Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 02/27/2023 (ENSO Condition: La Niña)

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 La Niña years and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with La Niña 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 La Niña ENSO Years**		Sub-sampling of AMO Warm + La Niña ENSO Years***	
	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (Feb-Jul)	N/A	N/A	0.52	Dry	0.64	Dry	0.54	Dry
Multi Seasonal (Feb-Oct)	N/A	N/A	2.17	Normal	2.59	Wet	2.15	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 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:

-1749 cfs 14-day running average for Lake Okeechobee Net Inflow through 02/27/2023.
According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

-1.08 for Palmer Drought Index on 02/25/2023.
According to the classification in Tributary Hydrologic Conditions table, this condition is Near Normal.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 02/27/2023:

Lake Okeechobee Stage: **15.58 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.25	
Operational Band	High sub-band	16.64	
	Intermediate sub-band	15.78	
	Low sub-band	13.50	← 15.58 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.90	
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 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 02/27/2023 (ENSO Condition- La Niña Watch):

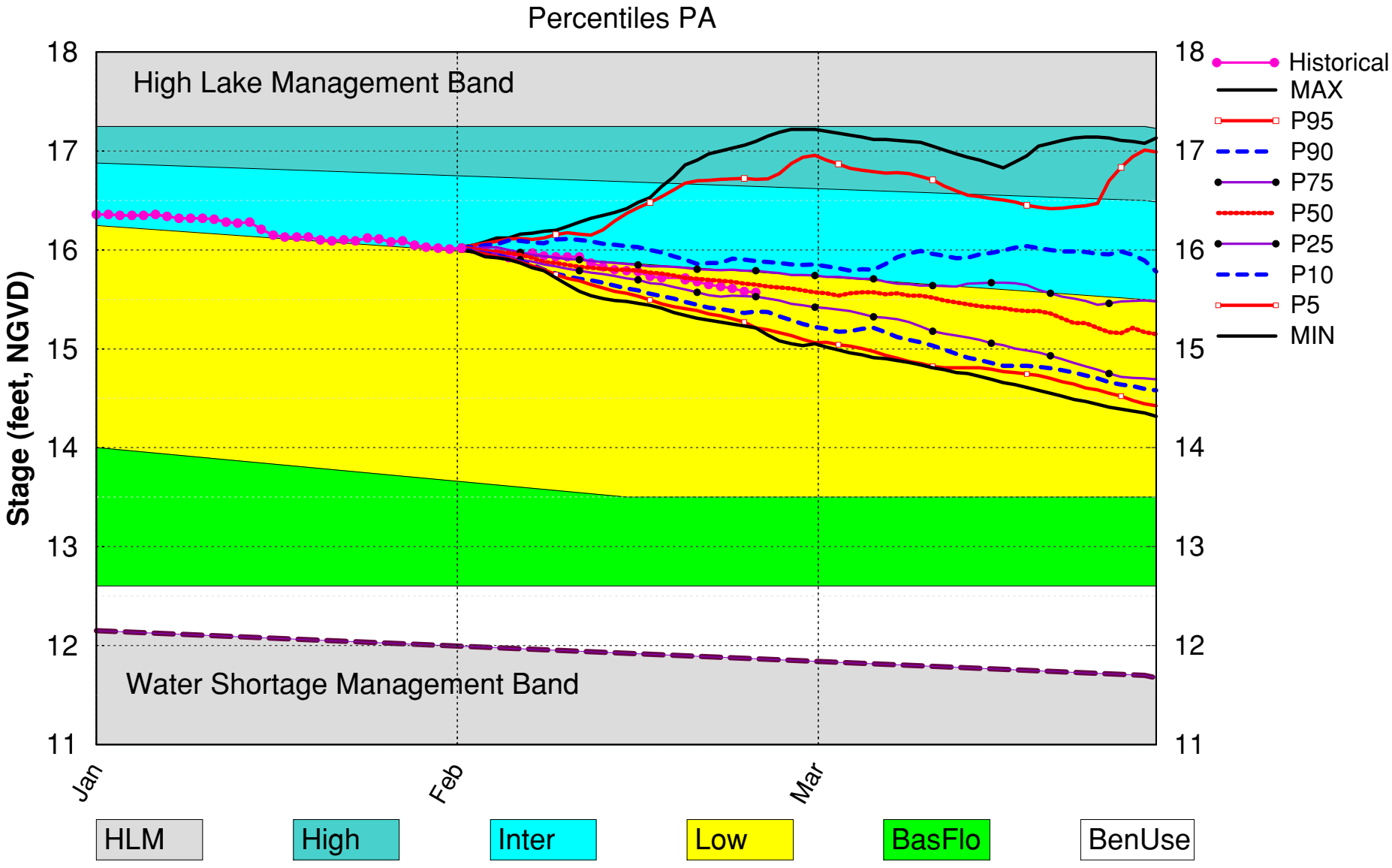
Status for week ending 02/27/2023:

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	-1.08 (Dry)	M
	CPC Precipitation Outlook	1 month: Below Normal	M
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	0.64 ft	M
	ENSO Forecast	Dry	
	LOK Multi-Seasonal Net Inflow Outlook	2.59 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-8C)	Above Line 1 (16.51 ft)	L
	WCA 2A: Site S11B	Above Line 1 (11.94 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (9.35 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.

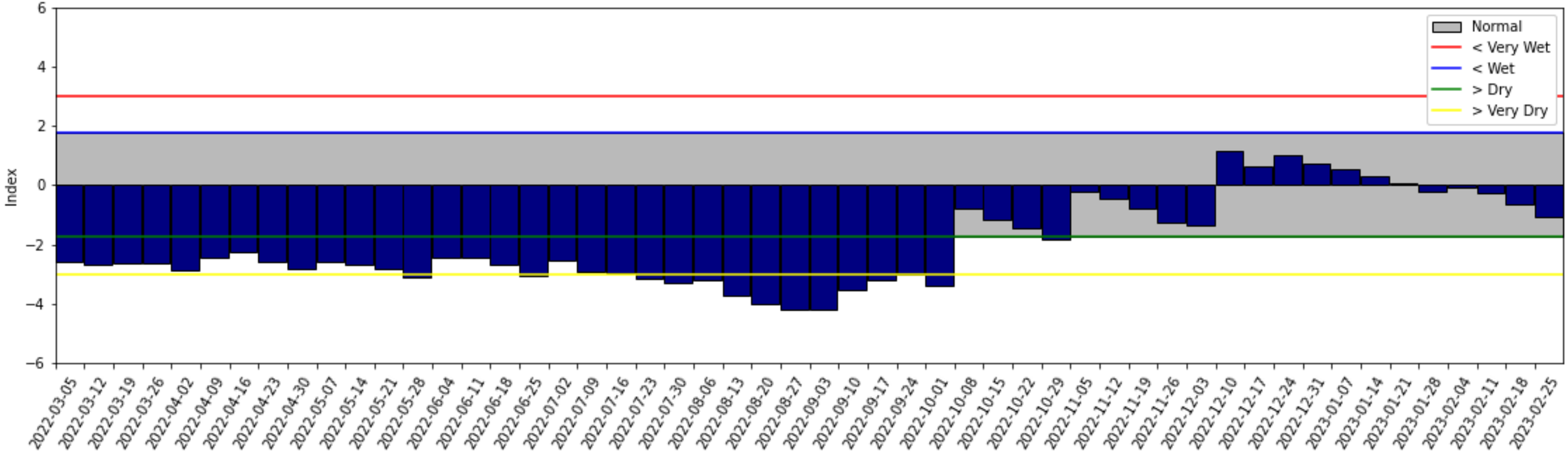
Lake Okeechobee SFWMM February 2023 Position Analysis



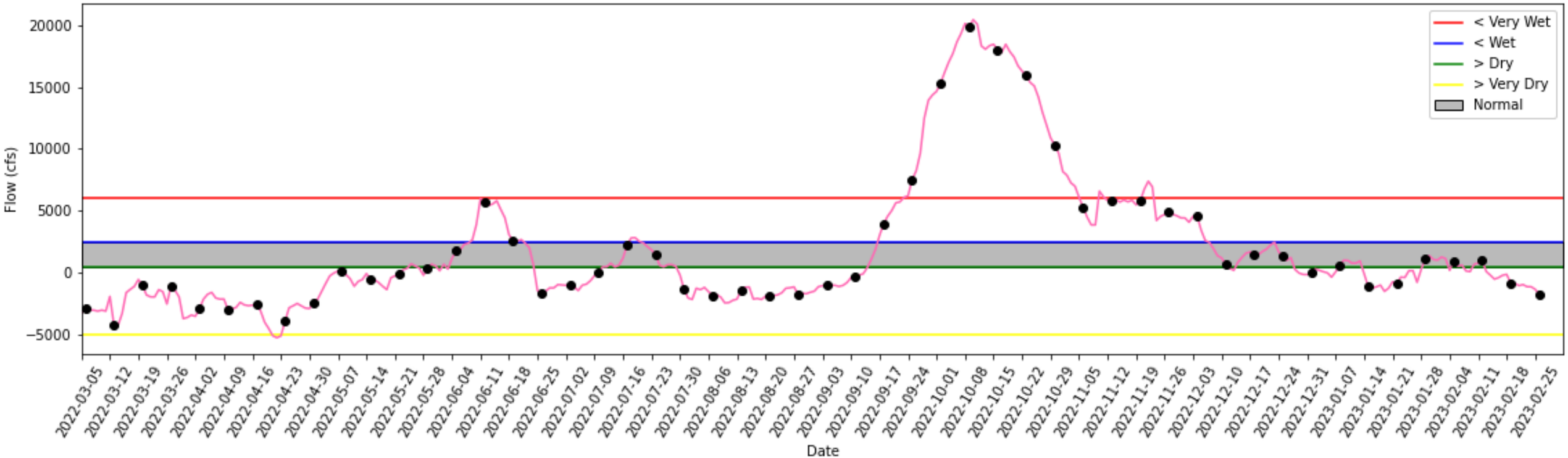
(See assumptions on the Position Analysis Results website)

Tue Feb 28 8:01:26 2023

Tributary Basin Condition Indicators as of February 26 2023



Date



Date

2008 LORS

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

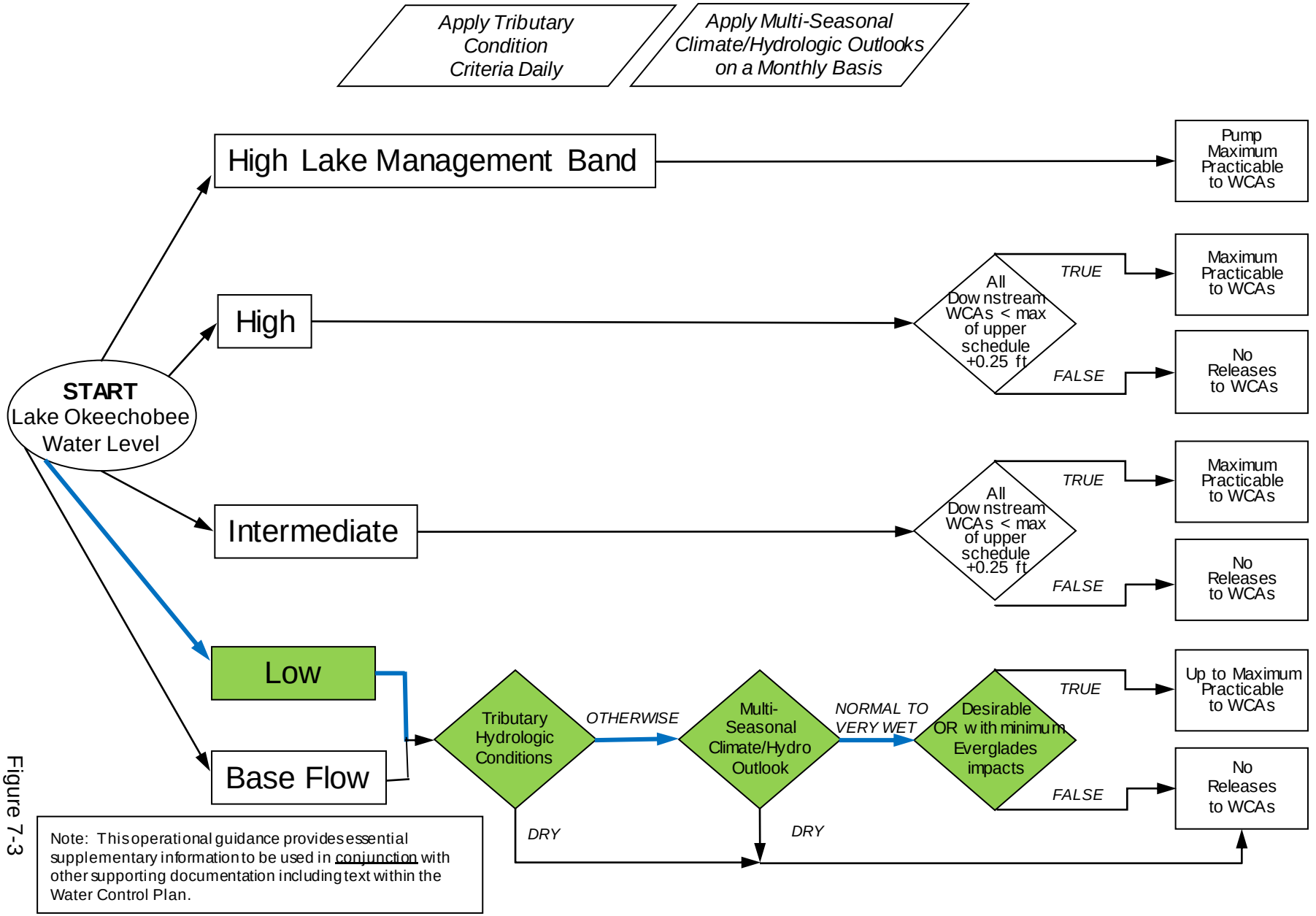
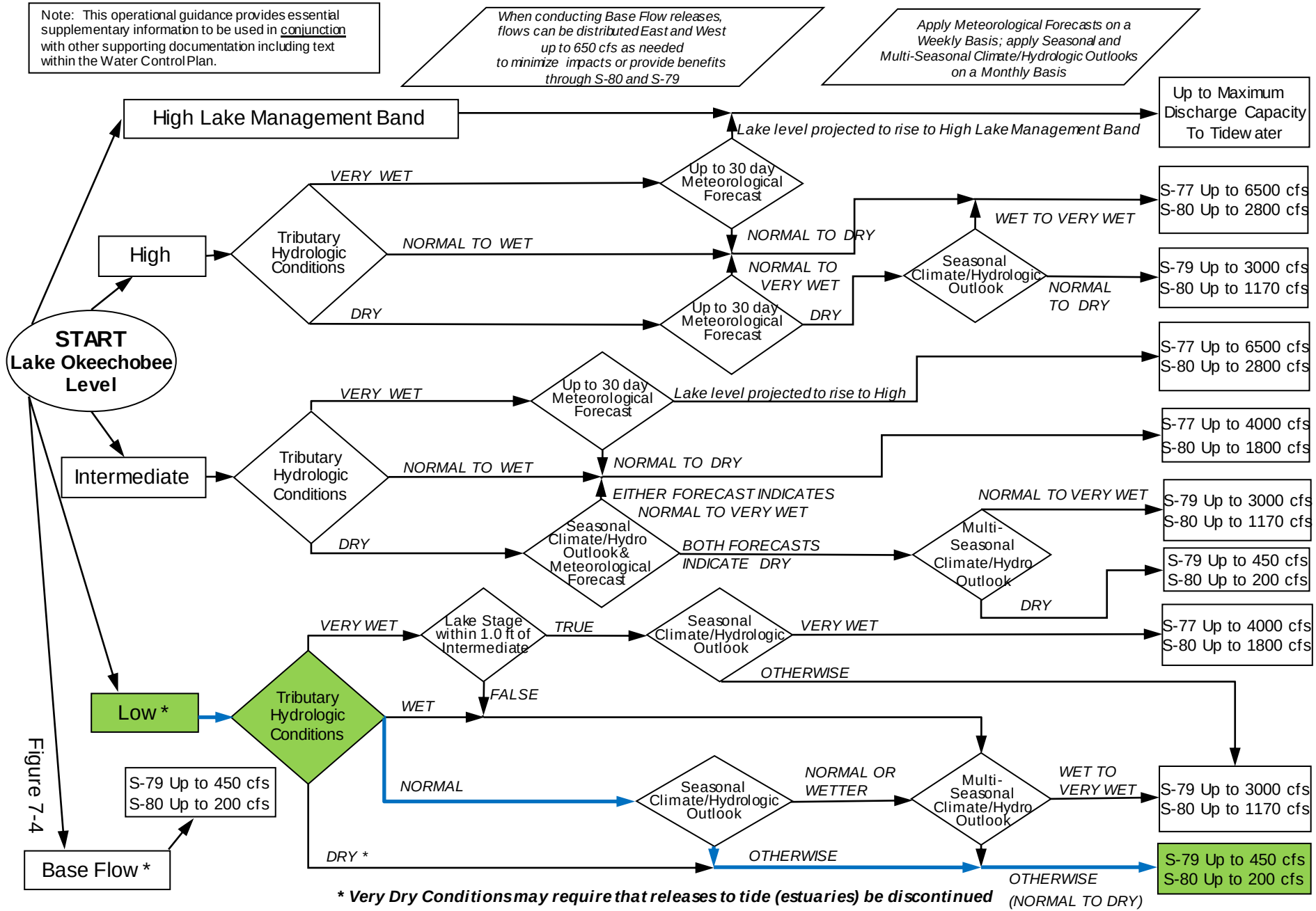


Figure 7-3

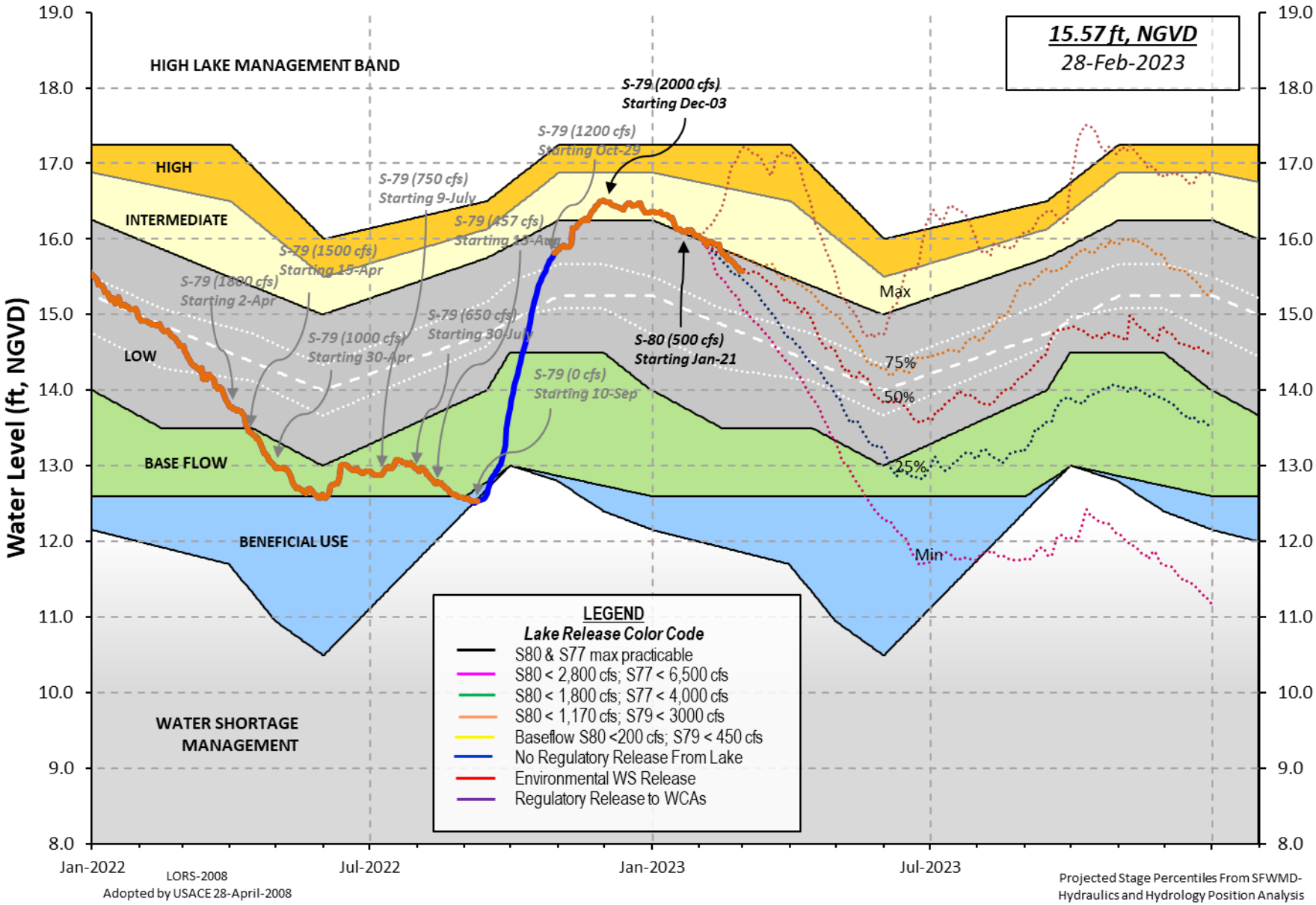
Note: This operational guidance provides essential supplementary information to be used in conjunction with other supporting documentation including text within the Water Control Plan.

2008 LORS

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



Lake Okeechobee Water Level History and Projected Stages



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

Data Ending 2400 hours 26 FEB 2023

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	15.58	14.59	15.36 (Official Elv)

Bottom of High Lake Mngmt= 17.25 Top of Water Short Mngmt= 11.87
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 13.33
Difference from Average LORS2008 2.25

26FEB (1965-2007) Period of Record Average 14.53
Difference from POR Average 1.05

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ◆ 9.52'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ◆ 7.72'
Bridge Clearance = 49.59'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.61	15.57	15.58	15.62	15.51	15.70	15.39	15.49

*Combination Okeechobee Avg-Daily Lake Average = 15.58 (*See Note)

Okeechobee Inflows (cfs):

S65E	1214	S65EX1	0	Fisheating Cr	2
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: 1215

Okeechobee Outflows (cfs):

S135 Culverts	-NR-	S354	301	S77	780

```
  S127 Culverts     0      S351            837      S308            429
  S129 Culverts     0      S352            357
  S131 Culverts     0      L8 Canal Pt     429
Total Outflows:   3133

****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            0.22      S308           0.28
  Average Pan Evap x 0.75 Pan Coefficient =  0.19" =  0.02'

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  -6504 cfs or -12900 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:	13.65	15.47	0	0	0	0	0	0	(cfs)		
S193:	------										
S191:	18.45	15.47	0	0.0	0.0	0.0					
S135 Pumps:	13.27	15.41	0	0	0	0	0	(cfs)			
S135 Culverts:			-NR-	-NR-	0.0						
North West Shore											
S65E:	20.92	15.28	1214	1.1	0.4	0.5	0.7	0.4	0.4		
S65EX1:	20.92	15.28	0								
S127 Pumps:	13.52	15.40	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.10	15.48	0	0	0	0	(cfs)				
S129 Culvert:			0	0.0							
S131 Pumps:	13.06	13.81	0	0	0	(cfs)					
S131 Culvert:			0								
Fisheating Creek nr Palmdale		28.08	2								

```
    nr Lakeport          ______
  C5:          ______     -NR-        0     -NR- -NR- -NR-

South Shore
  S4 Pumps:    12.20      -NR-        0      0    0    0            (cfs)
  S169:        ______     -NR-     -NR-   -NR- -NR- -NR-
  S310:        15.52                -3
  S3 Pumps:    10.77     15.52        0      0    0    0            (cfs)
  S354:        15.52     10.77      301    0.3  0.6
  S2 Pumps:    10.69     15.64        0      0    0    0    0       (cfs)
  S351:        15.64     10.69      837    0.4  1.0  0.8
  S352:        15.78     10.71      357    0.0  1.0
  C10A:         -NR-      -NR-           -NR-  -NR-  -NR-  -NR-  -NR-
  L8 Canal PT            14.90      429

_____________________________________________________________________
                 S351 and S352 Temporary Pumps/S354 Spillway

  S351:        10.69     15.64      837  -NR--NR--NR--NR--NR--NR-
  S352:        10.71     15.78      357  -NR--NR--NR--NR-
  S354:        10.77     15.52      301  -NR--NR--NR--NR-
_____________________________________________________________________

Caloosahatchee River (S77, S78, S79)
  S47B:        14.37     12.63           1.5  1.5
  S47D:        12.58     11.27        0    0.0
  S77:
    Spillway and Sector Preferred Flow:
               15.24     11.13      772  0.0  3.0  0.0  0.0
    Flow Due to Lockages+:            8

  S78:
    Spillway and Sector Flow:
               11.17      2.91      860    0.5  2.5  0.0  0.0
    Flow Due to Lockages+:          -NR-

  S79:
    Spillway and Sector Flow:
                3.09      1.12     1350    0.0  0.0  0.0  1.5  2.0  1.5  0.0  0.0
    Flow Due to Lockages+:            14
    Percent of flow from S77          57%
    Chloride             (ppm)        0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
               15.38     13.91      424  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:            5
```

```
  S153:        19.00     13.83       0    0.0  0.0
  S80:
    Spillway and Sector Flow:
                14.00     -0.07     494    0.0  0.0  0.0  0.0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:        -NR-
    Percent of flow from S308       86%

  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	215	3
S78:	-NR-	0.00	0.00	119	1
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	315	14
S80:	-NR-	0.00	0.00	200	1
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			Difference from 26FEB23
26FEB23	26 FEB 2023	15.58	
26FEB23 -1 Day =	25 FEB 2023	15.61	0.03
26FEB23 -2 Days =	24 FEB 2023	15.63	0.05

26FEB23 -3 Days =	23 FEB 2023	15.65	0.07
26FEB23 -4 Days =	22 FEB 2023	15.68	0.10
26FEB23 -5 Days =	21 FEB 2023	15.70	0.12
26FEB23 -6 Days =	20 FEB 2023	15.72	0.14
26FEB23 -7 Days =	19 FEB 2023	15.72	0.14
26FEB23 -30 Days =	27 JAN 2023	16.06	0.48
26FEB23 -1 Year =	26 FEB 2022	14.59	-0.99
26FEB23 -2 Year =	26 FEB 2021	15.36	-0.22

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
26FEB23 Today =	26 FEB 2023	-1749	MON	-3383
26FEB23 -1 Day =	25 FEB 2023	-1319	SUN	-37
26FEB23 -2 Days =	24 FEB 2023	-1119	SAT	130
26FEB23 -3 Days =	23 FEB 2023	-1109	FRI	-1917
26FEB23 -4 Days =	22 FEB 2023	-942	THU	-445
26FEB23 -5 Days =	21 FEB 2023	-1029	WED	-888
26FEB23 -6 Days =	20 FEB 2023	-833	TUE	2874
26FEB23 -7 Days =	19 FEB 2023	-816	MON	609
26FEB23 -8 Days =	18 FEB 2023	-119	SUN	-7761
26FEB23 -9 Days =	17 FEB 2023	-190	SAT	1393
26FEB23 -10 Days =	16 FEB 2023	-384	FRI	1444
26FEB23 -11 Days =	15 FEB 2023	-500	THU	-1992
26FEB23 -12 Days =	14 FEB 2023	-186	WED	-4702
26FEB23 -13 Days =	13 FEB 2023	108	TUE	-9816

S65E

	Average Flow over previous 14 days			Avg-Daily Flow
26FEB23 Today=	26 FEB 2023	1437	MON	1351
26FEB23 -1 Day =	25 FEB 2023	1448	SUN	1372
26FEB23 -2 Days =	24 FEB 2023	1458	SAT	1391
26FEB23 -3 Days =	23 FEB 2023	1466	FRI	1404
26FEB23 -4 Days =	22 FEB 2023	1477	THU	1436
26FEB23 -5 Days =	21 FEB 2023	1489	WED	1547
26FEB23 -6 Days =	20 FEB 2023	1492	TUE	1432
26FEB23 -7 Days =	19 FEB 2023	1500	MON	1390
26FEB23 -8 Days =	18 FEB 2023	1514	SUN	1431
26FEB23 -9 Days =	17 FEB 2023	1521	SAT	1563
26FEB23 -10 Days =	16 FEB 2023	1520	FRI	1424
26FEB23 -11 Days =	15 FEB 2023	1529	THU	1434
26FEB23 -12 Days =	14 FEB 2023	1535	WED	1434
26FEB23 -13 Days =	13 FEB 2023	1531	TUE	1503

S65EX1

	Average Flow over previous 14 days	Avg-Daily Flow

26FEB23	Today=	26 FEB 2023	0	MON	0
26FEB23	-1 Day =	25 FEB 2023	0	SUN	0
26FEB23	-2 Days =	24 FEB 2023	0	SAT	0
26FEB23	-3 Days =	23 FEB 2023	0	FRI	0
26FEB23	-4 Days =	22 FEB 2023	0	THU	0
26FEB23	-5 Days =	21 FEB 2023	0	WED	0
26FEB23	-6 Days =	20 FEB 2023	0	TUE	0
26FEB23	-7 Days =	19 FEB 2023	0	MON	0
26FEB23	-8 Days =	18 FEB 2023	0	SUN	0
26FEB23	-9 Days =	17 FEB 2023	0	SAT	0
26FEB23	-10 Days =	16 FEB 2023	0	FRI	0
26FEB23	-11 Days =	15 FEB 2023	0	THU	0
26FEB23	-12 Days =	14 FEB 2023	0	WED	0
26FEB23	-13 Days =	13 FEB 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)
26 FEB 2023	1471	1970	-NR-	2712
25 FEB 2023	4138	4758	-NR-	2964
24 FEB 2023	4617	4060	-NR-	4279
23 FEB 2023	5119	4100	4484	5471
22 FEB 2023	5206	4878	4075	5601
21 FEB 2023	5864	3677	3207	4009
20 FEB 2023	5679	2522	2205	3079
19 FEB 2023	5649	2329	1782	2593
18 FEB 2023	5729	2907	1915	2934
17 FEB 2023	5771	2883	2111	2898
16 FEB 2023	5823	2618	2207	3094
15 FEB 2023	5638	4211	3052	3771
14 FEB 2023	4327	5664	-NR-	4586
13 FEB 2023	3584	4162	-NR-	5345

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)
26 FEB 2023	-6	1660	707	597	850
25 FEB 2023	-6	1454	674	639	835
24 FEB 2023	-9	1476	727	534	792
23 FEB 2023	-2	1693	600	306	610
22 FEB 2023	1	1434	454	125	485
21 FEB 2023	-4	1576	537	320	725
20 FEB 2023	3	1304	274	269	552
19 FEB 2023	-12	1051	173	421	586
18 FEB 2023	-5	1233	216	373	565

17 FEB 2023	8	1748	508	408	591
16 FEB 2023	2	1867	489	647	635
15 FEB 2023	3	1987	438	719	642
14 FEB 2023	14	1135	426	340	669
13 FEB 2023	******	692	154	560	486

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
26 FEB 2023	826	-NR-	-NR-
25 FEB 2023	764	-NR-	774
24 FEB 2023	739	-NR-	862
23 FEB 2023	823	-NR-	972
22 FEB 2023	5	-NR-	757
21 FEB 2023	4	-NR-	953
20 FEB 2023	731	-NR-	359
19 FEB 2023	881	-NR-	973
18 FEB 2023	826	-NR-	854
17 FEB 2023	910	-NR-	666
16 FEB 2023	898	-NR-	859
15 FEB 2023	923	-NR-	553
14 FEB 2023	973	-NR-	962
13 FEB 2023	892	-NR-	960

*** 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

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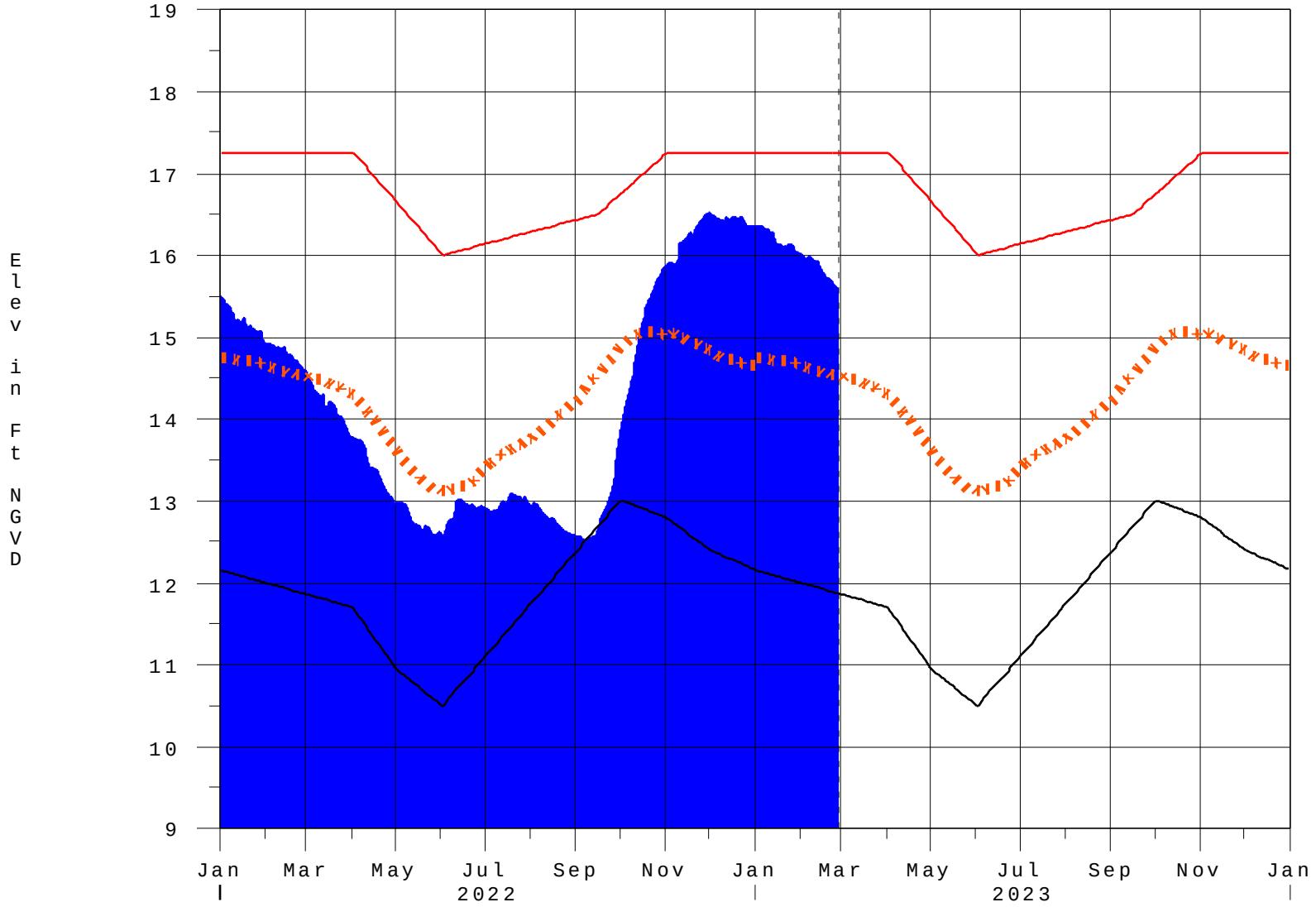
* On 11 May 1999, Lake Okeechobee Elevation was switched from Instantaneous 2400 value to an average-daily lake average.
On 14 Mar 2001, due to the isolation of various gages within the standard 10 stations, the average of the interior 4 station gages was used as the Lake Okeechobee Elevation.
On 05 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 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 27FEB2023 @ 09:15 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

27FEB23 09:17:21



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