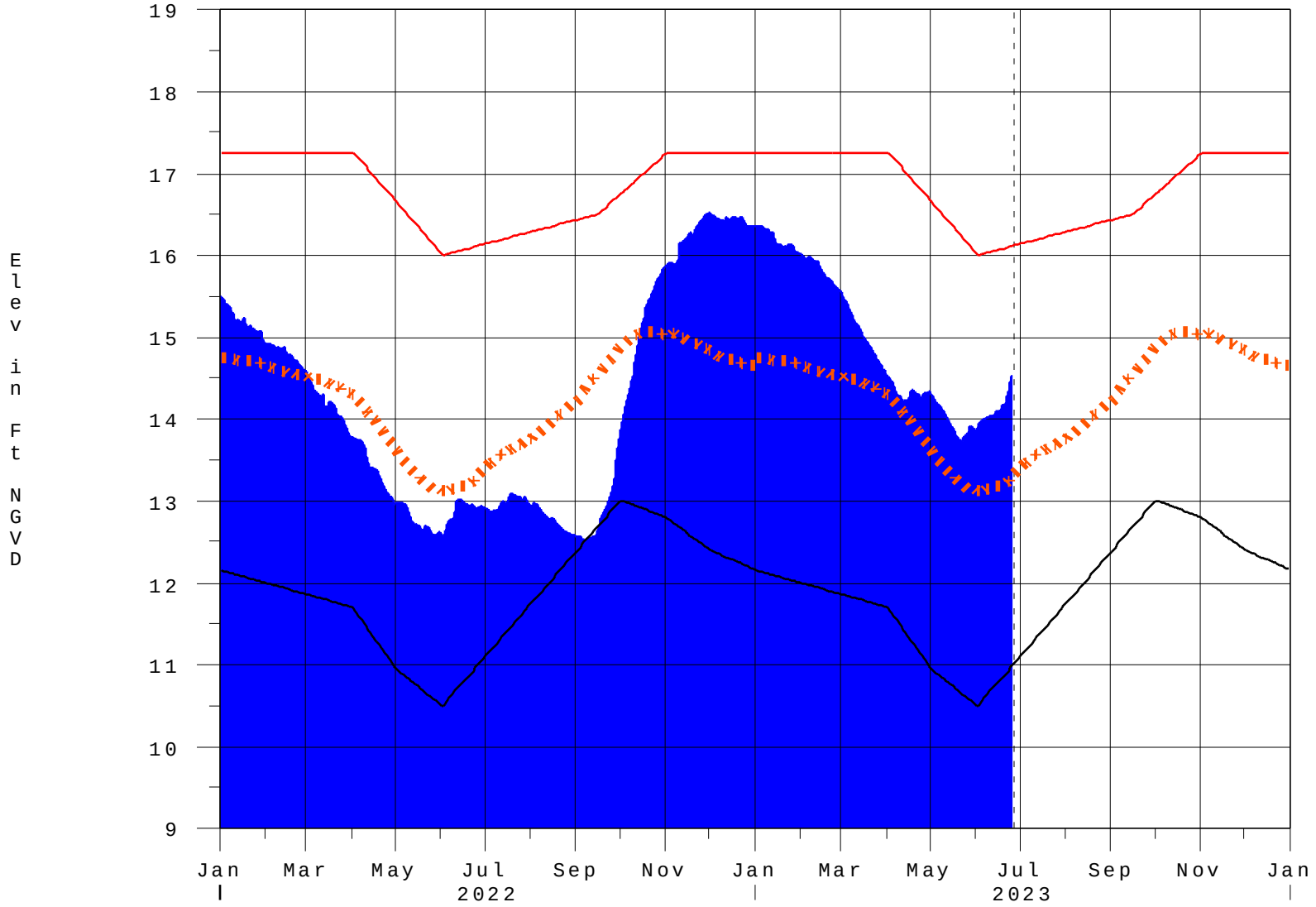
*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(I) - Flows preceeded 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 26JUN2023 @ 11:39  ** Preliminary Data - Subject to Revision **
```

Lake Okeechobee

26JUN23 11:45:24



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 >= 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**

Under Construction