Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 04/10/2023 (ENSO Condition: Neutral)

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 Neutral years and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with Neutral 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 Neutral ENSO Years**		Sub-sampling of AMO Warm + Neutral ENSO Years***	
	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (Apr-Sep)	N/A	N/A	1.81	Wet	2.04	Very Wet	2.75	Very Wet
Multi Seasonal (Apr-Oct)	N/A	N/A	2.28	Normal	2.61	Wet	3.55	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:

-2132 cfs 14-day running average for Lake Okeechobee Net Inflow through 04/10/2023.
According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

-2.43 for Palmer Drought Index on 04/08/2023.
According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 04/10/2023:

Lake Okeechobee Stage: **14.28 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.09	
Operational Band	High sub-band	16.37	
	Intermediate sub-band	15.43	
	Low sub-band	13.50	← 14.28 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.48	
Water Shortage Management Band			

Part C of LORS2008: Discharge to WCAs

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 LORS 2008 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 04/10/2023 (ENSO Condition- Neutral Watch):

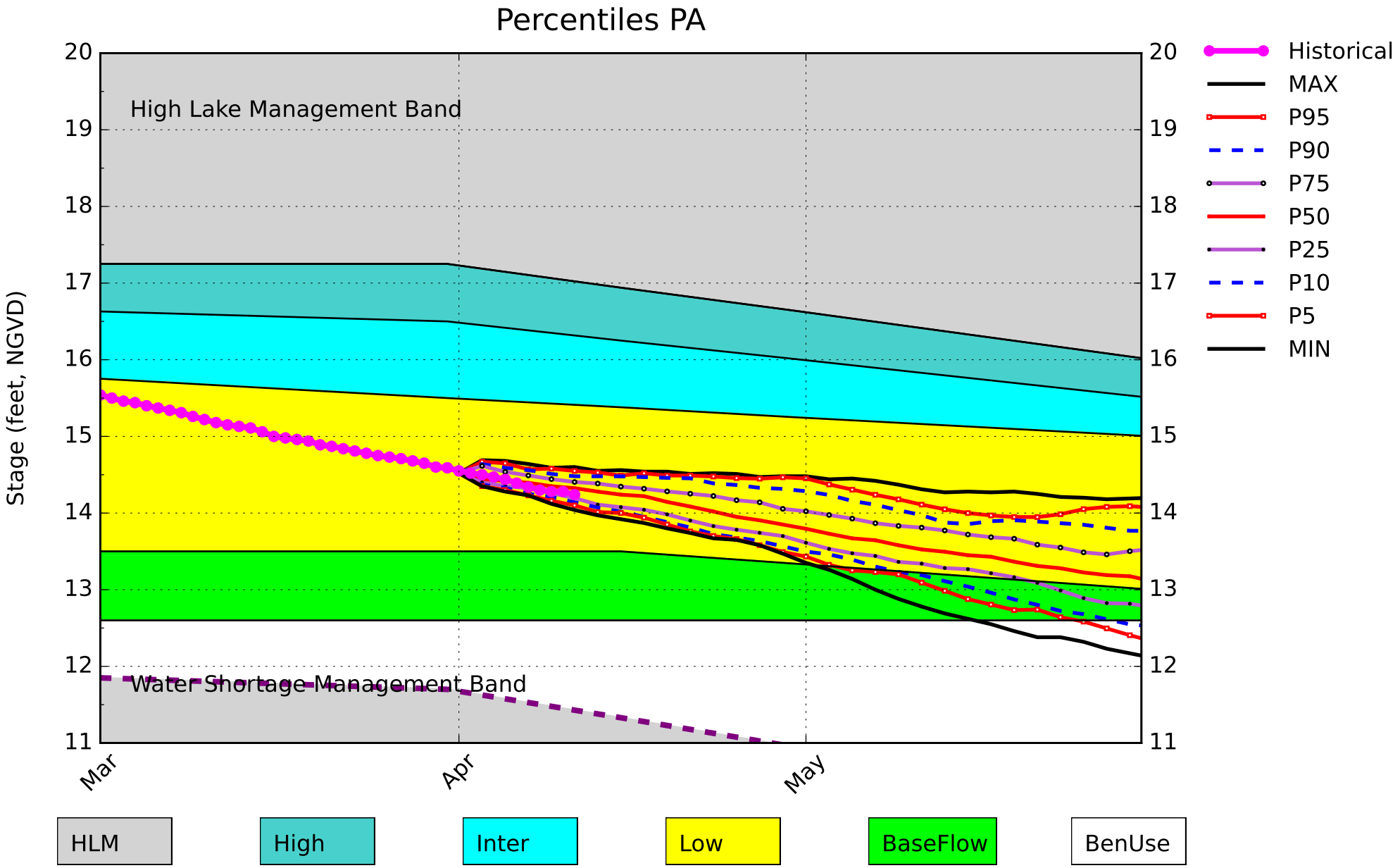
Status for week ending 04/10/2023:

Water Supply Risk Evaluation

Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-band	M
	Palmer Drought Index for LOK Tributary Conditions	-2.43 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Equal Chances	L
		3 months: Equal Chances	L
	LOK Seasonal Net Inflow Outlook	2.04 ft	L
	ENSO Forecast	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	2.61 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-8C)	Above Line 1 (15.87 ft)	L
	WCA 2A: Site S11B	Above Line 1 (11.20 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (8.85 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.

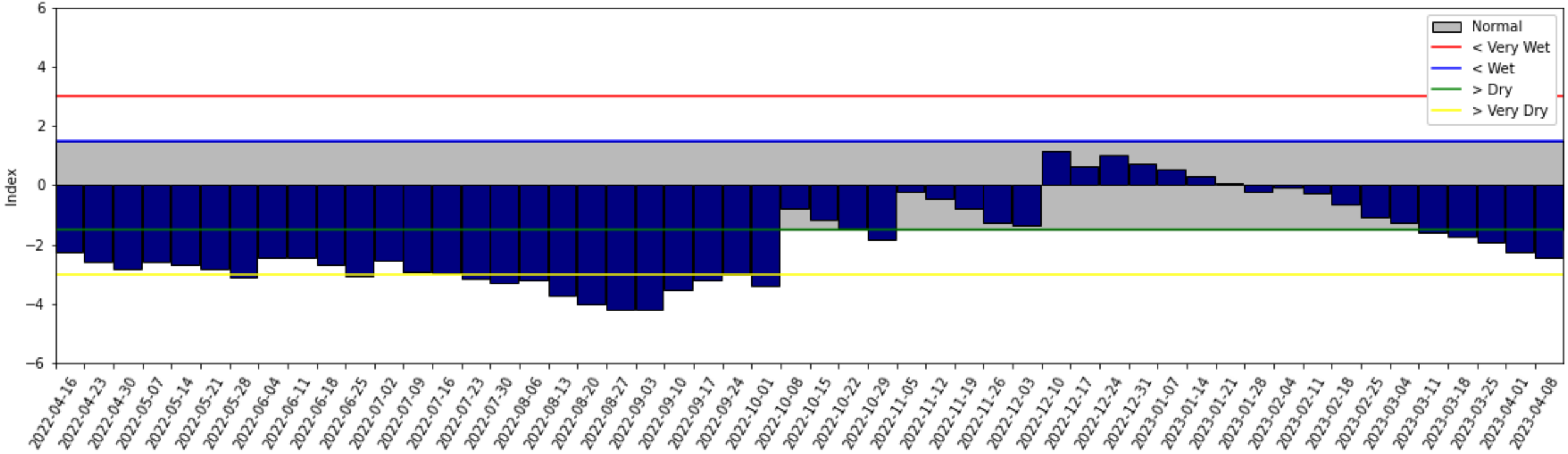
Lake Okeechobee SFWMM April 2023 Position Analysis

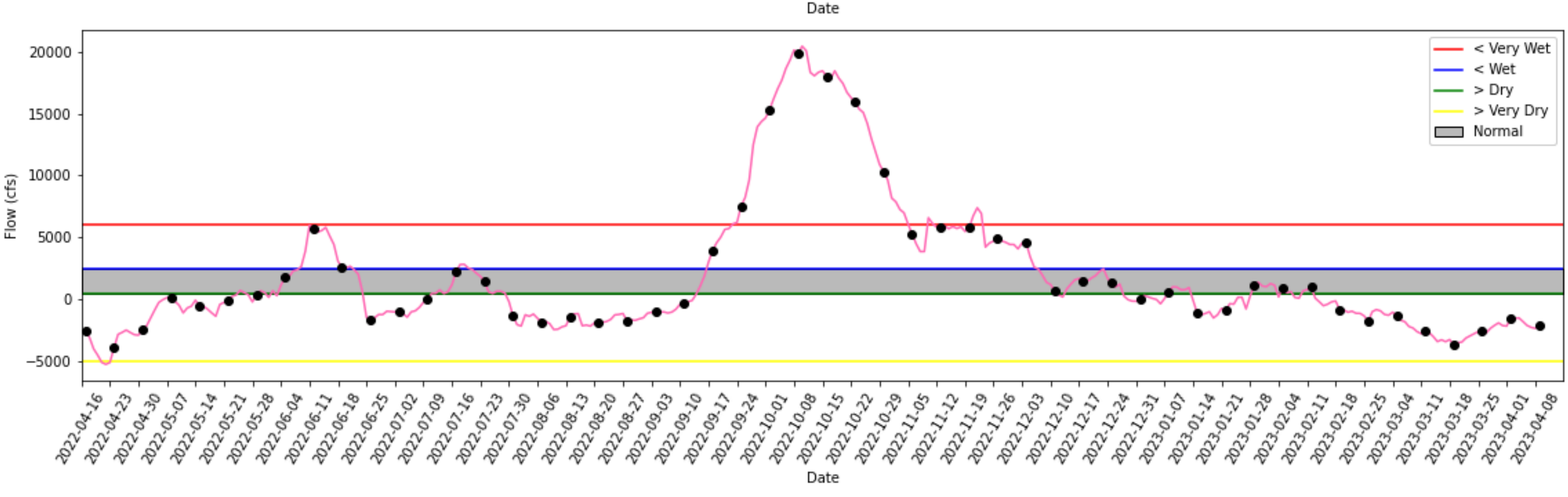


(See assumptions on the Position Analysis Results website)

04/11/23 07:30:40

Tributary Basin Condition Indicators as of April 09 2023





2008 LORS

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

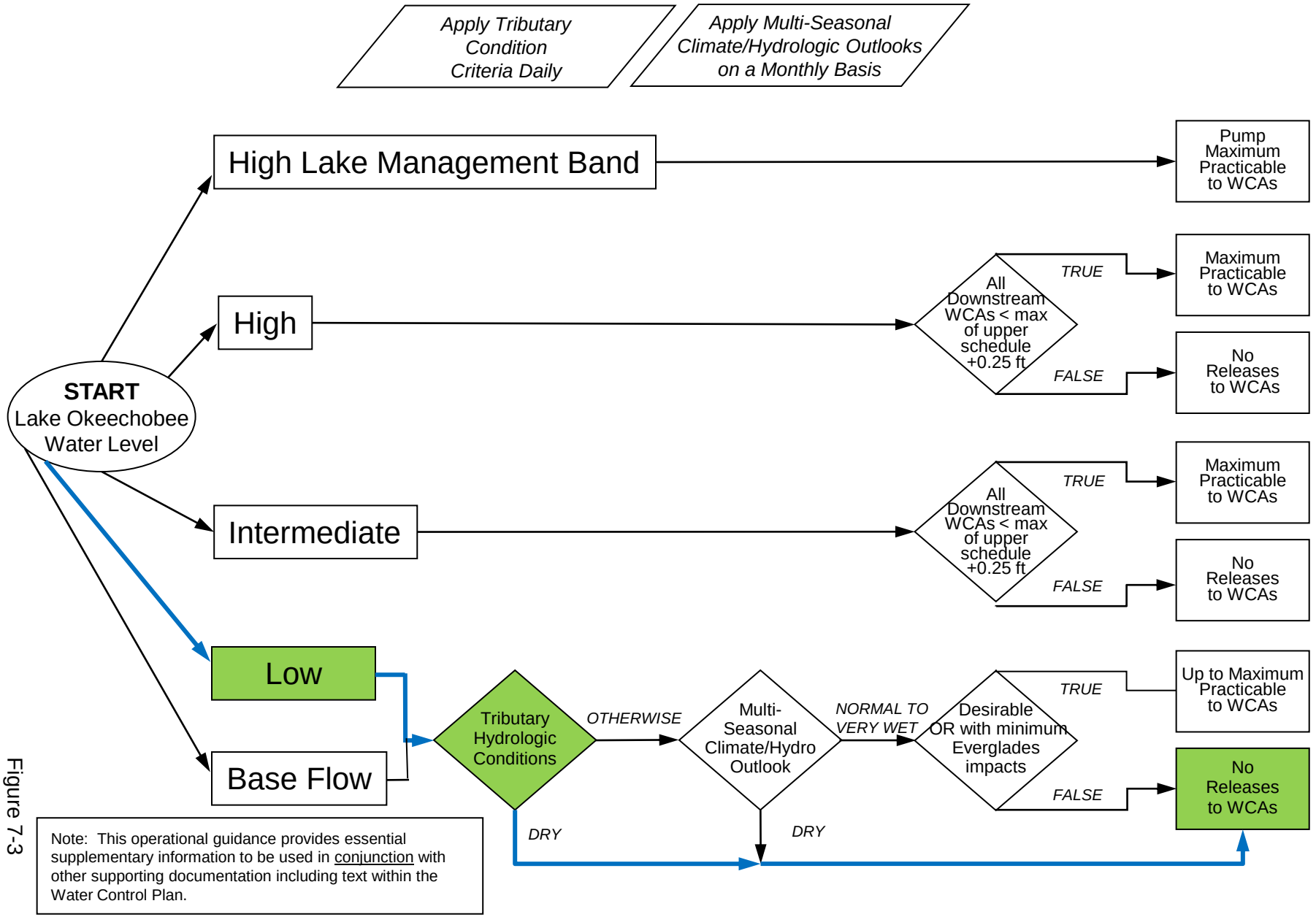


Figure 7-3

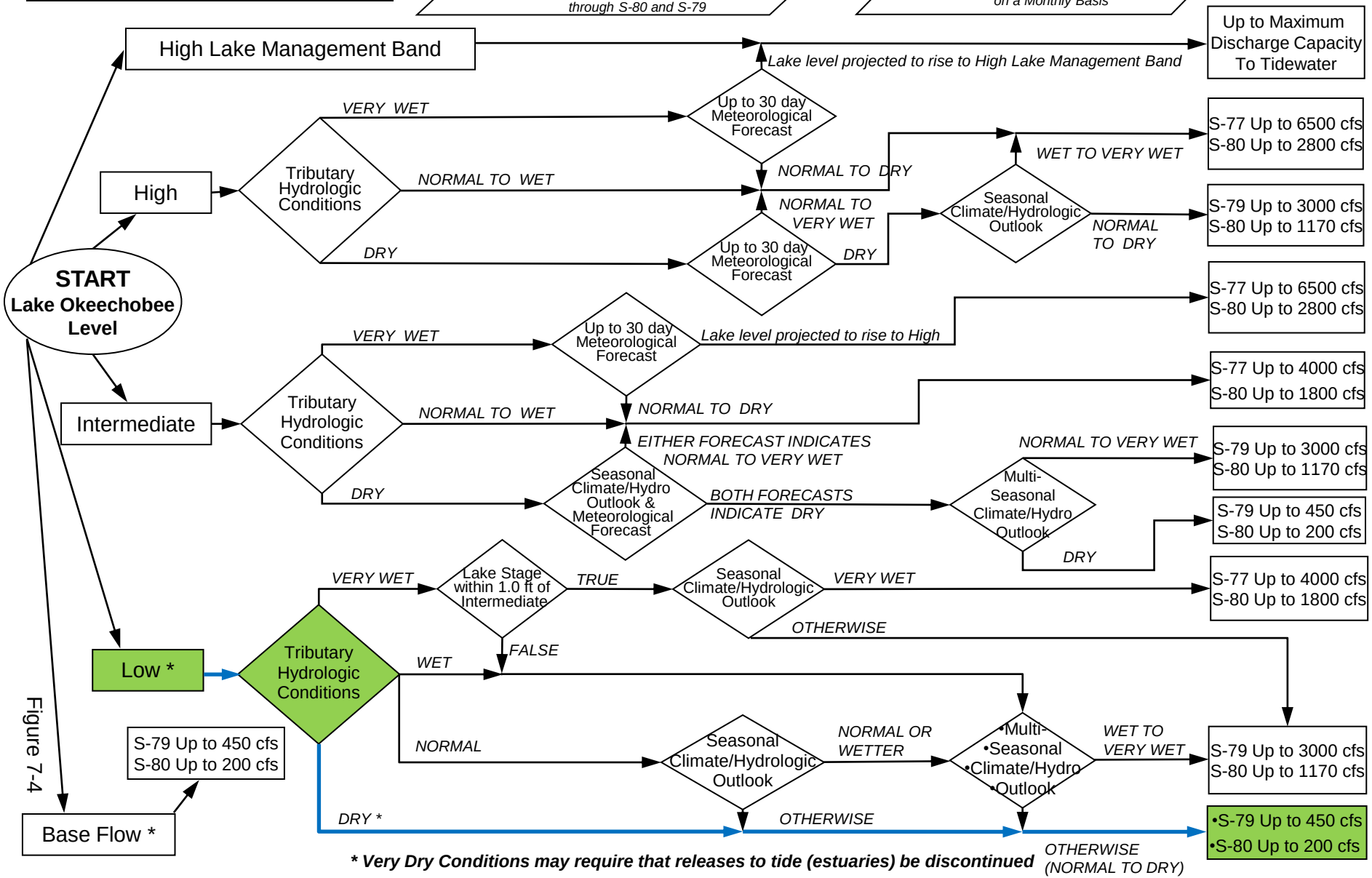
2008 LORS

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

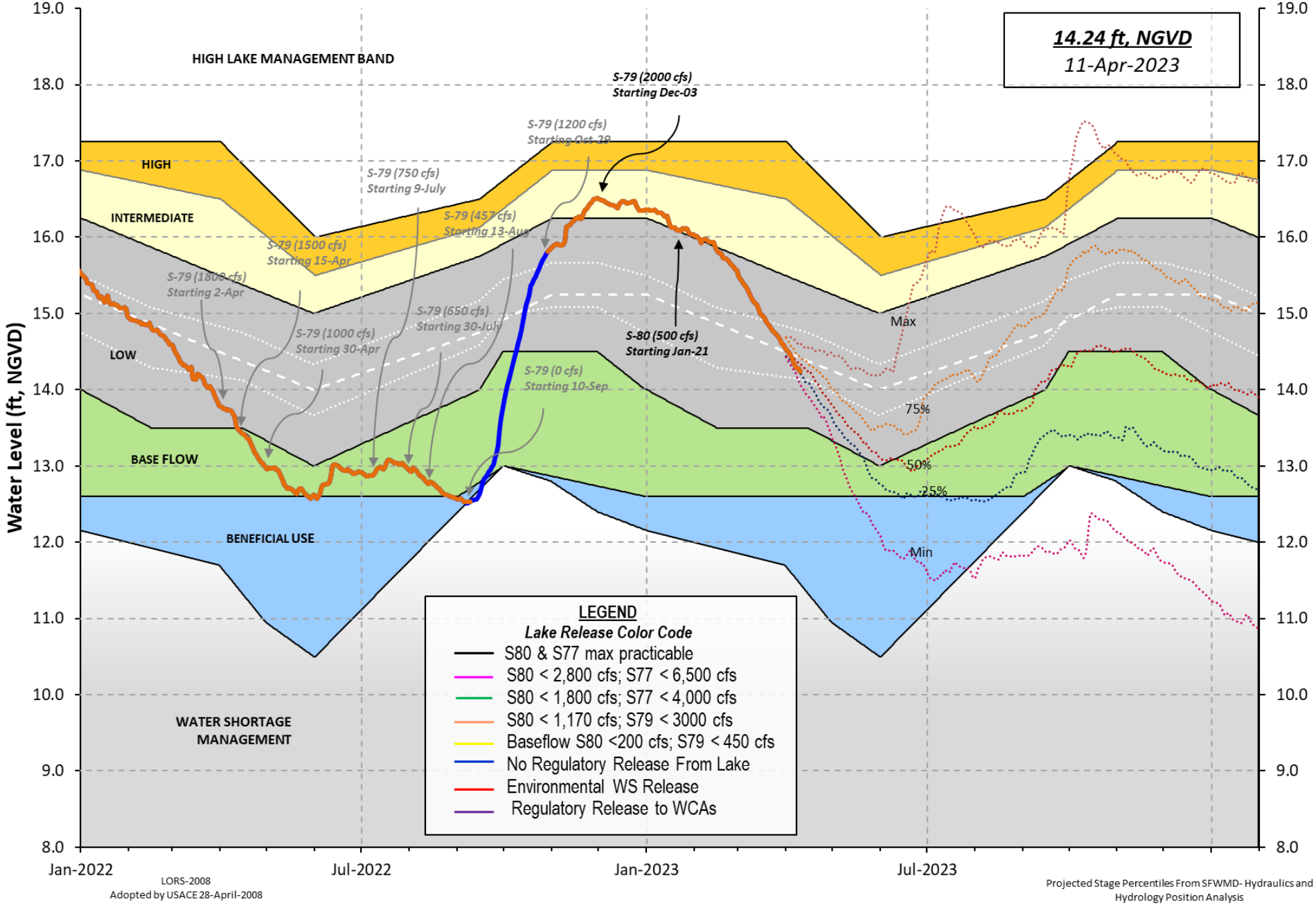
Apply Meteorological Forecasts on a Weekly Basis; apply Seasonal and Multi-Seasonal Climate/Hydrologic Outlooks on a Monthly Basis



**** Very Dry Conditions may require that releases to tide (estuaries) be discontinued***

Figure 7-4

Lake Okeechobee Water Level History and Projected Stages



LORS-2008
Adopted by USACE 28-April-2008

Projected Stage Percentiles From SFWMD- Hydraulics and Hydrology Position Analysis

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

Data Ending 2400 hours 09 APR 2023

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)	
*Okeechobee Lake Elevation	14.28	13.65	14.15	(Official Elv)

Bottom of High Lake Mngmt= 17.09 Top of Water Short Mngmt= 11.48
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 12.87
Difference from Average LORS2008 1.41

09APR (1965-2007) Period of Record Average 14.12
Difference from POR Average 0.16

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ◆ 8.22'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ◆ 6.42'
Bridge Clearance = 49.35'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
14.26	14.30	14.33	14.26	14.26	14.46	14.16	14.12

*Combination Okeechobee Avg-Daily Lake Average = 14.28
(*See Note)

Okeechobee Inflows (cfs):

S65E	324	S65EX1	0	Fisheating Cr	0
S154	0	S191	0	S135 Pumps	0
S84	0	S133 Pumps	0	S2 Pumps	0
S84X	0	S127 Pumps	0	S3 Pumps	0
S71	0	S129 Pumps	0	S4 Pumps	0
S72	0	S131 Pumps	0	C5	0

Total Inflows: 324

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	-NR-
S127 Culverts	0	S351	0	S308	-NR-
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	344		

Total Outflows: No Report Due To Missing S77 or S308 Discharge Data

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

Okeechobee Pan Evaporation (inches):

S77	-NR-	S308	-NR-

Average Pan Evap x 0.75 Pan Coefficient = -NR-" = -NR-'

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 0 cfs or 0 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:	13.37	14.05	0	0	0	0	0	0	(cfs)		
S193:											
S191:	18.17	14.07	0	0.0	0.0	0.0					
S135 Pumps:	13.26	14.06	0	0	0	0	0	(cfs)			
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	20.84	14.13	324	-0.0	0.0	0.0	0.3	0.0	0.3		
S65EX1:	20.84	14.13	0								
S127 Pumps:	13.27	14.07	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.06	14.23	0	0	0	0	(cfs)				
S129 Culvert:			0	0.0							
S131 Pumps:	12.73	-NR-	0	0	0	(cfs)					
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		27.48	0								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	12.19	-NR-	0	0	0	0	(cfs)				
S169:	14.51	-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	14.43		36								
S3 Pumps:	11.03	14.66	0	0	0	0	(cfs)				
S354:	14.66	11.03	0	0.0	0.0						
S2 Pumps:	10.61	14.64	0	0	0	0	0	(cfs)			
S351:	14.64	10.61	0	0.0	0.0	0.0					
S352:	14.47	10.37	0	0.0	0.0						
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-			
L8 Canal PT		14.29	344								
S351 and S352 Temporary Pumps/S354 Spillway											
S351:	10.61	14.64	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-		
S352:	10.37	14.47	0	-NR-	-NR-	-NR-	-NR-				
S354:	11.03	14.66	0	-NR-	-NR-	-NR-	-NR-				
Caloosahatchee River (S77, S78, S79)											
S47B:	14.00	12.20		0.8	0.8						
S47D:	12.25	10.95	0	0.0							
S77:											
Spillway and Sector Preferred Flow:											
	14.10	10.88	1650	2.5	2.5	2.5	0.0				
Flow Due to Lockages+:			-NR-								
S78:											

```
    Spillway and Sector Flow:
              10.81      2.96    1668    2.0  0.0  2.5  1.5
    Flow Due to Lockages+:          13

  S79:
    Spillway and Sector Flow:
               3.08      0.95    2307    0.0  0.0  2.0  2.5  2.0  2.0  2.0  0.0
    Flow Due to Lockages+:           6
    Percent of flow from S77        72%
    Chloride            (ppm)      0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
              14.08     14.15     449  3.0  3.0  3.0  0.0
    Flow Due to Lockages+:        -NR-

  S153:        18.95     13.91       0    0.0  0.0
  S80:
    Spillway and Sector Flow:
              14.09      1.84     510    0.0  0.5  0.0  0.0  0.0  0.5  0.0
    Flow Due to Lockages+:          15
    Percent of flow from S308       88%

  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	7	8
S78:	-NR-	0.00	0.00	341	2
S79:	-NR-	0.00	0.00	323	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	343	11
S80:	-NR-	0.00	0.00	19	5
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  09 APR 2023          14.28 Difference from 09APR23
   09APR23  -1 Day  =       08 APR 2023          14.28             0.00
```

09APR23	-2 Days =	07 APR 2023	14.30	0.02
09APR23	-3 Days =	06 APR 2023	14.34	0.06
09APR23	-4 Days =	05 APR 2023	14.39	0.11
09APR23	-5 Days =	04 APR 2023	14.44	0.16
09APR23	-6 Days =	03 APR 2023	14.47	0.19
09APR23	-7 Days =	02 APR 2023	14.50	0.22
09APR23	-30 Days =	10 MAR 2023	15.18	0.90
09APR23	-1 Year =	09 APR 2022	13.65	-0.63
09APR23	-2 Year =	09 APR 2021	14.15	-0.13

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
09APR23	Today =	09 APR 2023	-2131	MON	2441
09APR23	-1 Day =	08 APR 2023	-2327	SUN	-1069
09APR23	-2 Days =	07 APR 2023	-2245	SAT	-3765
09APR23	-3 Days =	06 APR 2023	-2087	FRI	-5534
09APR23	-4 Days =	05 APR 2023	-1775	THU	-5411
09APR23	-5 Days =	04 APR 2023	-1481	WED	-986
09APR23	-6 Days =	03 APR 2023	-1540	TUE	-996
09APR23	-7 Days =	02 APR 2023	-1501	MON	354
09APR23	-8 Days =	01 APR 2023	-2143	SUN	-2649
09APR23	-9 Days =	31 MAR 2023	-2100	SAT	-4682
09APR23	-10 Days =	30 MAR 2023	-1885	FRI	2300
09APR23	-11 Days =	29 MAR 2023	-2089	THU	-5597
09APR23	-12 Days =	28 MAR 2023	-2330	WED	-1682
09APR23	-13 Days =	27 MAR 2023	-2693	TUE	-2564

S65E

		Average Flow over previous 14 days			Avg-Daily Flow
09APR23	Today=	09 APR 2023	508	MON	369
09APR23	-1 Day =	08 APR 2023	526	SUN	338
09APR23	-2 Days =	07 APR 2023	545	SAT	350
09APR23	-3 Days =	06 APR 2023	563	FRI	353
09APR23	-4 Days =	05 APR 2023	581	THU	363
09APR23	-5 Days =	04 APR 2023	600	WED	443
09APR23	-6 Days =	03 APR 2023	612	TUE	522
09APR23	-7 Days =	02 APR 2023	617	MON	558
09APR23	-8 Days =	01 APR 2023	621	SUN	593
09APR23	-9 Days =	31 MAR 2023	622	SAT	515
09APR23	-10 Days =	30 MAR 2023	634	FRI	718
09APR23	-11 Days =	29 MAR 2023	631	THU	795
09APR23	-12 Days =	28 MAR 2023	627	WED	604
09APR23	-13 Days =	27 MAR 2023	631	TUE	597

S65EX1

		Average Flow over previous 14 days			Avg-Daily Flow
09APR23	Today=	09 APR 2023	0	MON	0
09APR23	-1 Day =	08 APR 2023	0	SUN	0
09APR23	-2 Days =	07 APR 2023	0	SAT	0
09APR23	-3 Days =	06 APR 2023	0	FRI	0
09APR23	-4 Days =	05 APR 2023	0	THU	0
09APR23	-5 Days =	04 APR 2023	0	WED	0
09APR23	-6 Days =	03 APR 2023	0	TUE	0
09APR23	-7 Days =	02 APR 2023	0	MON	0
09APR23	-8 Days =	01 APR 2023	0	SUN	0
09APR23	-9 Days =	31 MAR 2023	0	SAT	0
09APR23	-10 Days =	30 MAR 2023	0	FRI	0
09APR23	-11 Days =	29 MAR 2023	0	THU	0
09APR23	-12 Days =	28 MAR 2023	0	WED	0
09APR23	-13 Days =	27 MAR 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)
09 APR 2023	-NR-	3514	3379	4643
08 APR 2023	3133	3215	2359	3432
07 APR 2023	2745	2841	2361	3165
06 APR 2023	2915	3071	2327	3164
05 APR 2023	4079	4318	2461	3802
04 APR 2023	4849	5173	3474	4911
03 APR 2023	4552	4481	3451	5001
02 APR 2023	4027	3269	3132	4410
01 APR 2023	2922	2574	2322	3111
31 MAR 2023	3275	3271	2562	3628
30 MAR 2023	4554	3723	3492	5173
29 MAR 2023	5429	5504	3993	5428
28 MAR 2023	4148	4383	3633	4639
27 MAR 2023	2961	3195	2451	3336

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)
09 APR 2023	71	0	0	0	682
08 APR 2023	79	741	450	104	608
07 APR 2023	95	2153	1298	448	651
06 APR 2023	89	2067	1266	591	670
05 APR 2023	-33	1928	1152	511	595
04 APR 2023	-76	1911	1024	266	156
03 APR 2023	-34	1927	1408	559	508
02 APR 2023	5	1973	1370	250	470
01 APR 2023	30	1490	1170	0	679
31 MAR 2023	31	1001	615	0	638
30 MAR 2023	22	1484	677	126	672
29 MAR 2023	181	1566	684	632	736
28 MAR 2023	107	1639	774	1243	775
27 MAR 2023	117	1734	354	966	755

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
09 APR 2023	-NR-	-NR-	1042
08 APR 2023	-NR-	-NR-	1053
07 APR 2023	-NR-	-NR-	1027
06 APR 2023	2156	-NR-	1020
05 APR 2023	2300	-NR-	1016
04 APR 2023	5	-NR-	1055
03 APR 2023	477	-NR-	1576
02 APR 2023	-1632	-NR-	1065
01 APR 2023	190	-NR-	775
31 MAR 2023	-1216	-NR-	924
30 MAR 2023	-181	-NR-	36
29 MAR 2023	681	-NR-	56
28 MAR 2023	846	-NR-	774
27 MAR 2023	710	-NR-	873

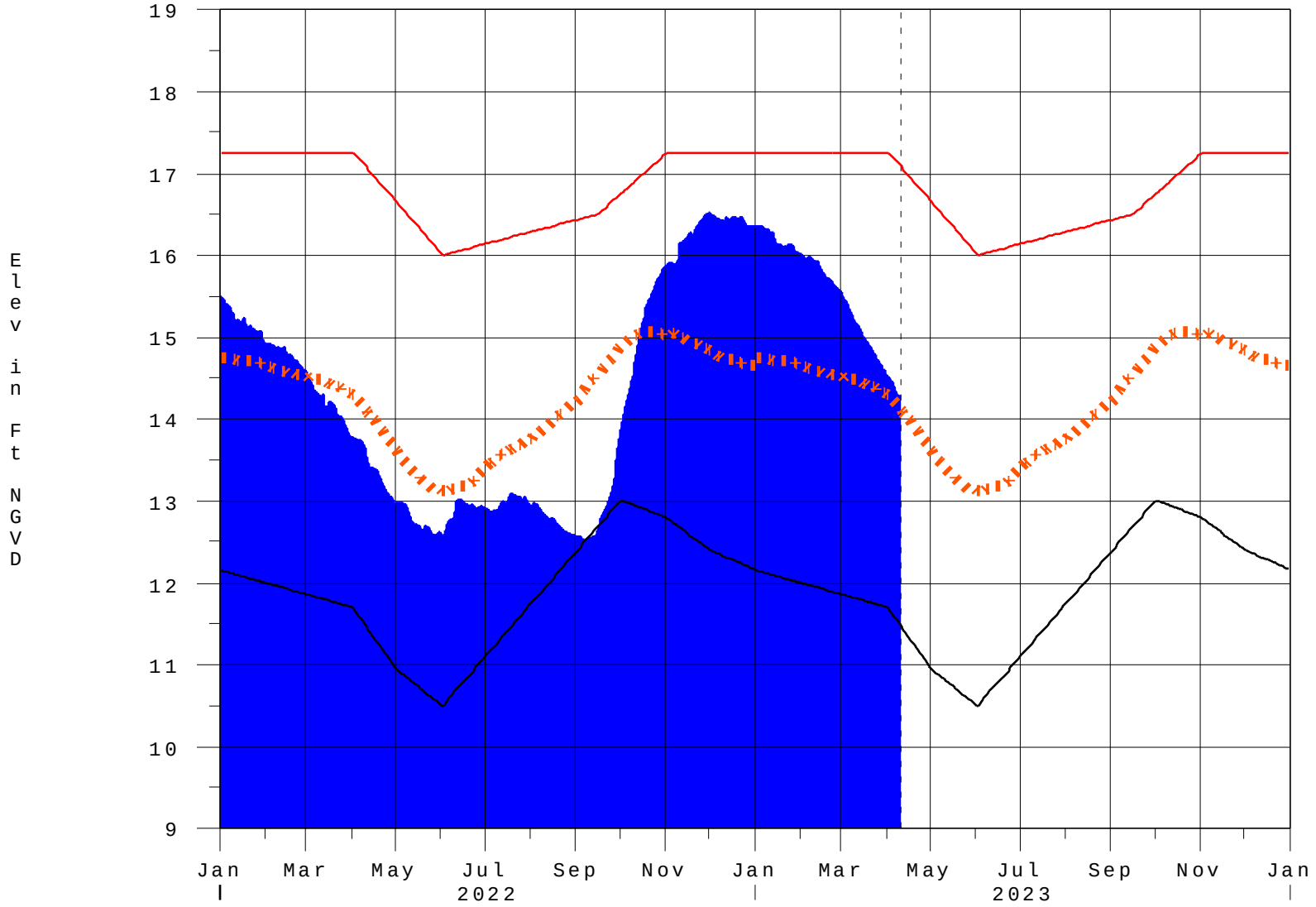
*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(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 10APR2023 @ 08:45  ** Preliminary Data - Subject to Revision **
```

Lake Okeechobee

10APR23 08:37:35



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 >= 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