Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 2/26/2024 (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 (Feb-Jul)	N/A	N/A	1.15	Normal	1.63	Wet	1.91	Wet
Multi Seasonal (Feb-Oct)	N/A	N/A	2.79	Wet	3.30	Wet	4.63	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:

4196 cfs 14-day running average for Lake Okeechobee Net Inflow through 2/26/2024. According to the classification in Tributary Hydrologic Conditions table, this condition is Wet.

0.96 for Palmer Drought Index on 2/24/2024. According to the classification in Tributary Hydrologic Conditions table, this condition is Near Normal.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 2/26/2024:

Lake Okeechobee Stage: **16.23 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.25	
Operational Band	High sub-band	16.65	
	Intermediate sub-band	15.79	← 16.23 ft
	Low sub-band	13.50	
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.87	
Water Shortage Management Band			

Part C of LORS2008: Discharge to WCAs

Maximum Practicable 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 2/26/2024 (ENSO Condition- El Niño):

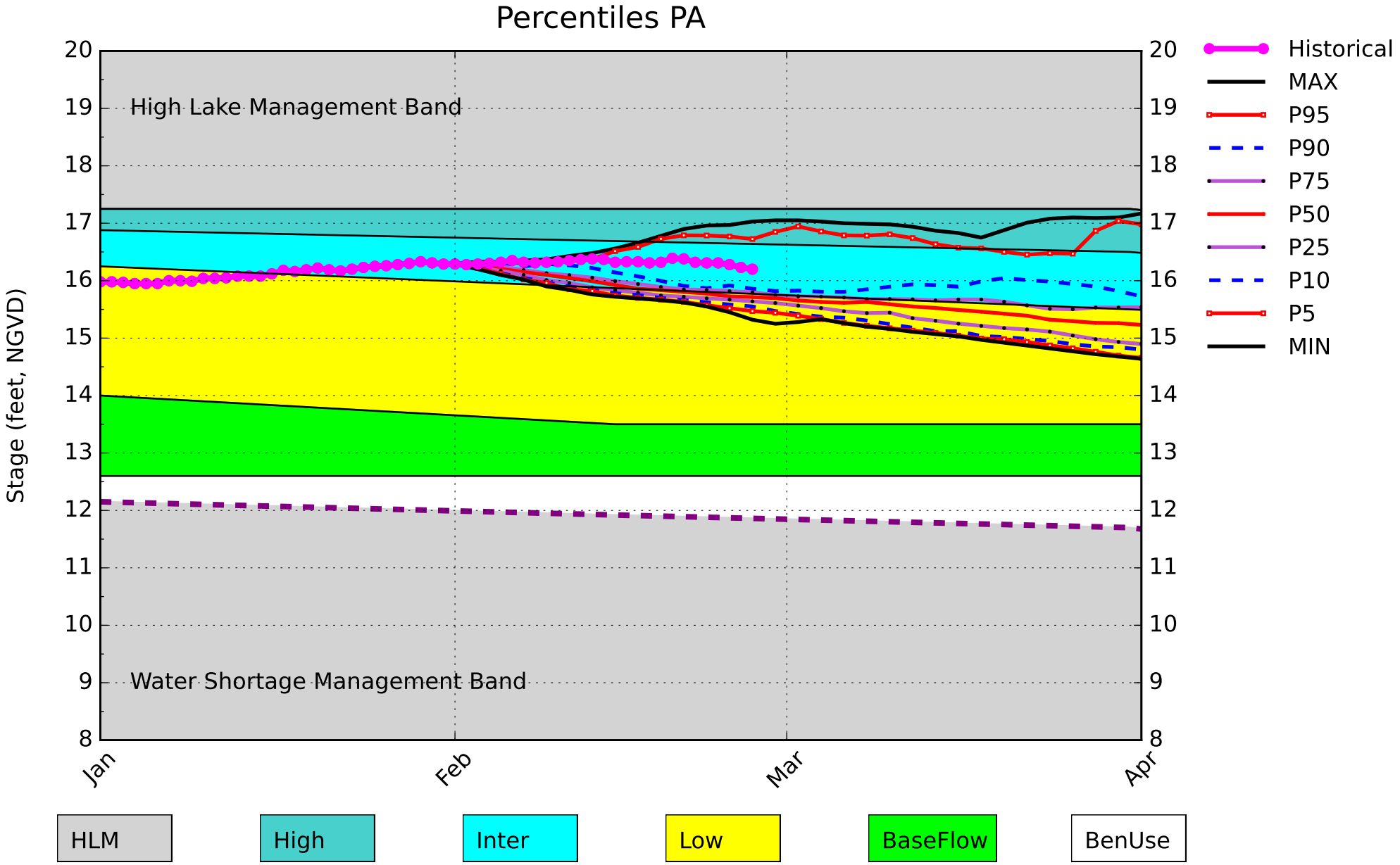
Status for week ending 2/26/2024:

Water Supply Risk Evaluation

Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Intermediate Sub-band	L
	Palmer Drought Index for LOK Tributary Conditions	0.96 (Normal to Extremely Wet)	L
	CPC Precipitation Outlook	1 month: Above Normal	L
		3 months: Above Normal	L
	LOK Seasonal Net Inflow Outlook	1.63 ft	L
	ENSO Forecast	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	3.30 ft	L
	ENSO Forecast	Wet	
WCAs	WCA 1: Site 1-8C	Above Line 1 (16.99 ft)	L
	WCA 2A: Site S11B	Above Line 1 (12.24 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.44 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.

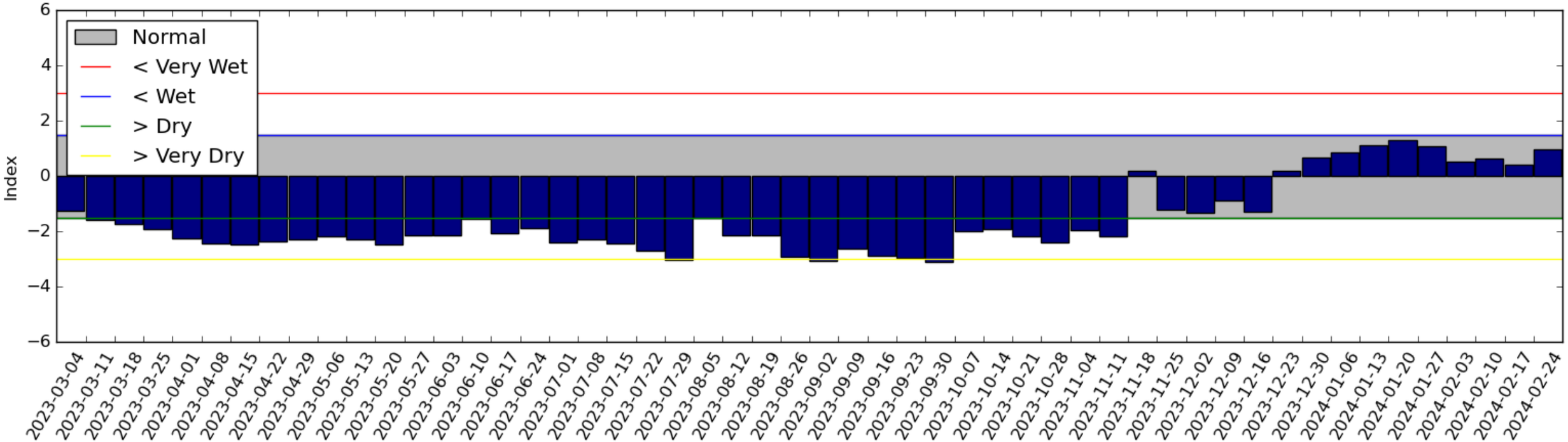
Lake Okeechobee SFWMM February 2024 Position Analysis

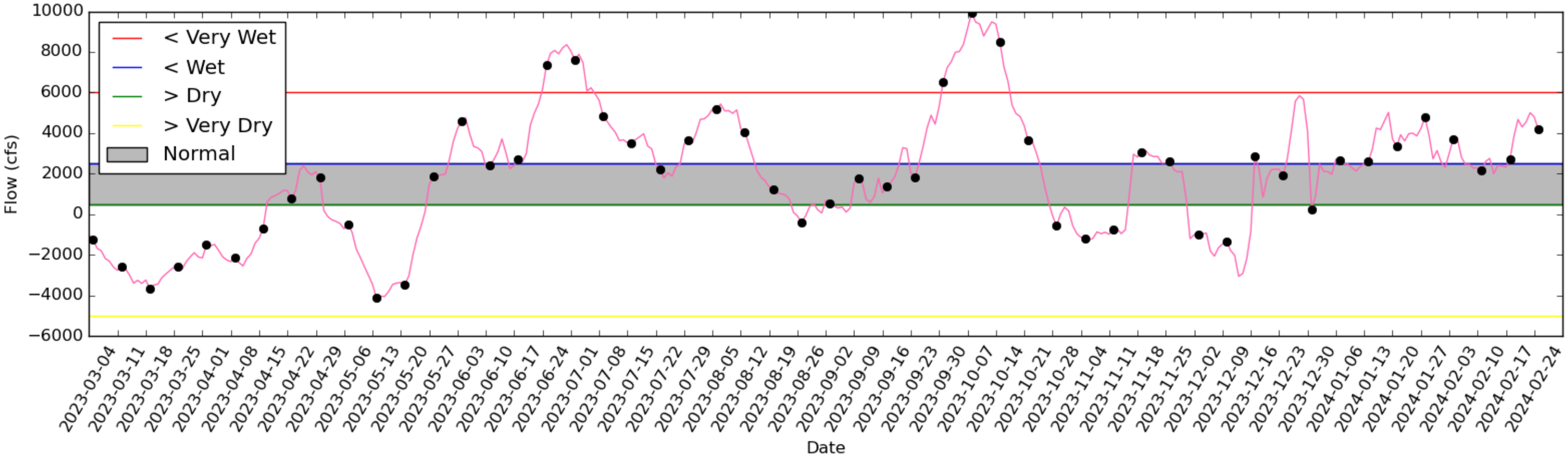


(See assumptions on the Position Analysis Results website)

02/27/24 08:08:21

Tributary Basin Condition Indicators as of February 25 2024





2008 LORS

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

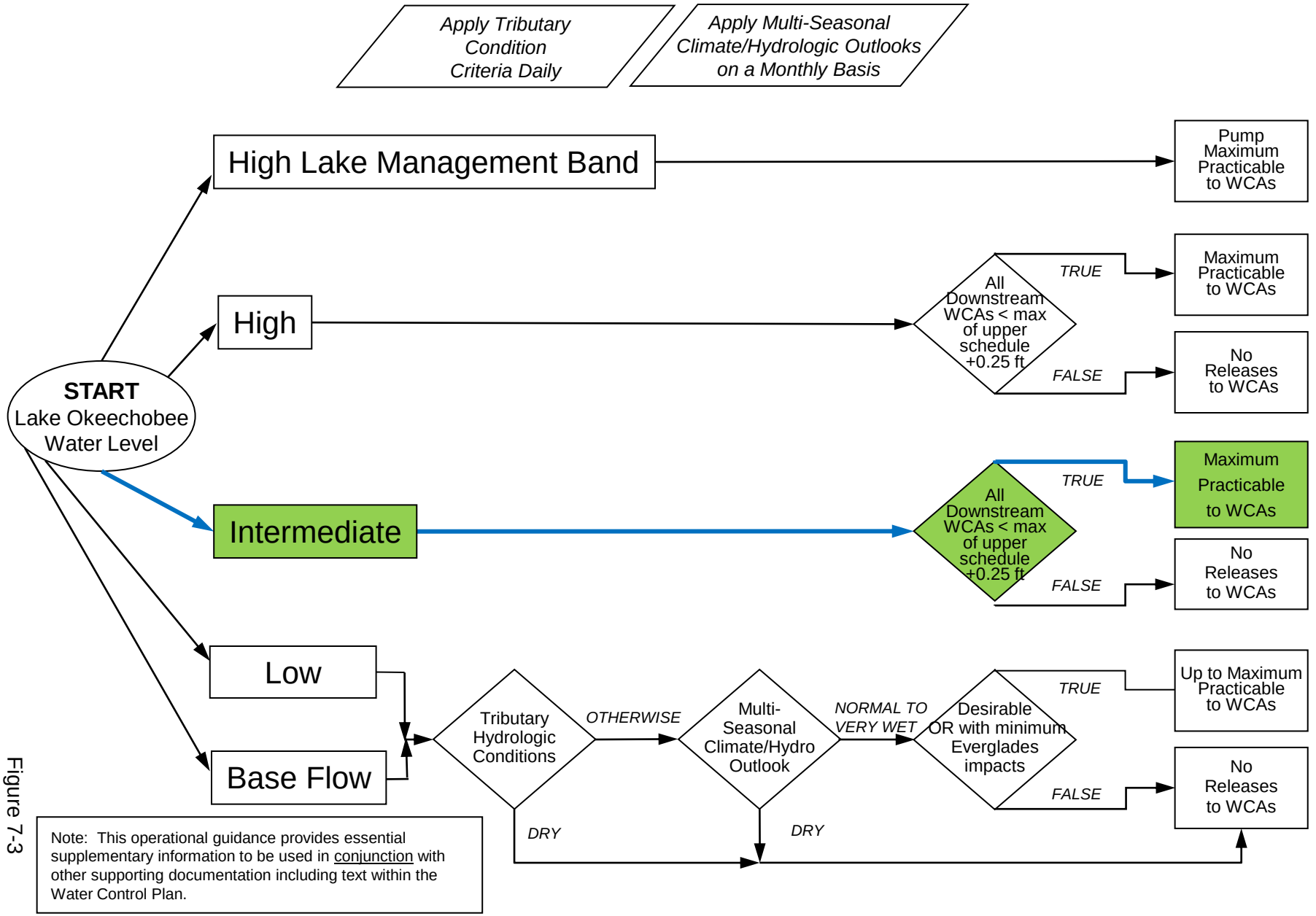


Figure 7-3

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

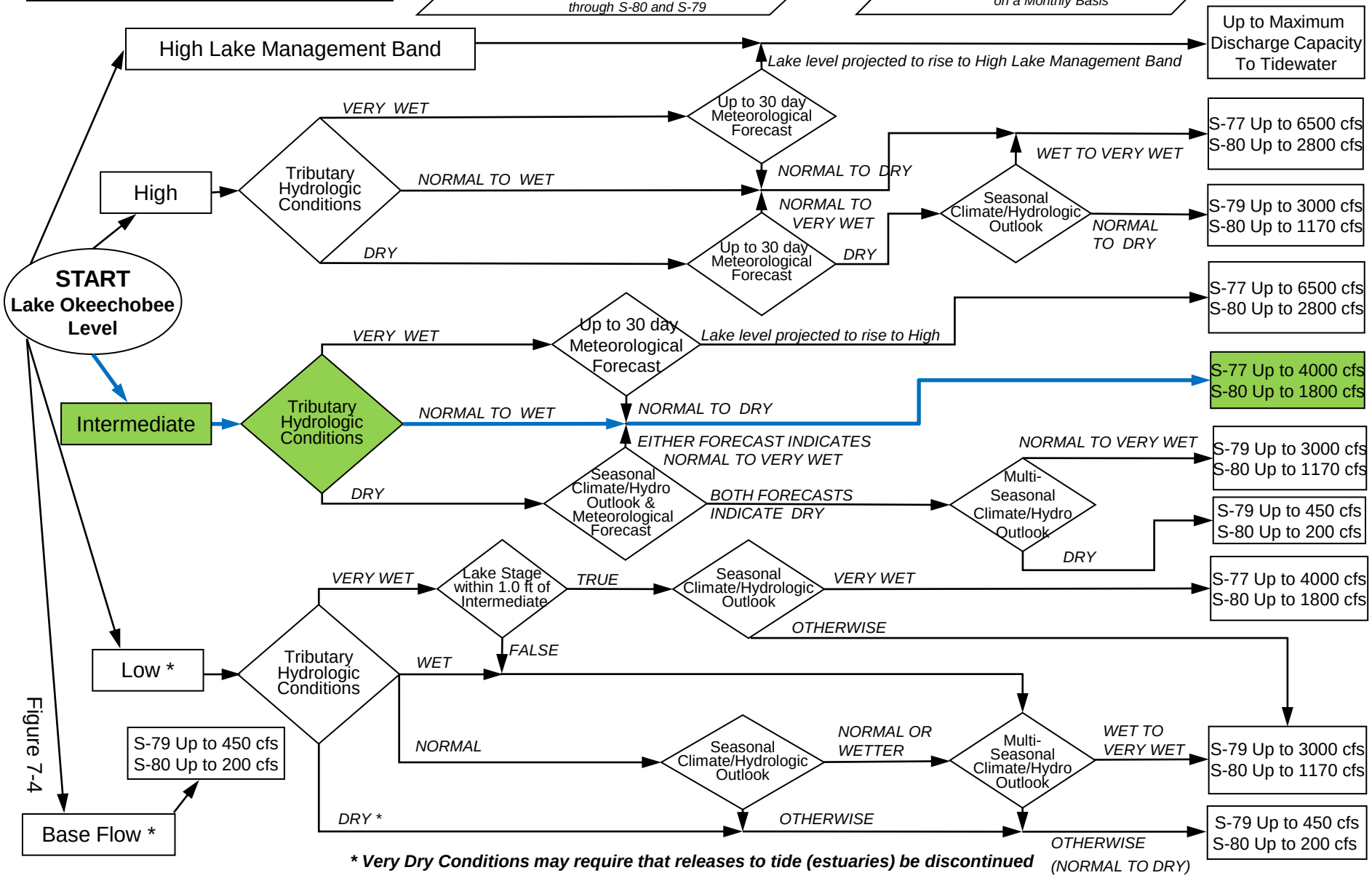
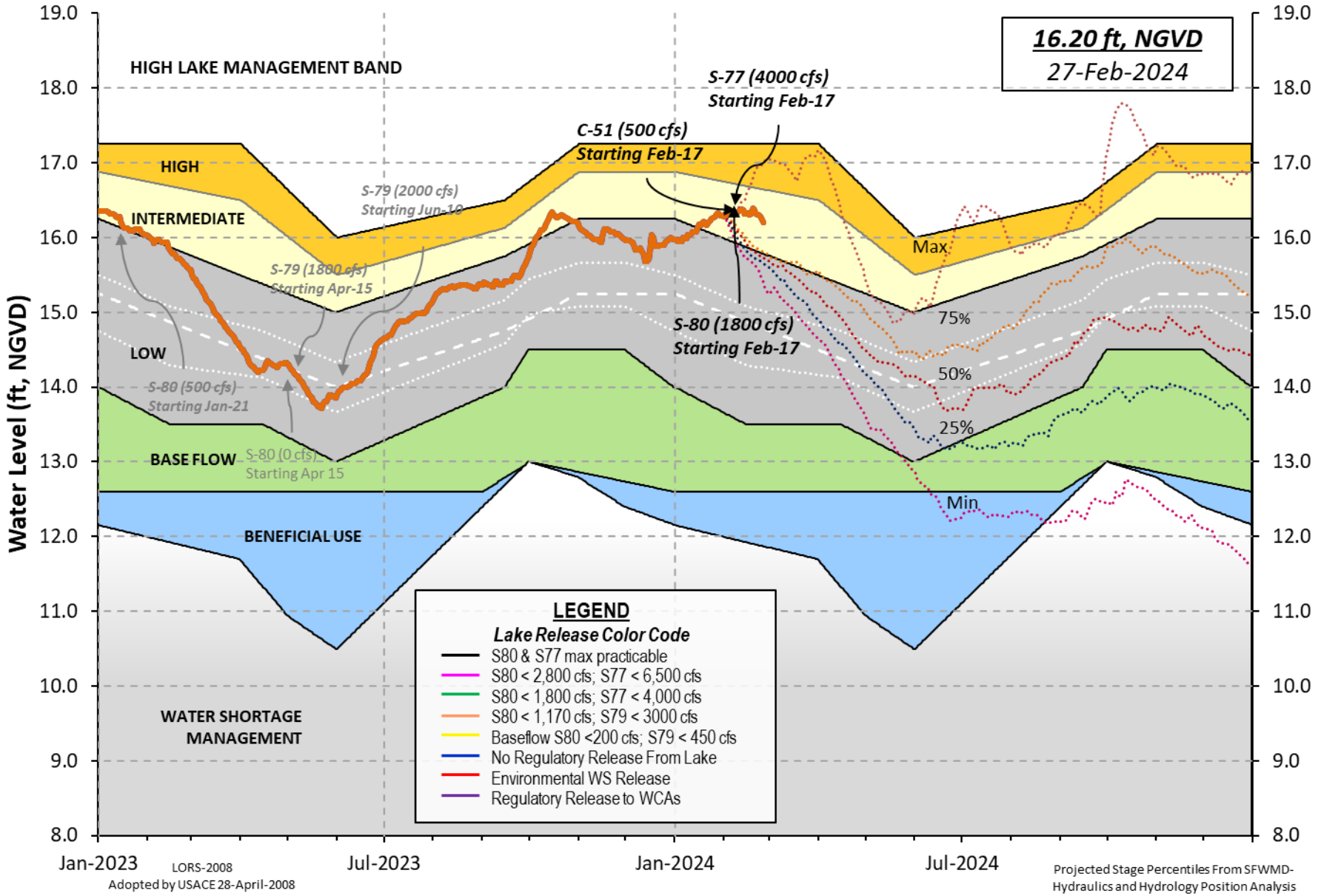


Figure 7-4

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 25 FEB 2024

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	16.23	15.61	14.63 (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] 13.34
Difference from Average LORS2008 2.89

25FEB (1965-2007) Period of Record Average 14.54
Difference from POR Average 1.69

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ◆ 10.17'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ◆ 8.37'
Bridge Clearance = 48.36'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
16.25	16.24	16.21	16.17	16.14	16.36	16.30	16.17

*Combination Okeechobee Avg-Daily Lake Average = 16.23 (*See Note)

Okeechobee Inflows (cfs):

S65E	3011	S65EX1	0	Fisheating Cr	166
S154	15	S191	74	S135 Pumps	0
S84	0	S133 Pumps	0	S2 Pumps	0
S84X	0	S127 Pumps	0	S3 Pumps	0
S71	111	S129 Pumps	0	S4 Pumps	0
S72	345	S131 Pumps	0	C5	0

Total Inflows: 3721

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	815	S77	4455
S127 Culverts	0	S351	0	S308	3498
S129 Culverts	0	S352	58		
S131 Culverts	0	L8 Canal Pt	106		

Total Outflows: 8932

****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	0.19	S308	0.22

Average Pan Evap x 0.75 Pan Coefficient = 0.15" = 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 -11344 cfs or -22500 AC-FT

	Headwater Elevation (ft-msl)	Tailwater Elevation (ft-msl)	Disch (cfs) (I) see note at bottom	Gate Positions #1 (ft)	#2 (ft)	#3 (ft)	#4 (ft)	#5 (ft)	#6 (ft)	#7 (ft)	#8 (ft)
North East Shore											
S133 Pumps:	13.53	16.13	0	0	0	0	0	0	0 (cfs)		
S193:	------										
S191:	19.09	16.15	74	0.0	0.5	0.0					
S135 Pumps:	13.34	16.03	0	0	0	0	0		(cfs)		
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	21.15	15.98	3011	1.8	1.6	1.1	1.8	1.3	1.1		
S65EX1:	21.15	15.98	0								
S127 Pumps:	13.55	16.11	0	0	0	0	0	0	0 (cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.06	16.18	0	0	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	13.05	13.30	0	0	0				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		31.49	166								
nr Lakeport		------									
S282	16.07	15.97		0.0	0.0	0.1					
South Shore											
S4 Pumps:	11.36	-NR-	0	0	0	0			(cfs)		
S169:	------	-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	------		-NR-								
S3 Pumps:	10.67	16.22	0	0	0	0			(cfs)		
S354:	16.22	10.67	815	1.5	1.5						
S2 Pumps:	10.29	16.26	0	-NR-	-NR-	-NR-	-NR-		(cfs)		
S351:	16.26	10.29	0	0.0	0.0	0.0					
S352:	16.31	10.56	58	0.1	0.1						
S271:	16.50	15.07		1.0	1.0	1.0	0.0				
L8 Canal PT		14.77	106								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.29	16.26	0	-NR--NR--NR--NR--NR--NR-	
S352:	10.56	16.31	58	-NR--NR--NR--NR-	
S354:	10.67	16.22	815	-NR--NR--NR--NR-	
Caloosahatchee River (S77, S78, S79)					
S47B:	13.35	12.23		0.5	0.5
S47D:	12.23	10.81	0	0.0	
S77:					
Spillway and Sector Preferred Flow:					
	15.75	10.79	4450	3.5	3.5 4.0 3.5
Flow Due to Lockages+:			5		
S78:					

```
    Spillway and Sector Flow:
              10.55      3.21    4878    4.0  4.5  6.0  0.0
    Flow Due to Lockages+:          21

  S79:
    Spillway and Sector Flow:
               3.13      0.69    5730    0.0  3.0  3.0  3.0  3.0  3.0  3.0  0.0
    Flow Due to Lockages+:           8
    Percent of flow from S77        78%
    Chloride            (ppm)      0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
              16.36     15.14    3496  4.0  5.0  5.0  4.0
    Flow Due to Lockages+:           2

  S153:        19.05     14.84       2    0.0  0.5
  S80:
    Spillway and Sector Flow:
              12.28      1.76    2190    0.0  2.0  2.0  2.0  2.0  2.0  0.0
    Flow Due to Lockages+:          10
    Percent of flow from S308      160%

  Steele Point Top Salinity    (mg/ml) ****
  Steele Point Bottom Salinity (mg/ml) ****

  Speedy Point Top Salinity    (mg/ml) 6978
  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:	5.23	5.46	5.46	357	3
S78:	0.01	0.01	0.02	278	1
S79:	1.35	1.52	1.52	289	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:	0.00	0.00	0.00	35	1
S80:	0.05	0.10	0.10	-NR-	-NR-
Okeechobee Average (Sites S78, S79 and S80 not included)	2.62	0.42	0.42		
Oke Nexrad Basin Avg	-NR-	0.00	0.00		

```
Okeechobee Lake Elevations  25 FEB 2024          16.23 Difference from 25FEB24
   25FEB24  -1 Day  =       24 FEB 2024          16.28             0.05
```

25FEB24 -2 Days =	23 FEB 2024	16.31	0.08
25FEB24 -3 Days =	22 FEB 2024	16.31	0.08
25FEB24 -4 Days =	21 FEB 2024	16.32	0.09
25FEB24 -5 Days =	20 FEB 2024	16.38	0.15
25FEB24 -6 Days =	19 FEB 2024	16.39	0.16
25FEB24 -7 Days =	18 FEB 2024	16.32	0.09
25FEB24 -30 Days =	26 JAN 2024	16.28	0.05
25FEB24 -1 Year =	25 FEB 2023	15.61	-0.62
25FEB24 -2 Year =	25 FEB 2022	14.63	-1.60

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
25FEB24 Today =	25 FEB 2024	4197	MON	-2270
25FEB24 -1 Day =	24 FEB 2024	4800	SUN	3022
25FEB24 -2 Days =	23 FEB 2024	5006	SAT	9631
25FEB24 -3 Days =	22 FEB 2024	4550	FRI	6832
25FEB24 -4 Days =	21 FEB 2024	4310	THU	-4611
25FEB24 -5 Days =	20 FEB 2024	4677	WED	6403
25FEB24 -6 Days =	19 FEB 2024	3843	TUE	24307
25FEB24 -7 Days =	18 FEB 2024	2699	MON	10784
25FEB24 -8 Days =	17 FEB 2024	2323	SUN	1969
25FEB24 -9 Days =	16 FEB 2024	2386	SAT	2507
25FEB24 -10 Days =	15 FEB 2024	2420	FRI	5071
25FEB24 -11 Days =	14 FEB 2024	2006	THU	-8826
25FEB24 -12 Days =	13 FEB 2024	2761	WED	-163
25FEB24 -13 Days =	12 FEB 2024	2609	TUE	4102

S65E

	Average Flow over previous 14 days			Avg-Daily Flow
25FEB24 Today=	25 FEB 2024	3372	MON	3205
25FEB24 -1 Day =	24 FEB 2024	3355	SUN	3303
25FEB24 -2 Days =	23 FEB 2024	3322	SAT	3603
25FEB24 -3 Days =	22 FEB 2024	3284	FRI	3727
25FEB24 -4 Days =	21 FEB 2024	3236	THU	3862
25FEB24 -5 Days =	20 FEB 2024	3184	WED	3790
25FEB24 -6 Days =	19 FEB 2024	3144	TUE	3844
25FEB24 -7 Days =	18 FEB 2024	3101	MON	3516
25FEB24 -8 Days =	17 FEB 2024	3083	SUN	3290
25FEB24 -9 Days =	16 FEB 2024	3082	SAT	3117
25FEB24 -10 Days =	15 FEB 2024	3100	FRI	3018
25FEB24 -11 Days =	14 FEB 2024	3131	THU	2992
25FEB24 -12 Days =	13 FEB 2024	3165	WED	2918
25FEB24 -13 Days =	12 FEB 2024	3198	TUE	3017

S65EX1

	Average Flow over previous 14 days			Avg-Daily Flow
25FEB24 Today=	25 FEB 2024	0	MON	0
25FEB24 -1 Day =	24 FEB 2024	0	SUN	0
25FEB24 -2 Days =	23 FEB 2024	0	SAT	0
25FEB24 -3 Days =	22 FEB 2024	0	FRI	0
25FEB24 -4 Days =	21 FEB 2024	0	THU	0
25FEB24 -5 Days =	20 FEB 2024	0	WED	0
25FEB24 -6 Days =	19 FEB 2024	0	TUE	0
25FEB24 -7 Days =	18 FEB 2024	0	MON	0
25FEB24 -8 Days =	17 FEB 2024	0	SUN	0
25FEB24 -9 Days =	16 FEB 2024	0	SAT	0
25FEB24 -10 Days =	15 FEB 2024	0	FRI	0
25FEB24 -11 Days =	14 FEB 2024	0	THU	0
25FEB24 -12 Days =	13 FEB 2024	0	WED	0
25FEB24 -13 Days =	12 FEB 2024	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)
25 FEB 2024	8808	-NR-	9656	11367
24 FEB 2024	9763	-NR-	10652	13464
23 FEB 2024	10314	-NR-	10544	12653
22 FEB 2024	10754	-NR-	11031	12248
21 FEB 2024	10562	-NR-	11672	14301
20 FEB 2024	10018	-NR-	12088	14652
19 FEB 2024	9608	-NR-	11992	14651
18 FEB 2024	9767	-NR-	10963	13741
17 FEB 2024	7738	-NR-	8219	10138
16 FEB 2024	2871	-NR-	3074	4675
15 FEB 2024	3247	-NR-	2417	3204
14 FEB 2024	2651	-NR-	2426	3923
13 FEB 2024	3170	-NR-	2397	4057
12 FEB 2024	2228	-NR-	1973	3495

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 FEB 2024	-NR-	0	115	1616	211
24 FEB 2024	-NR-	0	117	1991	209
23 FEB 2024	-NR-	0	116	1043	212
22 FEB 2024	-NR-	0	115	0	209
21 FEB 2024	-NR-	0	120	0	264
20 FEB 2024	-NR-	0	120	0	287
19 FEB 2024	-NR-	0	120	0	199
18 FEB 2024	-NR-	0	124	0	180
17 FEB 2024	-NR-	0	117	508	171
16 FEB 2024	-NR-	0	161	724	159
15 FEB 2024	-NR-	0	207	868	147
14 FEB 2024	-NR-	374	70	1011	168
13 FEB 2024	-NR-	177	70	528	181
12 FEB 2024	-NR-	454	68	422	121

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
25 FEB 2024	6956	-NR-	4362
24 FEB 2024	7064	-NR-	4371
23 FEB 2024	7149	-NR-	4326
22 FEB 2024	6722	-NR-	4795
21 FEB 2024	6678	-NR-	4596
20 FEB 2024	6878	-NR-	4425
19 FEB 2024	7004	-NR-	4444
18 FEB 2024	6909	-NR-	4437
17 FEB 2024	4403	-NR-	3106
16 FEB 2024	1685	-NR-	49
15 FEB 2024	1748	-NR-	47
14 FEB 2024	967	-NR-	43
13 FEB 2024	15	-NR-	35
12 FEB 2024	14	-NR-	32

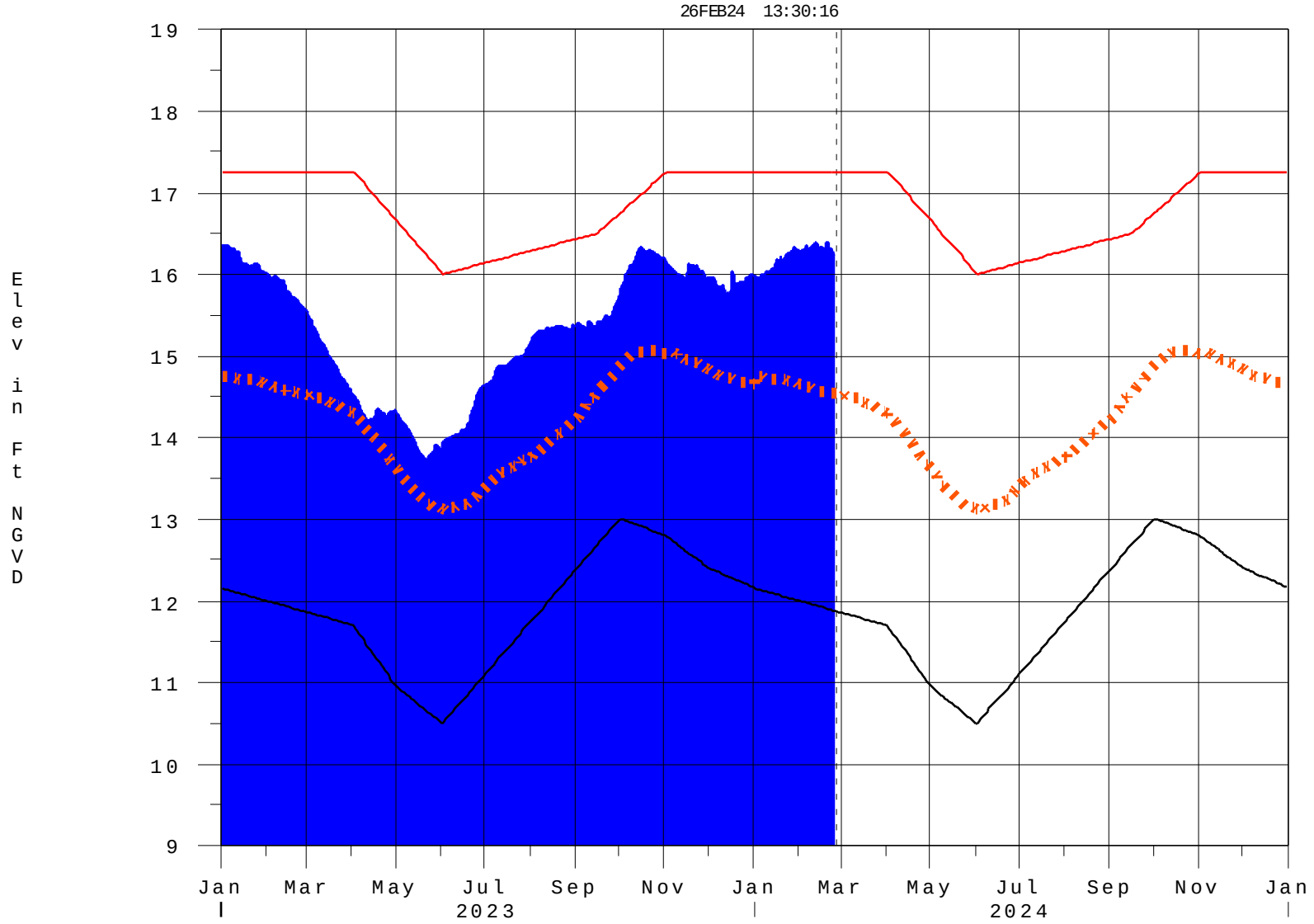
*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(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 26FEB2024 @ 13:38 ** Preliminary Data - Subject to Revision **

Lake Okeechobee



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