

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 10/17/2022 (ENSO Condition: La Niña)

Lake Okeechobee Net Inflow Outlook:

The Lake Okeechobee Net Inflow Outlook has been computed using 4 methods: Croley's method¹, the SFWMD empirical method², a sub-sampling of La Niña years³ and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with La Niña ENSO years⁴. 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 ^{1*}		SFWMD Empirical Method ²		Sub-sampling of La Niña ENSO Years ³		Sub-sampling of AMO Warm + La Niña ENSO Years ⁴	
	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>
Current (Oct-Mar)	N/A	N/A	1.82	Wet	1.36	Normal	1.21	Normal
Multi Seasonal (Oct-Apr)	N/A	N/A	1.90	Normal	1.22	Normal	1.11	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 ENSO forecast used.

Tributary Hydrologic Conditions Graph:

18002 cfs 14-day running average for Lake Okeechobee Net Inflow through 10/17/2022. According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

-1.15 for Palmer Drought Index on 10/15/2022.

According to the classification in Tributary Hydrologic Conditions table, this condition is Near Normal.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 10/17/2022:

Lake Okeechobee Stage: **15.17 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.99	
Operational Band	High sub-band	16.62	
	Intermediate sub-band	16.08	
	Low sub-band	14.50	← 15.17 ft
Base Flow sub-band		12.93	
Beneficial Use sub-band		12.90	
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

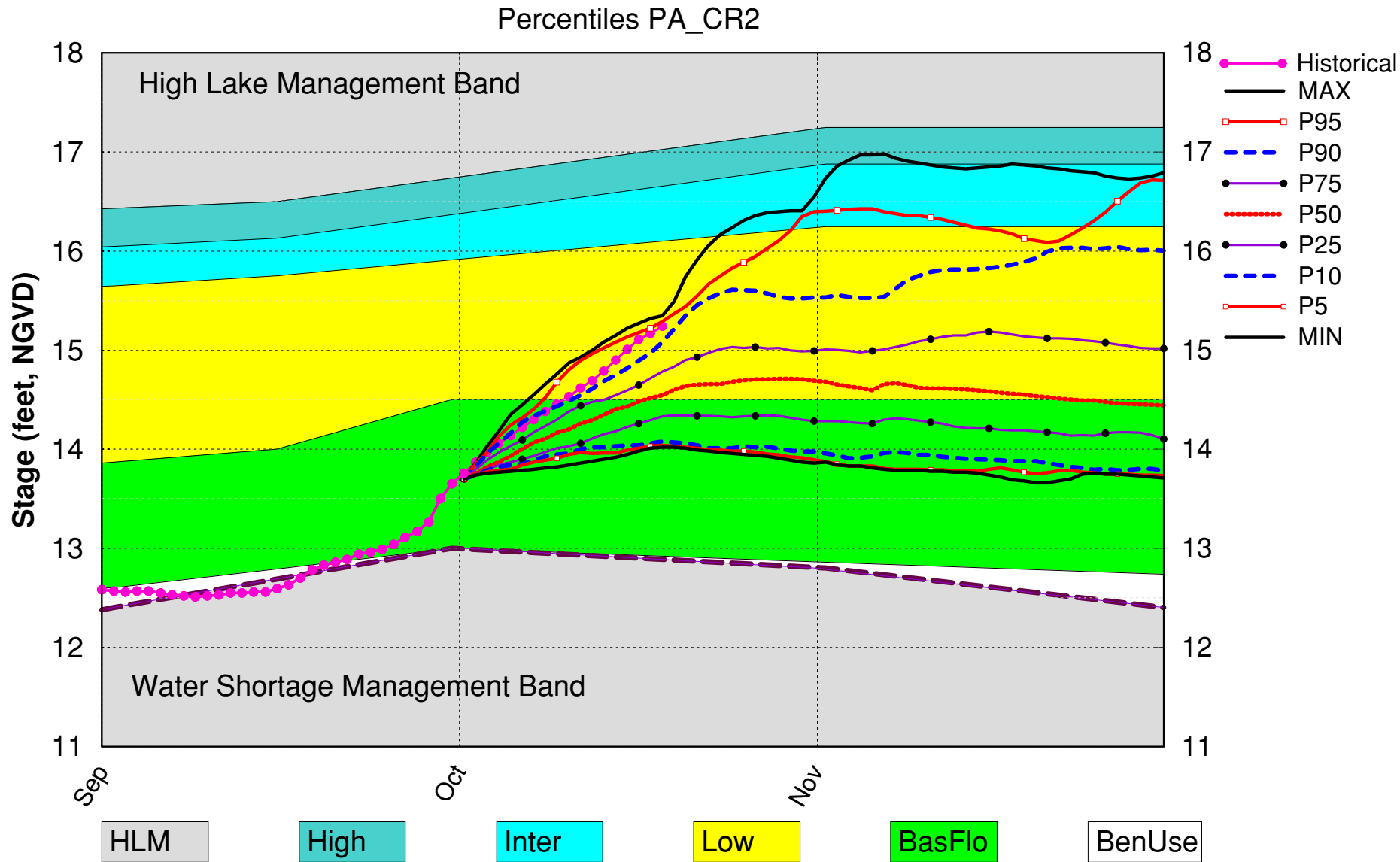
Up to 3000 cfs at S-79 and up to 1170 cfs at S-80.

LORS2008 Implementation on 10/17/2022 (ENSO Condition- La Niña Watch):**Status for week ending 10/17/2022:****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	-1.15 (Normal to Extremely Wet)	M
	CPC Precipitation Outlook	1 month: Normal	L
		3 months: Normal	L
	LOK Seasonal Net Inflow Outlook	1.36 ft	L
	ENSO Forecast	Normal	
	LOK Multi-Seasonal Net Inflow Outlook	1.22 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-7, 1-8T, 1-9)	Above Line 1 (17.17 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (13.87 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.79 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

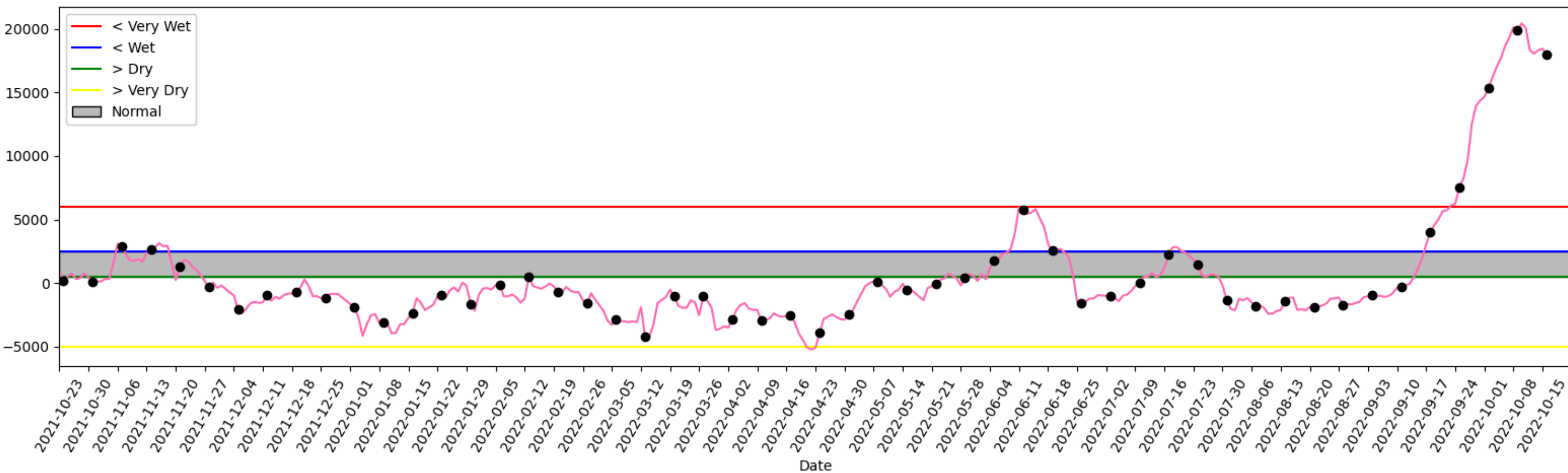
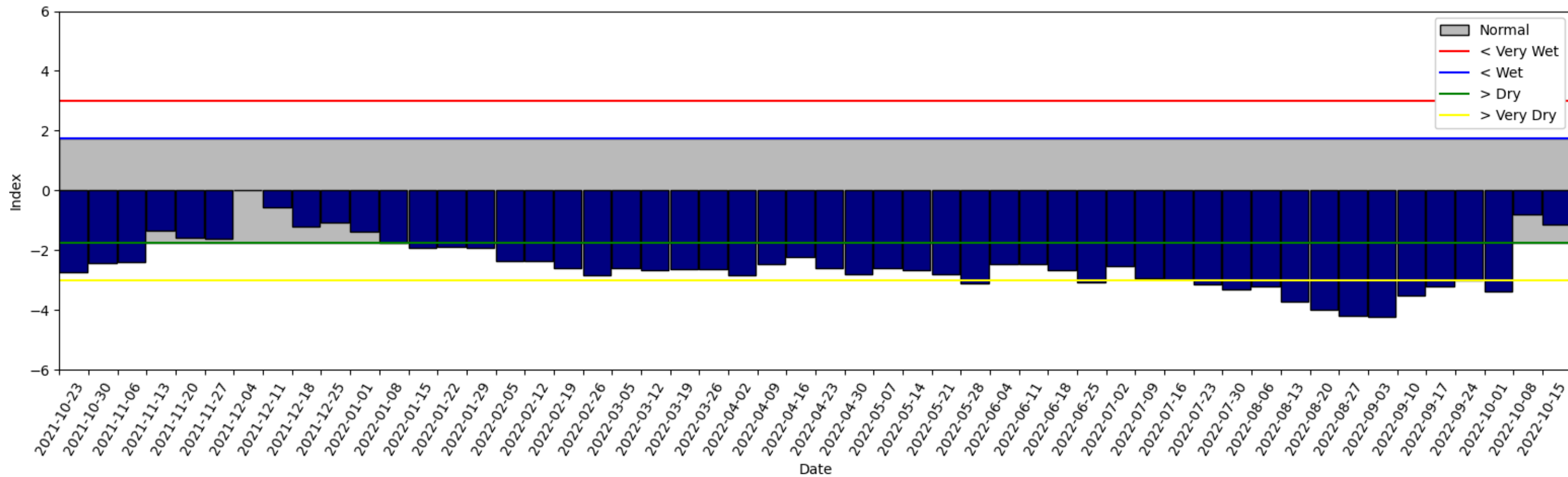
Note: The water supply risk classification based on the Palmer index, as well as the LOK seasonal and multi-seasonal net inflow outlooks use slightly different classification intervals than those used by the 2008-LORS.

Lake Okeechobee SFWMM October 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of October 16 2022



2008 LORS

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

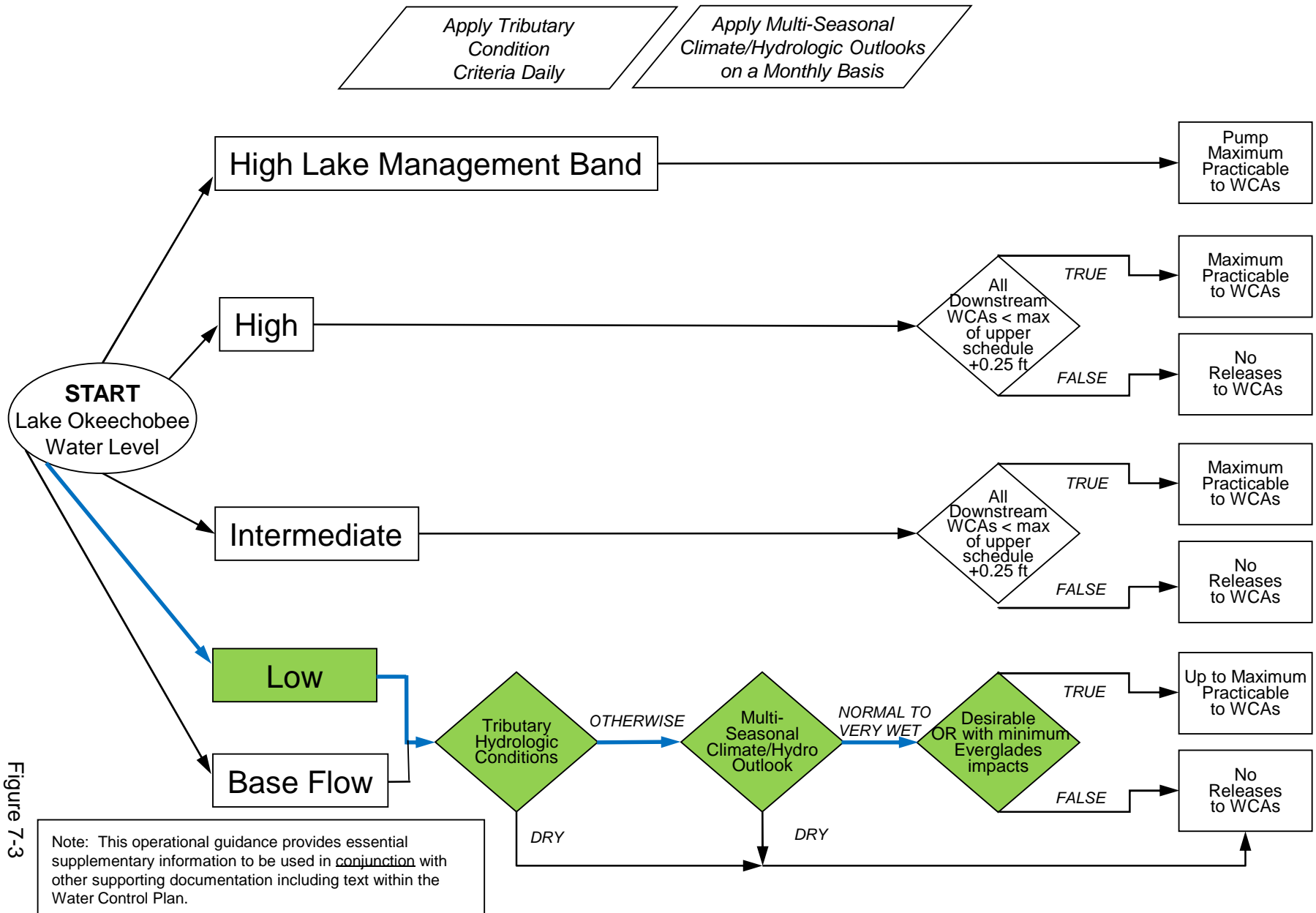


Figure 7-3

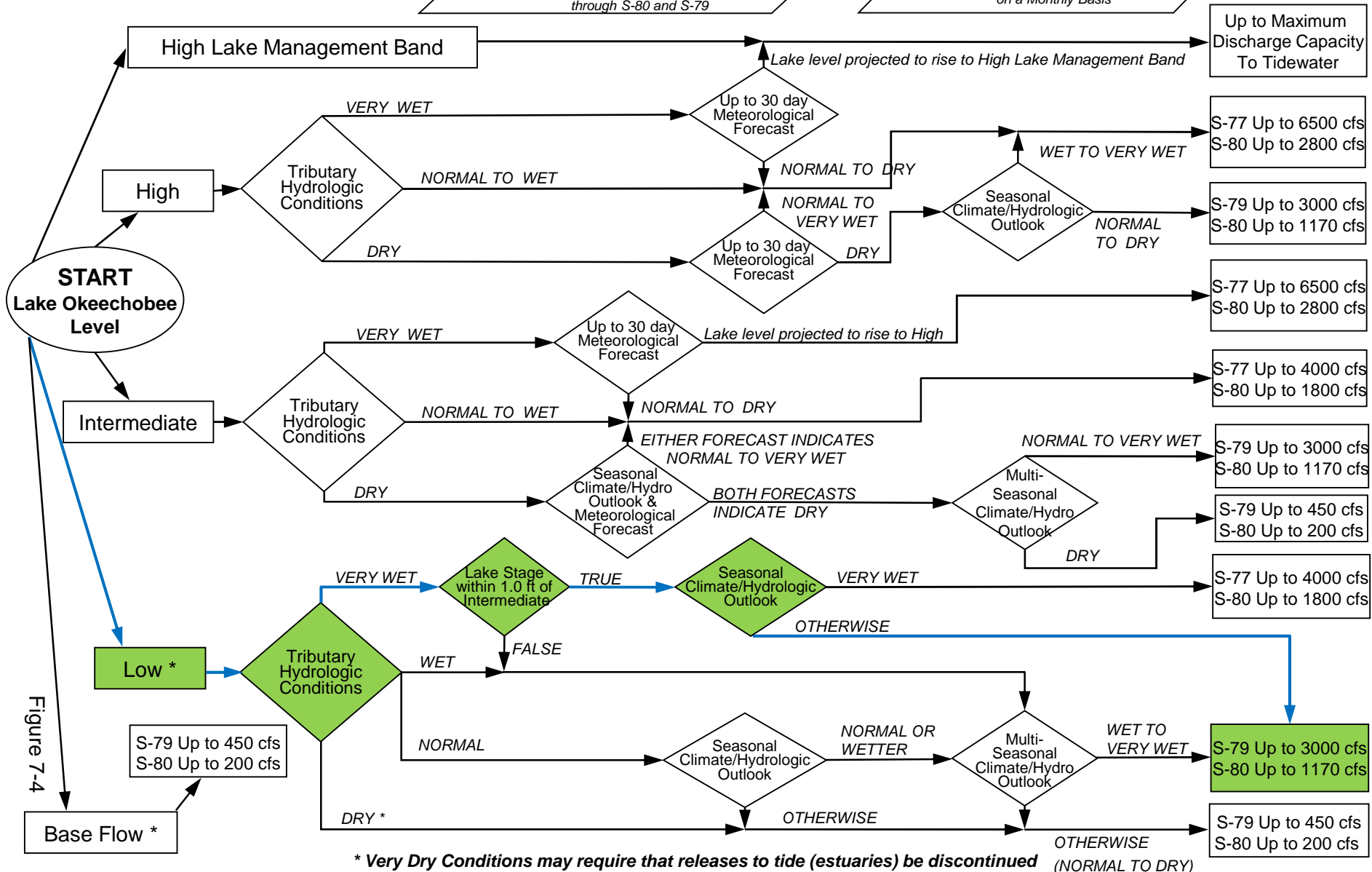
2008 LORS

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

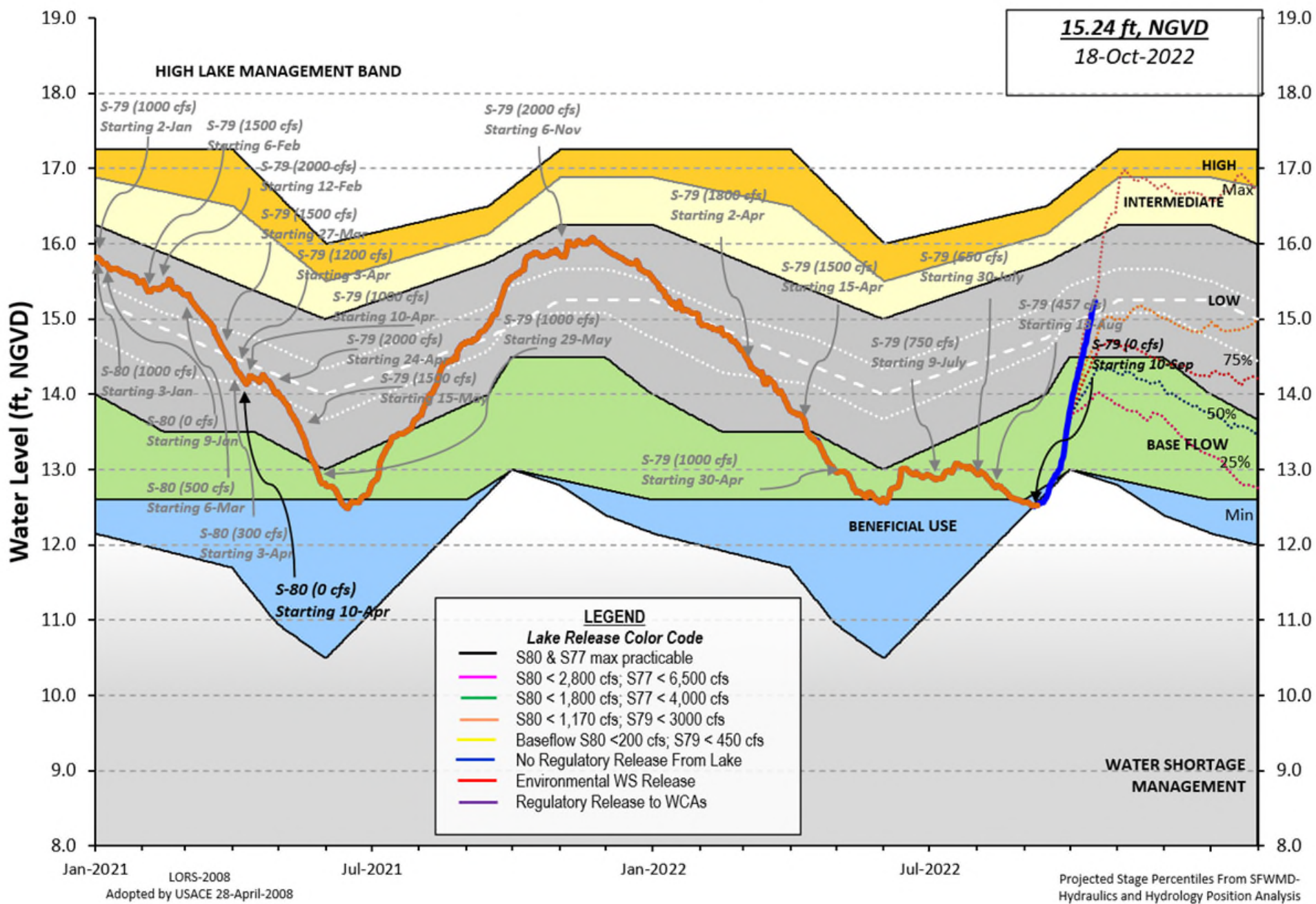
Note: This operational guidance provides essential supplementary information to be used in conjunction with other supporting documentation including text within the Water Control Plan.

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



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 16 OCT 2022

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	15.17	15.88	16.21 (Official Elv)
Bottom of High Lake Mngmt= 16.99 Top of Water Short Mngmt= 12.90			
Currently in Operational Management Band			
Simulated Average LORS2008 [1965-2000]	13.97		
Difference from Average LORS2008	1.20		
16OCT (1965-2007) Period of Record Average	15.05		
Difference from POR Average	0.12		

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 9.11'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 7.31'
Bridge Clearance = 49.36'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.26	15.23	15.21	15.19	15.24	15.24	15.02	15.07

*Combination Okeechobee Avg-Daily Lake Average = 15.17
(*See Note)

Okeechobee Inflows (cfs):

S65E	13583	S65EX1	260	Fisheating Cr	798
S154	22	S191	315	S135 Pumps	0
S84	1108	S133 Pumps	118	S2 Pumps	0
S84X	341	S127 Pumps	0	S3 Pumps	0
S71	122	S129 Pumps	0	S4 Pumps	0
S72	50	S131 Pumps	0	C5	0
Total Inflows: 16716					

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	2
S127 Culverts	0	S351	0	S308	2
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-313		
Total Outflows: -309					

****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	0.26	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 13008 cfs or 25800 AC-FT

	Headwater	Tailwater		----- Gate Positions -----							
	Elevation	Elevation	Disch	#1	#2	#3	#4	#5	#6	#7	#8
	(ft-msl)	(ft-msl)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
	(I) see note at bottom										
North East Shore											
S133 Pumps:	13.34	15.16	118	24	0	37	60	0	(cfs)		
S193:											
S191:	19.60	15.15	315	0.0	0.0	0.5					
S135 Pumps:	13.44	15.07	0	0	0	0	0		(cfs)		
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	20.92	15.74	13583	5.7	6.1	5.7	5.5	5.5	6.2		
S65EX1:	20.92	15.74	260								
S127 Pumps:	13.44	15.12	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.04	15.25	0	0	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	12.87	15.35	0	0	0				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		32.72	798								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.73	-NR-	0	0	0	0			(cfs)		
S169:		-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	15.17		-5								
S3 Pumps:	9.66	15.26	0	0	0	0			(cfs)		
S354:	15.26	9.66	0	0.0	0.0						
S2 Pumps:	9.91	15.23	0	0	0	0	0		(cfs)		
S351:	15.23	9.91	0	0.0	0.0	0.0					
S352:	15.27	9.00	0	0.0	0.0						
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-			
L8 Canal PT		15.18	-313								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.91	15.23	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-
S352:	9.00	15.27	0	-NR-	-NR-	-NR-	-NR-		
S354:	9.66	15.26	0	-NR-	-NR-	-NR-	-NR-		

Caloosahatchee River (S77, S78, S79)

S47B:	15.22	10.97		0.0	0.0				
S47D:	10.98	10.96	70	6.5					
S77:									
Spillway and Sector Preferred Flow:									
	15.15	10.84	0	0.0	0.0	0.0	0.0		
Flow Due to Lockages+:			2						

S78:

Spillway and Sector Flow:
10.87 2.96 1095 0.0 2.5 0.0 1.0
Flow Due to Lockages+: 6

S79:

Spillway and Sector Flow:
3.14 2.31 2959 0.0 0.0 3.0 3.0 2.0 2.0 2.0 0.0
Flow Due to Lockages+: 5
Percent of flow from S77 0%
Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:
15.09 14.14 0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 2

S153: 18.75 13.99 83 0.5 0.0

S80:

Spillway and Sector Flow:
14.25 1.42 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 21
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

Daily Precipitation Totals	1-Day (inches)	3-Day (inches)	7-Day (inches)	----- Wind ----- Direction Speed (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:	0.00	0.00	0.74	104 6
S78:	0.00	0.01	2.15	111 2
S79:	0.00	0.01	-0.31	-NR- -NR-
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	67 1
S80:	0.00	0.05	0.85	218 1
Okeechobee Average (Sites S78, S79 and S80 not included)	0.00	0.00	0.06	

Oke Nexrad Basin Avg	-NR-	0.00	0.00	

Okeechobee Lake Elevations	16 OCT 2022	15.17	Difference from 16OCT22
16OCT22 -1 Day =	15 OCT 2022	15.11	-0.06

16OCT22	-2 Days =	14 OCT 2022	15.01	-0.16
16OCT22	-3 Days =	13 OCT 2022	14.90	-0.27
16OCT22	-4 Days =	12 OCT 2022	14.79	-0.38
16OCT22	-5 Days =	11 OCT 2022	14.69	-0.48
16OCT22	-6 Days =	10 OCT 2022	14.62	-0.55
16OCT22	-7 Days =	09 OCT 2022	14.53	-0.64
16OCT22	-30 Days =	16 SEP 2022	12.70	-2.47
16OCT22	-1 Year =	16 OCT 2021	15.88	0.71
16OCT22	-2 Year =	16 OCT 2020	16.21	1.04

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
16OCT22	Today =	16 OCT 2022	18320	MON	13008
16OCT22	-1 Day =	15 OCT 2022	18903	SUN	21679
16OCT22	-2 Days =	14 OCT 2022	19018	SAT	23343
16OCT22	-3 Days =	13 OCT 2022	19015	FRI	23797
16OCT22	-4 Days =	12 OCT 2022	19584	THU	21175
16OCT22	-5 Days =	11 OCT 2022	21514	WED	14823
16OCT22	-6 Days =	10 OCT 2022	21968	TUE	19058
16OCT22	-7 Days =	09 OCT 2022	21514	MON	15024
16OCT22	-8 Days =	08 OCT 2022	21499	SUN	17243
16OCT22	-9 Days =	07 OCT 2022	21013	SAT	16940
16OCT22	-10 Days =	06 OCT 2022	20224	FRI	16940
16OCT22	-11 Days =	05 OCT 2022	19295	THU	17243
16OCT22	-12 Days =	04 OCT 2022	18762	WED	17142
16OCT22	-13 Days =	03 OCT 2022	17949	TUE	19058

S65E

Average Flow over previous 14 days					Avg-Daily Flow
16OCT22	Today=	16 OCT 2022	12574	MON	12911
16OCT22	-1 Day =	15 OCT 2022	12316	SUN	13335
16OCT22	-2 Days =	14 OCT 2022	12013	SAT	13082
16OCT22	-3 Days =	13 OCT 2022	11693	FRI	12931
16OCT22	-4 Days =	12 OCT 2022	11315	THU	13139
16OCT22	-5 Days =	11 OCT 2022	10858	WED	13056
16OCT22	-6 Days =	10 OCT 2022	10321	TUE	12990
16OCT22	-7 Days =	09 OCT 2022	9773	MON	13155
16OCT22	-8 Days =	08 OCT 2022	9137	SUN	13197
16OCT22	-9 Days =	07 OCT 2022	8422	SAT	12929
16OCT22	-10 Days =	06 OCT 2022	7668	FRI	12518
16OCT22	-11 Days =	05 OCT 2022	6908	THU	11719
16OCT22	-12 Days =	04 OCT 2022	6191	WED	11055
16OCT22	-13 Days =	03 OCT 2022	5514	TUE	10026

S65EX1

Average Flow over previous 14 days					Avg-Daily Flow
16OCT22	Today=	16 OCT 2022	278	MON	260
16OCT22	-1 Day =	15 OCT 2022	281	SUN	262
16OCT22	-2 Days =	14 OCT 2022	283	SAT	268
16OCT22	-3 Days =	13 OCT 2022	286	FRI	269
16OCT22	-4 Days =	12 OCT 2022	292	THU	272
16OCT22	-5 Days =	11 OCT 2022	346	WED	277
16OCT22	-6 Days =	10 OCT 2022	392	TUE	278
16OCT22	-7 Days =	09 OCT 2022	372	MON	281
16OCT22	-8 Days =	08 OCT 2022	352	SUN	283
16OCT22	-9 Days =	07 OCT 2022	332	SAT	284
16OCT22	-10 Days =	06 OCT 2022	312	FRI	285
16OCT22	-11 Days =	05 OCT 2022	292	THU	288
16OCT22	-12 Days =	04 OCT 2022	271	WED	292
16OCT22	-13 Days =	03 OCT 2022	250	TUE	294

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)
16 OCT 2022	4	-14	2181	5856
15 OCT 2022	6	326	2492	7501
14 OCT 2022	7	763	3726	9721
13 OCT 2022	2	454	2690	8224
12 OCT 2022	5	-104	353	3560
11 OCT 2022	8	45	428	3895
10 OCT 2022	7	62	747	4483
09 OCT 2022	8	6	1004	4537
08 OCT 2022	10	126	886	5143
07 OCT 2022	6	-14	1187	5614
06 OCT 2022	4	122	1737	7069
05 OCT 2022	3	352	1630	7872
04 OCT 2022	0	664	3153	10433
03 OCT 2022	2	952	4860	14528

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)
16 OCT 2022	-10	0	0	0	-621
15 OCT 2022	-79	0	0	0	-630
14 OCT 2022	-225	0	0	0	-690
13 OCT 2022	-139	0	0	0	-200
12 OCT 2022	-61	0	0	0	-47
11 OCT 2022	-105	0	0	0	-154
10 OCT 2022	-127	0	0	0	-328
09 OCT 2022	35	0	0	0	-362
08 OCT 2022	45	0	0	0	-410
07 OCT 2022	3	0	0	0	-534
06 OCT 2022	13	0	0	0	-620
05 OCT 2022	-111	0	0	0	-775
04 OCT 2022	-139	0	0	0	-1022
03 OCT 2022	-290	0	0	0	-1367

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
16 OCT 2022	4	-NR-	42
15 OCT 2022	3	-NR-	20
14 OCT 2022	2	-NR-	487
13 OCT 2022	1	-NR-	1034
12 OCT 2022	1	-NR-	336
11 OCT 2022	1	-NR-	594
10 OCT 2022	2	-NR-	28
09 OCT 2022	2	-NR-	30
08 OCT 2022	7	-NR-	35
07 OCT 2022	2	-NR-	20
06 OCT 2022	1	-NR-	20
05 OCT 2022	-0	-NR-	27
04 OCT 2022	243	-NR-	17
03 OCT 2022	0	-NR-	14

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

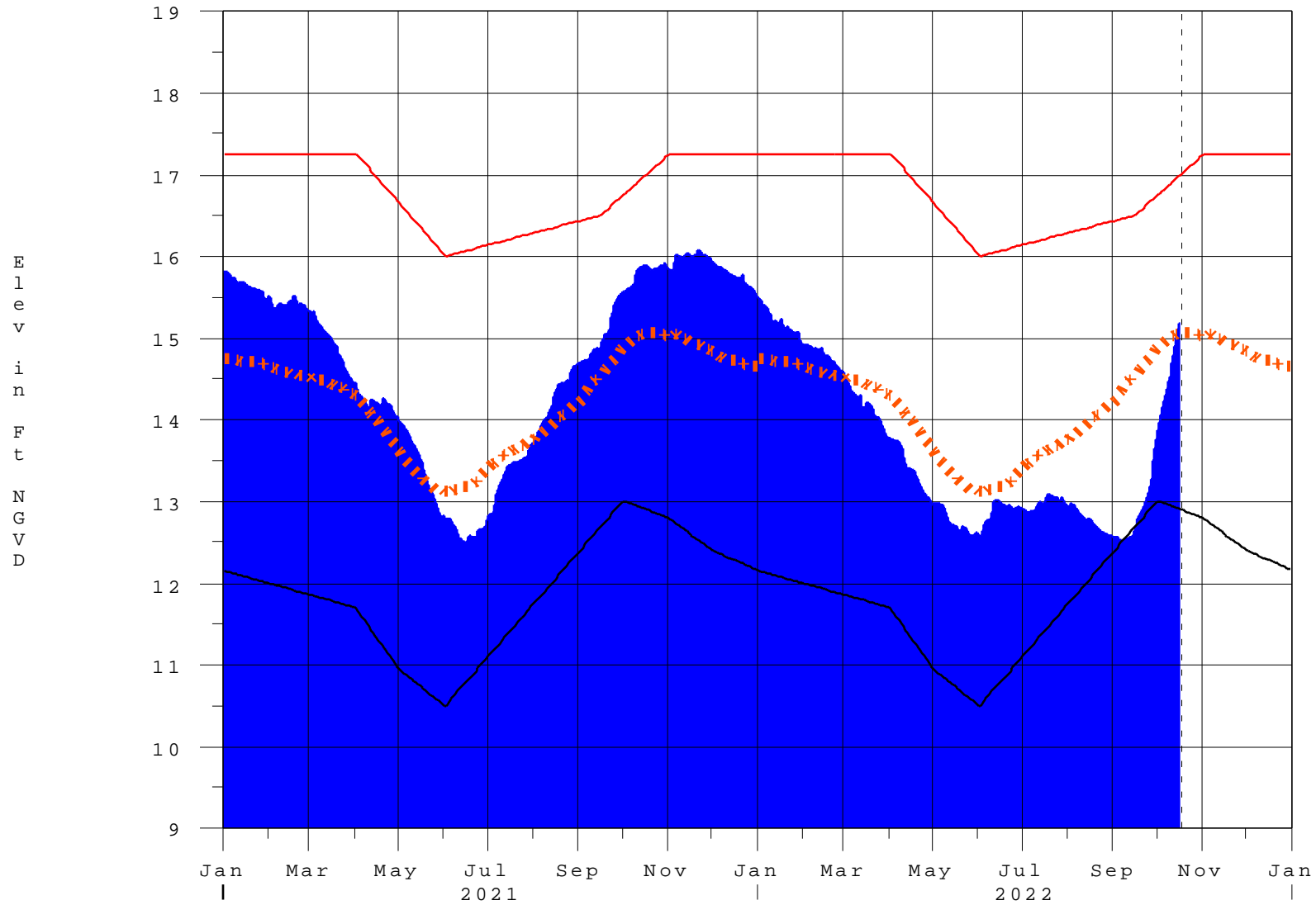
(I) - Flows preceeded by "I" signify an instantaneous flow computed from the single value reported for the day

* 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 Okeechobee 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 17OCT2022 @ 10:15 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

17OCT22 10:17:25



- 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 \geq 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**