Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 01/09/2023 (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 (Jan-Jun)	N/A	N/A	0.26	Dry	0.28	Dry	0.20	Dry
Multi Seasonal (Jan-Oct)	N/A	N/A	2.43	Normal	2.66	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:

597 cfs 14-day running average for Lake Okeechobee Net Inflow through 01/09/2023.
According to the classification in Tributary Hydrologic Conditions table, this condition is Near Normal.

0.55 for Palmer Drought Index on 01/07/2022.
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 01/09/2023:

Lake Okeechobee Stage: **16.32 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.25	
Operational Band	High sub-band	16.85	
	Intermediate sub-band	16.19	← 16.32 ft
	Low sub-band	13.92	
Base Flow sub-band		12.60	
Beneficial Use sub-band		12.11	
Water Shortage Management Band			

Part C of LORS2008: Discharge to WCAs

Maximum practicable to WCAs if “All downstream WCAs < max. of upper schedule + 0.25 ft”. Currently, all WCAs have the potential to receive regulatory releases from Lake Okeechobee.

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 01/09/2023 (ENSO Condition- La Niña Watch):

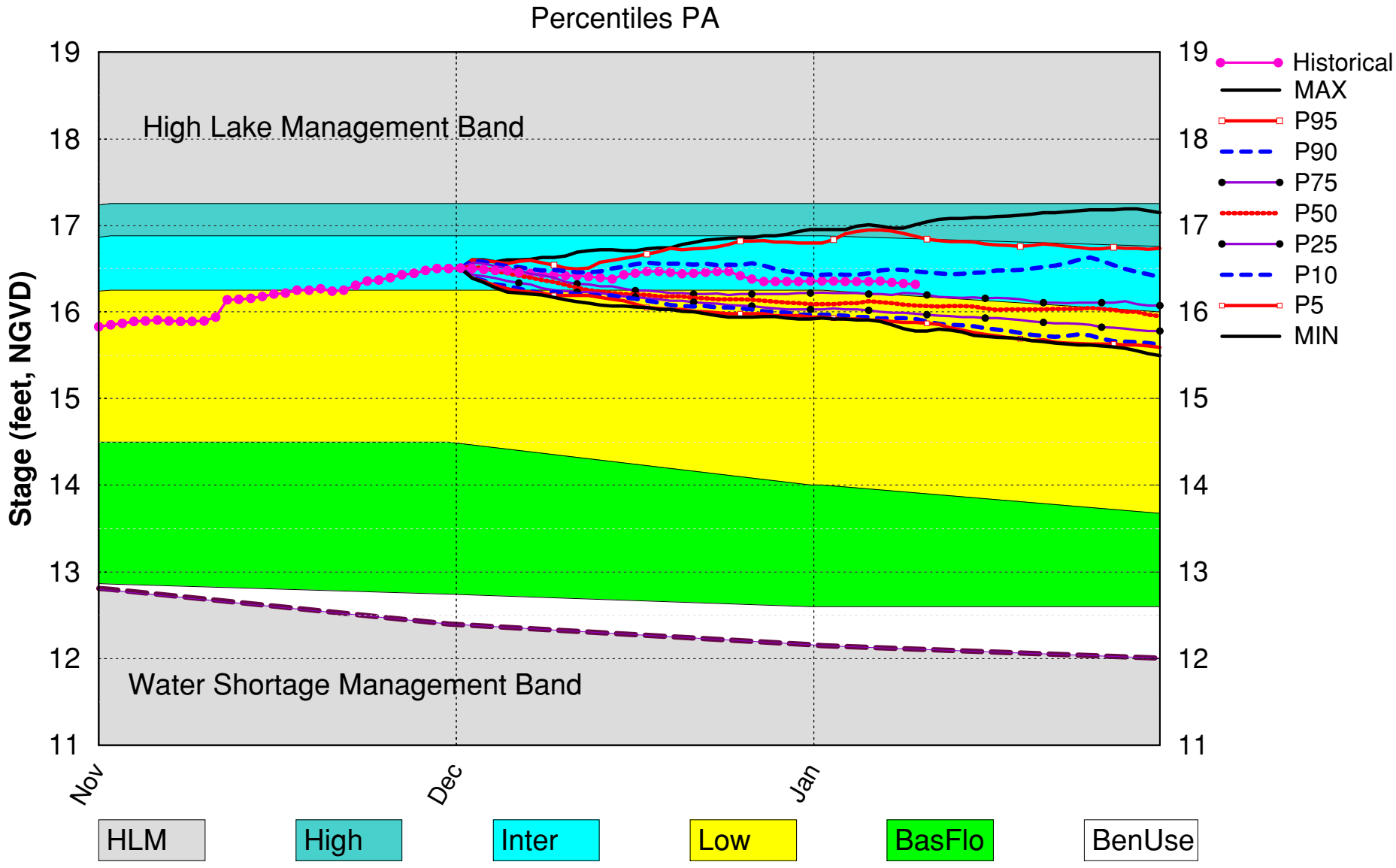
Status for week ending 01/09/2023:

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	0.55 (Normal to Extremely Wet)	L
	CPC Precipitation Outlook	1 month: Normal	L
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	0.28 ft	M
	ENSO Forecast	Dry	
	LOK Multi-Seasonal Net Inflow Outlook	2.66 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-8C)	Above Line 1 (17.27 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (12.34 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.08 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.

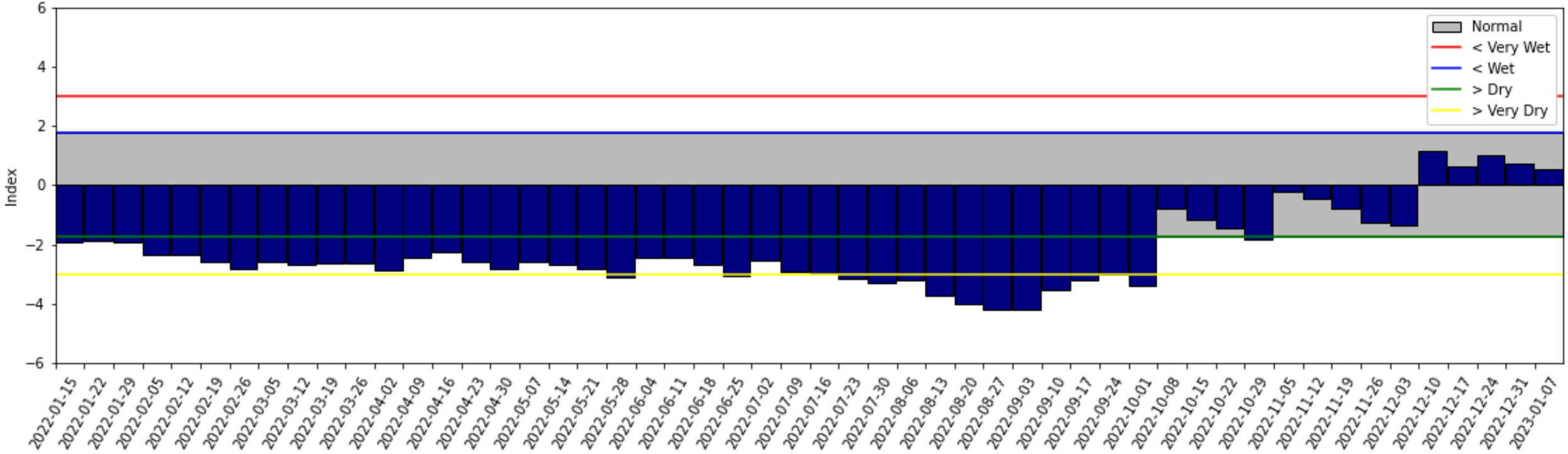
Lake Okeechobee SFWMM December 2022 Position Analysis

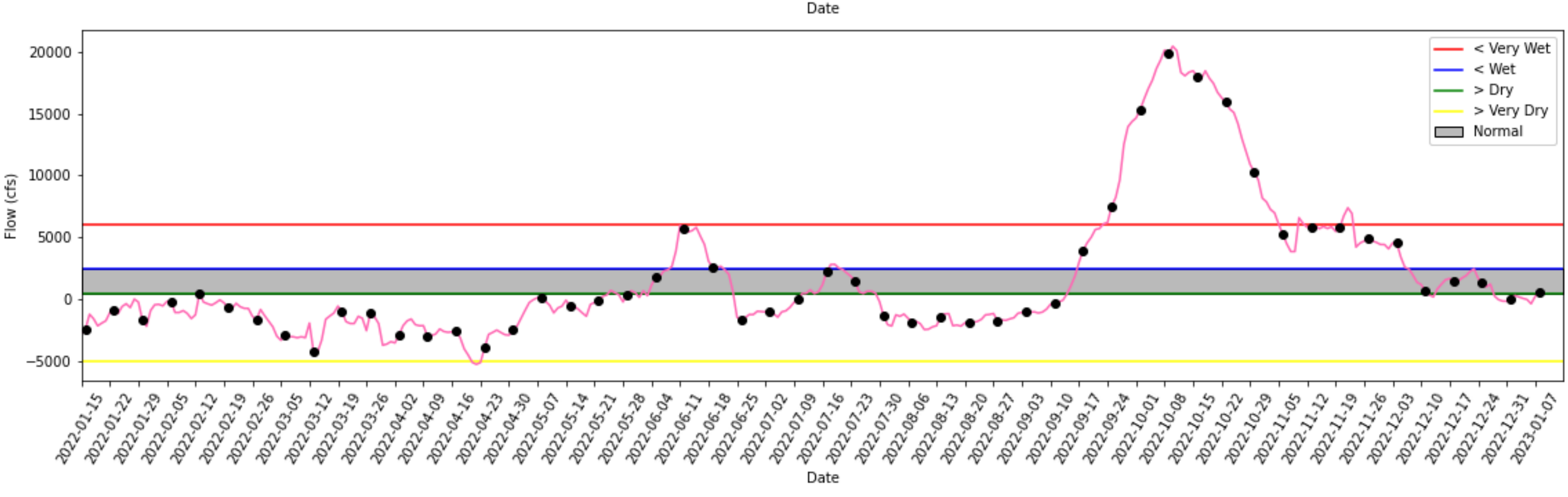


(See assumptions on the Position Analysis Results website)

Tue Jan 10 08:16:00 2023

Tributary Basin Condition Indicators as of January 08 2023





2008 LORS

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

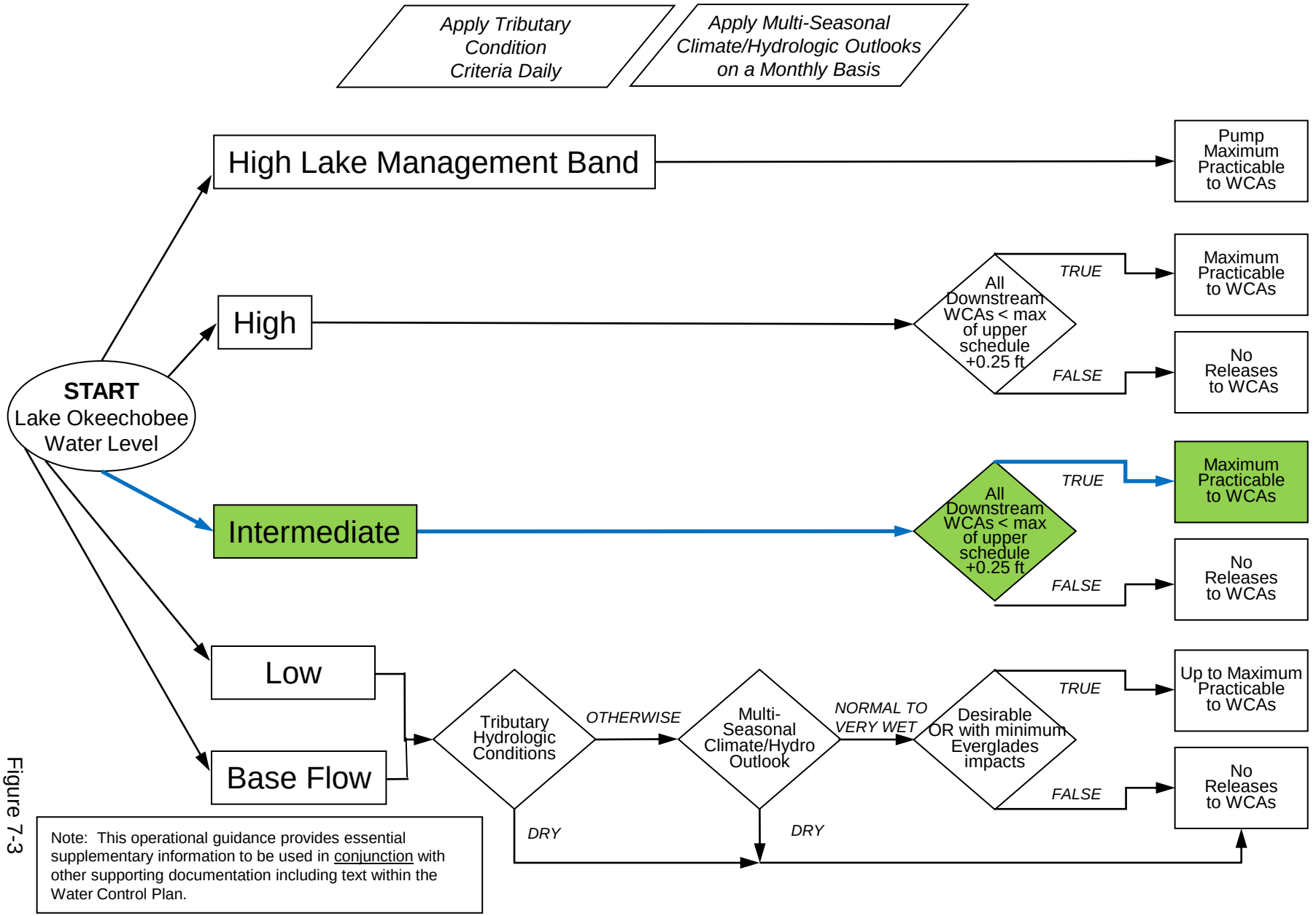


Figure 7-3

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)

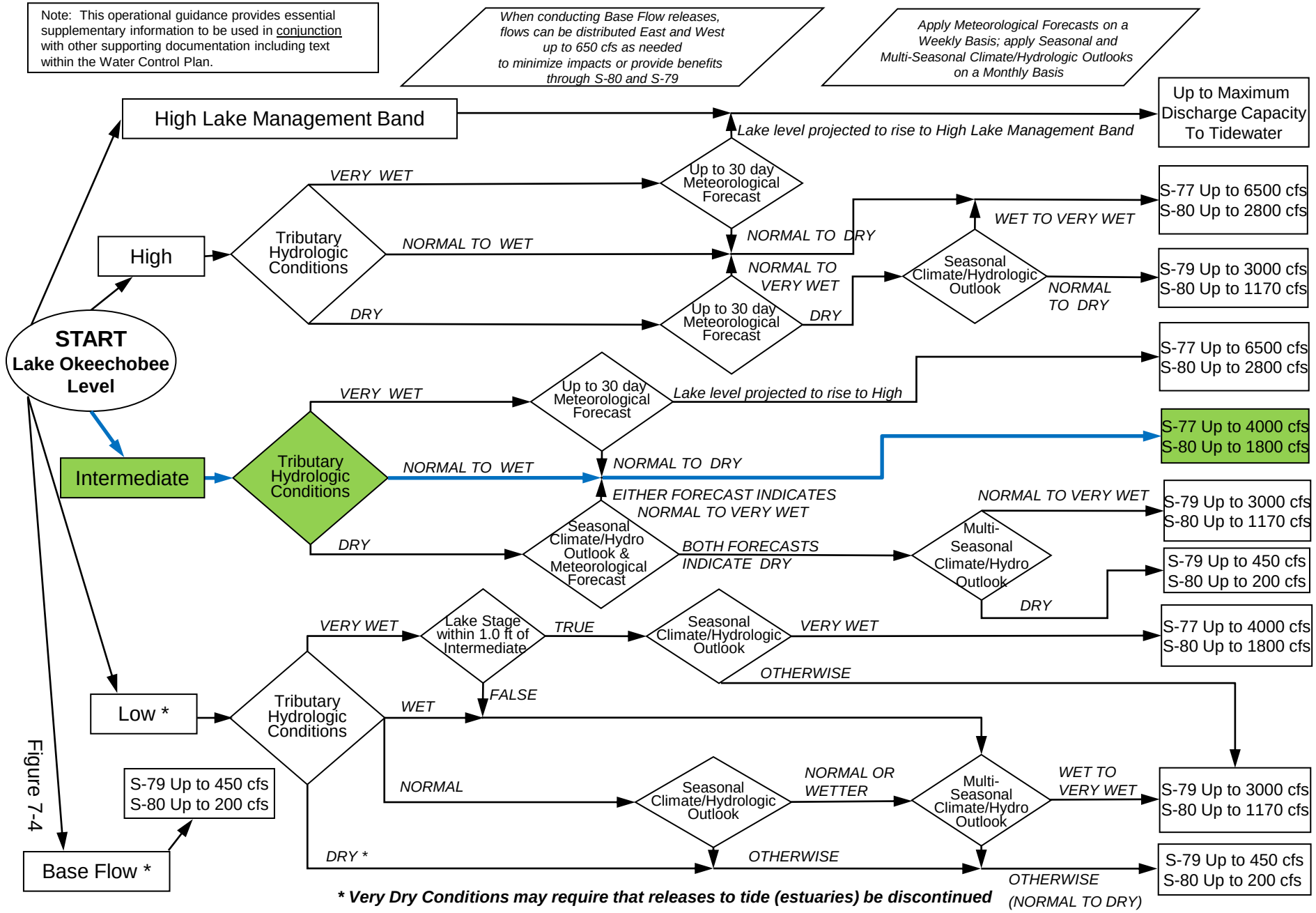
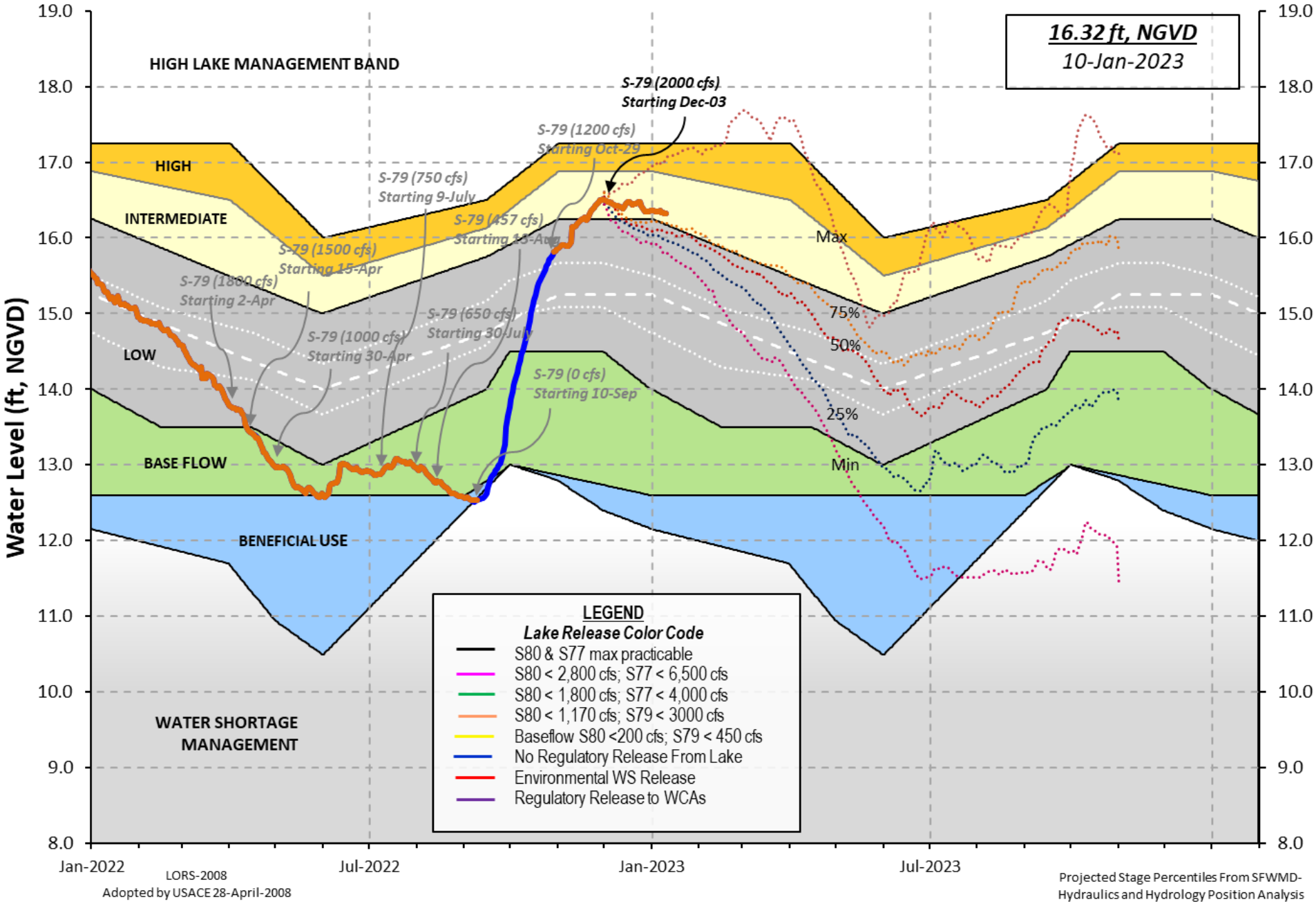


Figure 7-4

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 08 JAN 2023

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)	
*Okeechobee Lake Elevation	16.32	15.30	15.73	(Official Elv)

Bottom of High Lake Mngmt= 17.25 Top of Water Short Mngmt= 12.11
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 13.60
Difference from Average LORS2008 2.72

08JAN (1965-2007) Period of Record Average 14.73
Difference from POR Average 1.59

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ◆ 10.26'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ◆ 8.46'
Bridge Clearance = 63.52'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
16.34	16.32	16.30	16.34	16.31	16.41	16.30	16.25

*Combination Okeechobee Avg-Daily Lake Average = 16.32
(*See Note)

Okeechobee Inflows (cfs):

S65E	1426	S65EX1	0	Fisheating Cr	44
S154	0	S191	0	S135 Pumps	0
S84	0	S133 Pumps	0	S2 Pumps	0
S84X	0	S127 Pumps	0	S3 Pumps	0
S71	78	S129 Pumps	0	S4 Pumps	0
S72	57	S131 Pumps	0	C5	0

Total Inflows: 1605

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	71	S77	721
S127 Culverts	0	S351	580	S308	-NR-
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-1		

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

****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	0.21	S308	0.14

Average Pan Evap x 0.75 Pan Coefficient = 0.13" = 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 -2269 cfs or -4500 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:	13.59	16.33	0	0	0	0	0	0	(cfs)		
S193:											
S191:	18.84	16.28	0	0.0	0.0	0.0					
S135 Pumps:	13.39	16.20	0	0	0	0	0		(cfs)		
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	21.09	16.09	1426	0.5	0.5	1.1	0.5	0.5	1.2		
S65EX1:	21.09	16.09	0								
S127 Pumps:	13.69	16.23	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.03	16.27	0	0	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	12.98	16.26	0	0	0				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		29.52	44								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	12.18	-NR-	0	0	0	0			(cfs)		
S169:		-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	16.23		4								
S3 Pumps:	10.82	16.30	0	0	0	0			(cfs)		
S354:	16.30	10.82	71	0.0	0.2						
S2 Pumps:	10.77	16.37	0	0	0	0	0		(cfs)		
S351:	16.37	10.77	580	0.5	0.4	0.5					
S352:	16.43	10.49	0	0.0	0.0						
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-			
L8 Canal PT		13.69	-1								
S351 and S352 Temporary Pumps/S354 Spillway											
S351:	10.77	16.37	580	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-		
S352:	10.49	16.43	0	-NR-	-NR-	-NR-	-NR-				
S354:	10.82	16.30	71	-NR-	-NR-	-NR-	-NR-				
Caloosahatchee River (S77, S78, S79)											
S47B:	14.31	12.57		1.0	1.5						
S47D:	12.55	11.18	0	0.0							
S77:											
Spillway and Sector Preferred Flow:											
	16.13	11.06	714	0.0	0.0	2.5	0.0				
Flow Due to Lockages+:			7								
S78:											

```
    Spillway and Sector Flow:
              11.08      2.79     921    1.0  2.5  0.0  0.0
    Flow Due to Lockages+:        -NR-

  S79:
    Spillway and Sector Flow:
               3.01      1.01    1396    0.0  0.0  0.0  0.0  2.0  2.0  1.0  0.0
    Flow Due to Lockages+:           6
    Percent of flow from S77        51%
    Chloride            (ppm)      0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
              16.30     -0.02       0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:        -NR-

  S153:        18.65     14.07      51    0.0  0.0
  S80:
    Spillway and Sector Flow:
              14.32      1.26       0    0.0  0.0  0.0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:          19
    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
_____________________________________________________________________________
                                                                 ----- Wind ----
Daily Precipitation Totals    1-Day       3-Day       7-Day     Direction Speed
                            (inches)    (inches)    (inches)    (Deg)    (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       306        3
  S78:                        -NR-        0.00        0.00       104        4
  S79:                        -NR-        0.00        0.00         0        0
  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        58        3
  S80:                        -NR-        0.00        0.00       288        2
        Okeechobee Average    -NR-        0.00        0.00
        (Sites S78, S79 and S80 not included)
  ---------------------------------------------------------------
  Oke Nexrad Basin Avg        -NR-        0.00        0.00
  ---------------------------------------------------------------


_____________________________________________________________________________
Okeechobee Lake Elevations  08 JAN 2023          16.32 Difference from 08JAN23
   08JAN23  -1 Day  =       07 JAN 2023          16.33             0.01
```

08JAN23	-2 Days =	06 JAN 2023	16.34	0.02
08JAN23	-3 Days =	05 JAN 2023	16.36	0.04
08JAN23	-4 Days =	04 JAN 2023	16.35	0.03
08JAN23	-5 Days =	03 JAN 2023	16.35	0.03
08JAN23	-6 Days =	02 JAN 2023	16.35	0.03
08JAN23	-7 Days =	01 JAN 2023	16.36	0.04
08JAN23	-30 Days =	09 DEC 2022	16.42	0.10
08JAN23	-1 Year =	08 JAN 2022	15.30	-1.02
08JAN23	-2 Year =	08 JAN 2021	15.73	-0.59

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
08JAN23	Today =	08 JAN 2023	541	MON	-NR-
08JAN23	-1 Day =	07 JAN 2023	248	SUN	-479
08JAN23	-2 Days =	06 JAN 2023	-340	SAT	-2985
08JAN23	-3 Days =	05 JAN 2023	5	FRI	3345
08JAN23	-4 Days =	04 JAN 2023	97	THU	1238
08JAN23	-5 Days =	03 JAN 2023	213	WED	2019
08JAN23	-6 Days =	02 JAN 2023	329	TUE	591
08JAN23	-7 Days =	01 JAN 2023	80	MON	2584
08JAN23	-8 Days =	31 DEC 2022	-134	SUN	1149
08JAN23	-9 Days =	30 DEC 2022	-123	SAT	2902
08JAN23	-10 Days =	29 DEC 2022	-4	FRI	1196
08JAN23	-11 Days =	28 DEC 2022	291	THU	284
08JAN23	-12 Days =	27 DEC 2022	272	WED	1283
08JAN23	-13 Days =	26 DEC 2022	52	TUE	-6091

S65E

		Average Flow over previous 14 days			Avg-Daily Flow
08JAN23	Today=	08 JAN 2023	1624	MON	1562
08JAN23	-1 Day =	07 JAN 2023	1638	SUN	1583
08JAN23	-2 Days =	06 JAN 2023	1651	SAT	1590
08JAN23	-3 Days =	05 JAN 2023	1664	FRI	1602
08JAN23	-4 Days =	04 JAN 2023	1676	THU	1603
08JAN23	-5 Days =	03 JAN 2023	1689	WED	1624
08JAN23	-6 Days =	02 JAN 2023	1696	TUE	1623
08JAN23	-7 Days =	01 JAN 2023	1702	MON	1627
08JAN23	-8 Days =	31 DEC 2022	1712	SUN	1637
08JAN23	-9 Days =	30 DEC 2022	1714	SAT	1728
08JAN23	-10 Days =	29 DEC 2022	1718	FRI	1682
08JAN23	-11 Days =	28 DEC 2022	1718	THU	1574
08JAN23	-12 Days =	27 DEC 2022	1725	WED	1570
08JAN23	-13 Days =	26 DEC 2022	1735	TUE	1732

S65EX1

		Average Flow over previous 14 days			Avg-Daily Flow
08JAN23	Today=	08 JAN 2023	0	MON	0
08JAN23	-1 Day =	07 JAN 2023	0	SUN	0
08JAN23	-2 Days =	06 JAN 2023	0	SAT	0
08JAN23	-3 Days =	05 JAN 2023	0	FRI	0
08JAN23	-4 Days =	04 JAN 2023	0	THU	0
08JAN23	-5 Days =	03 JAN 2023	0	WED	0
08JAN23	-6 Days =	02 JAN 2023	0	TUE	0
08JAN23	-7 Days =	01 JAN 2023	0	MON	0
08JAN23	-8 Days =	31 DEC 2022	0	SUN	0
08JAN23	-9 Days =	30 DEC 2022	0	SAT	0
08JAN23	-10 Days =	29 DEC 2022	0	FRI	0
08JAN23	-11 Days =	28 DEC 2022	0	THU	0
08JAN23	-12 Days =	27 DEC 2022	0	WED	0
08JAN23	-13 Days =	26 DEC 2022	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)
08 JAN 2023	1393	2185	-NR-	2787
07 JAN 2023	2146	2735	1787	3142
06 JAN 2023	1471	1851	2119	2625
05 JAN 2023	1412	2001	1955	3034
04 JAN 2023	1600	2208	1918	3377
03 JAN 2023	2806	3262	3024	4022
02 JAN 2023	4663	5102	3793	5379
01 JAN 2023	4182	4678	4028	5595
31 DEC 2022	638	1595	2027	3273
30 DEC 2022	930	2174	1431	2013
29 DEC 2022	2375	3075	2591	2787
28 DEC 2022	372	1170	1646	3154
27 DEC 2022	1659	2482	2087	4215
26 DEC 2022	4752	5827	3611	5460

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)
08 JAN 2023	9	1150	0	141	-1
07 JAN 2023	7	1309	0	149	0
06 JAN 2023	5	1371	0	252	-3
05 JAN 2023	5	508	0	220	-0
04 JAN 2023	7	616	0	231	1
03 JAN 2023	10	757	0	450	2
02 JAN 2023	-4	905	0	22	7
01 JAN 2023	4	1077	0	33	8
31 DEC 2022	19	1444	0	218	-3
30 DEC 2022	11	132	0	174	3
29 DEC 2022	7	0	0	115	-2
28 DEC 2022	-0	0	88	123	-2
27 DEC 2022	13	105	568	130	1
26 DEC 2022	15	331	674	135	-8

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
08 JAN 2023	-NR-	-NR-	39
07 JAN 2023	-NR-	-NR-	27
06 JAN 2023	-NR-	-NR-	43
05 JAN 2023	8	-NR-	53
04 JAN 2023	9	-NR-	36
03 JAN 2023	11	-NR-	35
02 JAN 2023	7	-NR-	35
01 JAN 2023	6	-NR-	27
31 DEC 2022	10	-NR-	30
30 DEC 2022	15	-NR-	175
29 DEC 2022	14	-NR-	485
28 DEC 2022	9	-NR-	496
27 DEC 2022	3	-NR-	169
26 DEC 2022	3	-NR-	19

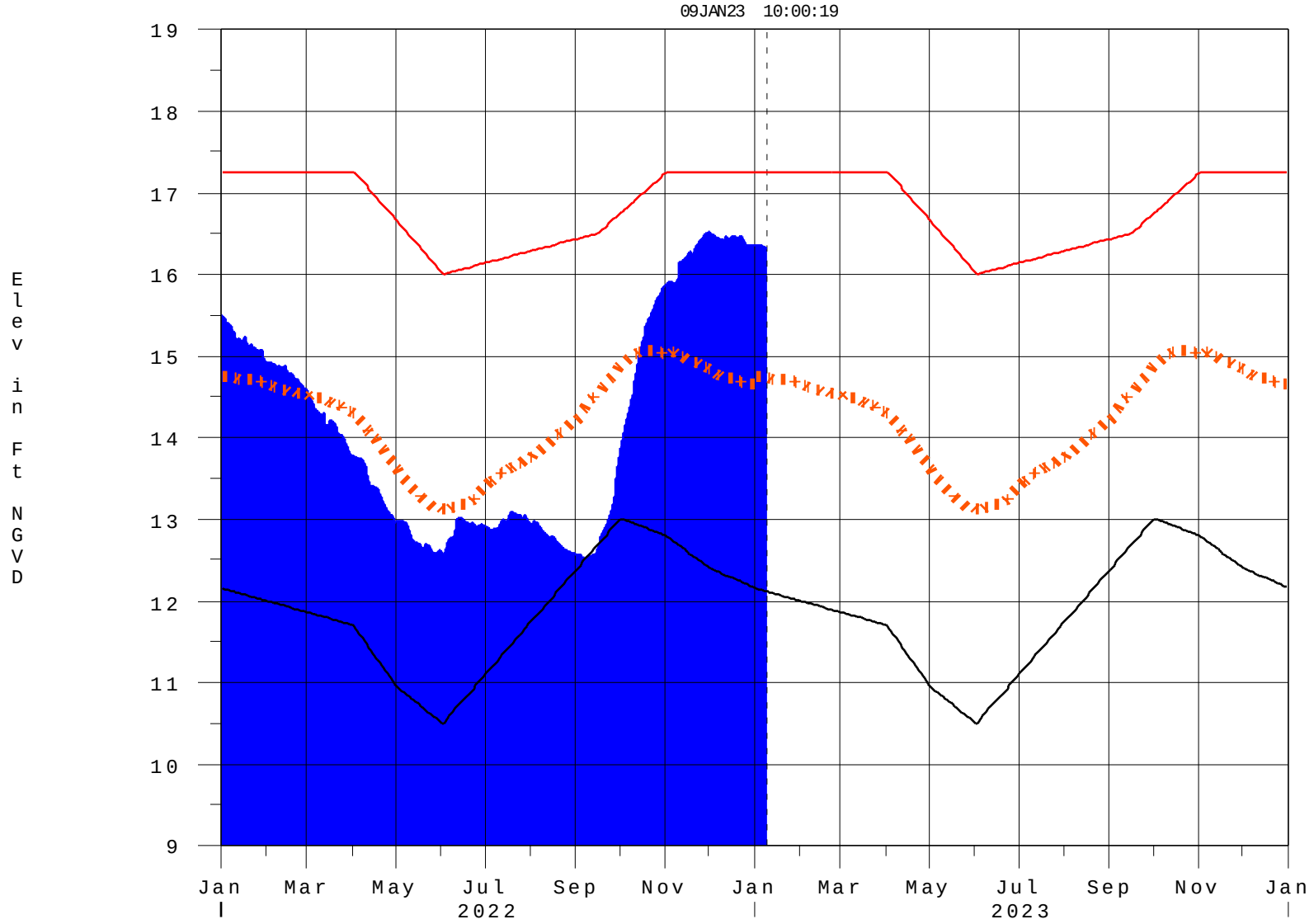
*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(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 09JAN2023 @ 10:15 ** Preliminary Data - Subject to Revision **

Lake Okeechobee



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**