

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 10/31/2022 (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	2.25	Very Wet	1.73	Wet	1.54	Wet
Multi Seasonal (Oct-Apr)	N/A	N/A	2.19	Normal	1.62	Normal	1.44	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:

10311 cfs 14-day running average for Lake Okeechobee Net Inflow through 10/31/2022. According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

-1.81 for Palmer Drought Index on 10/29/2022.

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

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 10/31/2022:

Lake Okeechobee Stage: **15.83 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.22	
Operational Band	High sub-band	16.85	
	Intermediate sub-band	16.23	
	Low sub-band	14.50	← 15.83 ft
Base Flow sub-band		12.87	
Beneficial Use sub-band		12.81	
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

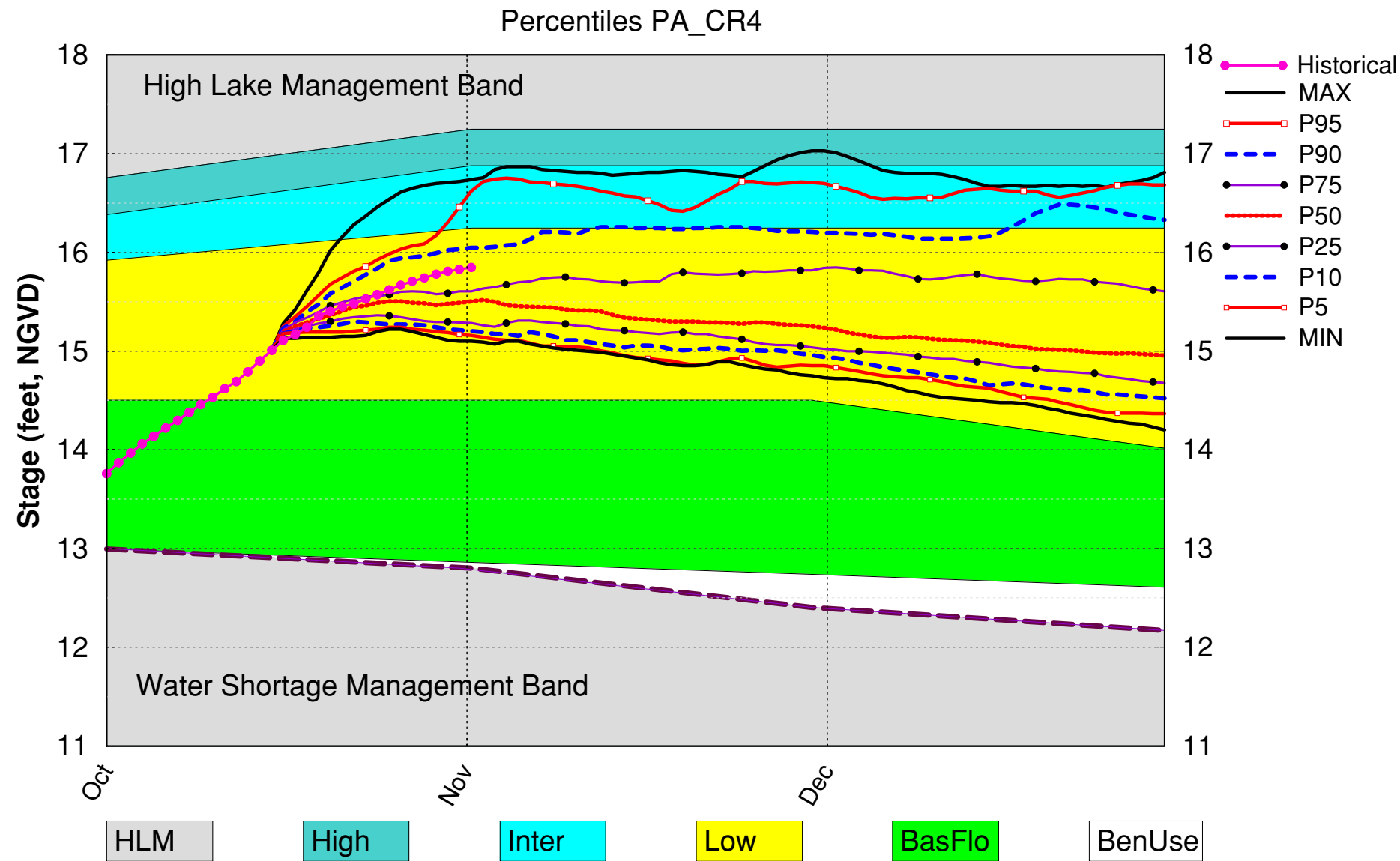
Up to 3000 cfs at S-79 and up to 1170 cfs at S-80.

LORS2008 Implementation on 10/31/2022 (ENSO Condition- La Niña Watch):**Status for week ending 10/31/2022:****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	-1.81 (Dry)	M
	CPC Precipitation Outlook	1 month: Below Normal	M
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	1.73 ft	L
	ENSO Forecast	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	1.62 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 (13.59 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.69 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

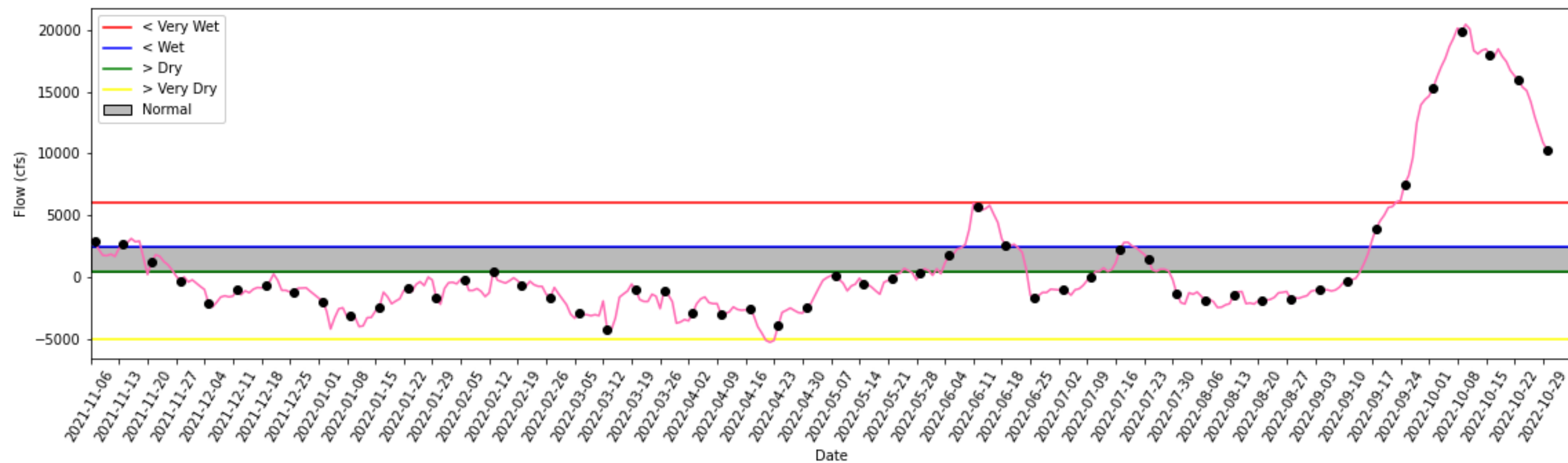
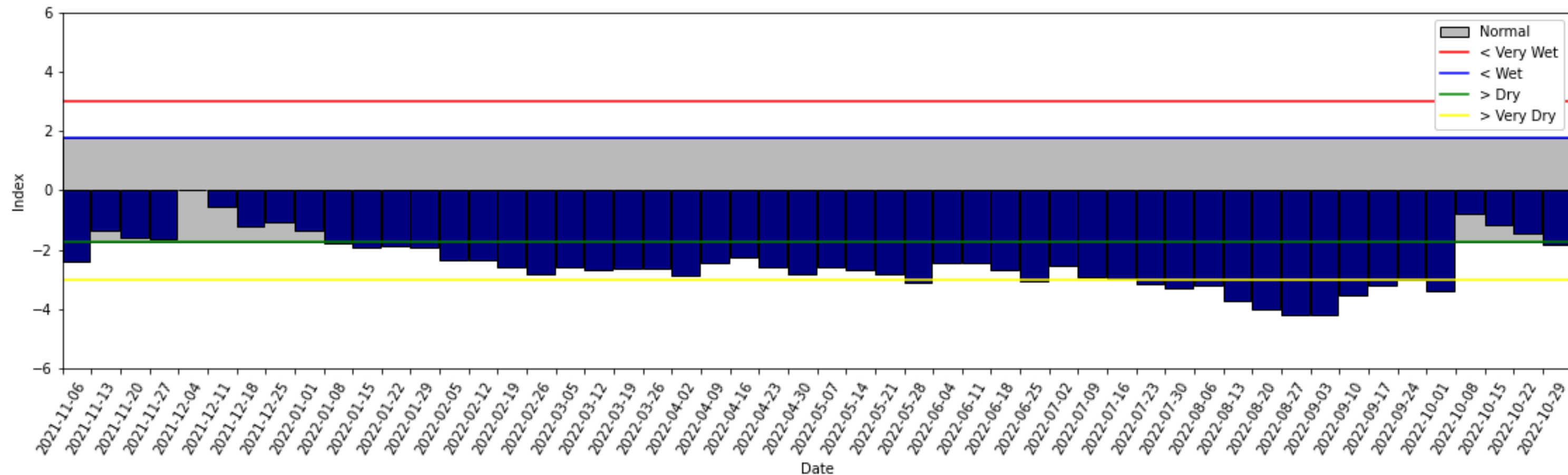
Note: The water supply risk classification based on the Palmer index, as well as the LOK seasonal and multi-seasonal net inflow outlooks use slightly different classification intervals than those used by the 2008-LORS.

Lake Okeechobee SFWMM Oct Mid–Mon 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of October 30 2022



2008 LORS

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

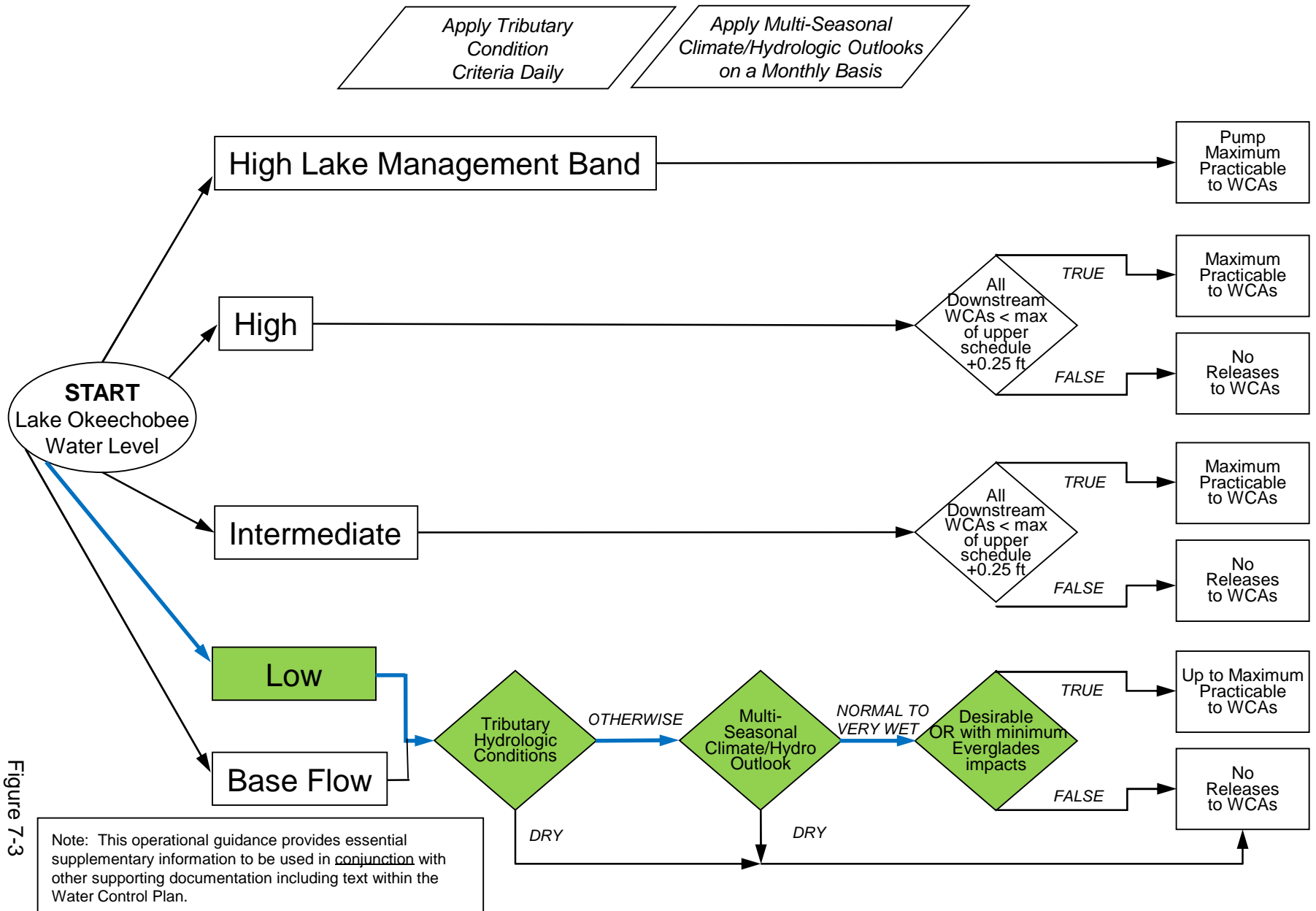


Figure 7-3

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

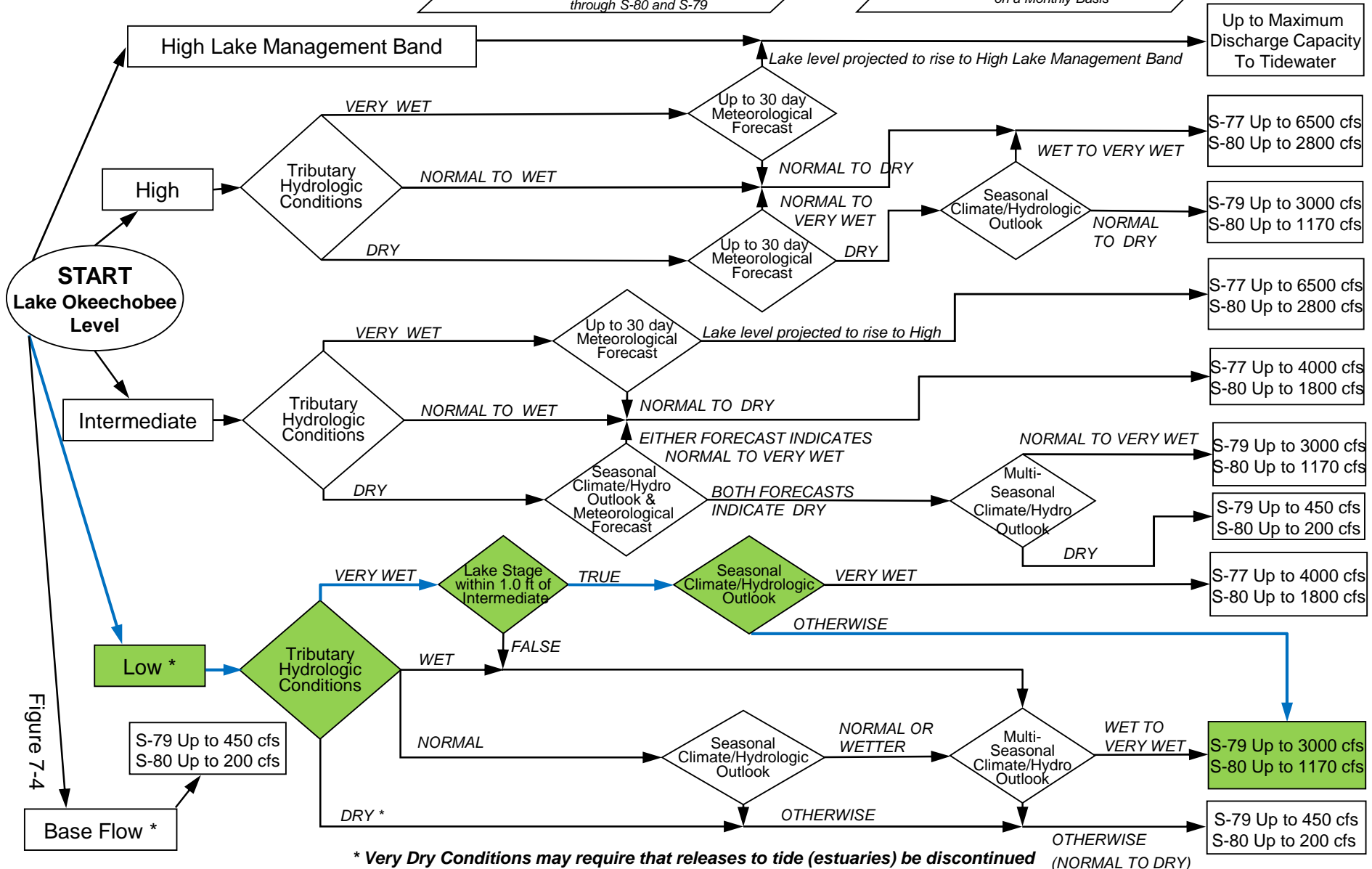
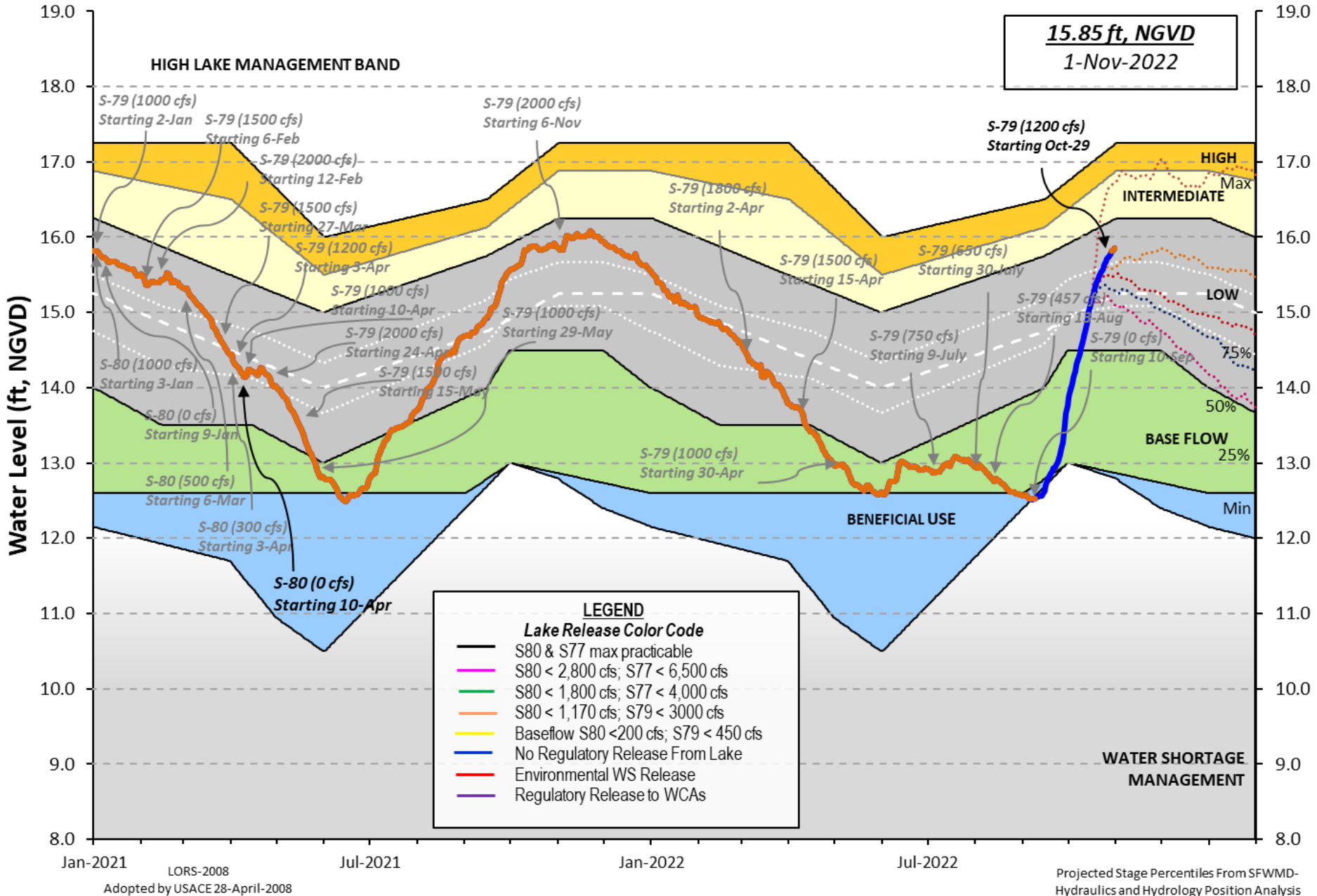


Figure 7-4

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 30 OCT 2022

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	15.83	15.90	16.30 (Official Elv)

Bottom of High Lake Mngmt= 17.22 Top of Water Short Mngmt= 12.81
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 13.97
Difference from Average LORS2008 1.86

30OCT (1965-2007) Period of Record Average 15.03
Difference from POR Average 0.80

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ♦ 9.77'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ♦ 7.97'
Bridge Clearance = 49.44'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.92	15.86	15.88	15.84	15.86	15.92	15.68	15.74

*Combination Okeechobee Avg-Daily Lake Average = 15.83
(*See Note)

Okeechobee Inflows (cfs):

S65E	5399	S65EX1	264	Fisheating Cr	265
S154	21	S191	143	S135 Pumps	0
S84	778	S133 Pumps	0	S2 Pumps	0
S84X	226	S127 Pumps	0	S3 Pumps	0
S71	80	S129 Pumps	0	S4 Pumps	0
S72	21	S131 Pumps	0	C5	0

Total Inflows: 7196

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	7
S127 Culverts	0	S351	37	S308	3
S129 Culverts	0	S352	45		
S131 Culverts	0	L8 Canal Pt	1		

Total Outflows: 93

****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	0.19
-----	------	------	------

Average Pan Evap x 0.75 Pan Coefficient = 0.17" = 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 4336 cfs or 8600 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:	13.75	15.73	0	0	0	0	0	0	(cfs)		
S193:											
S191:	19.29	15.73	143	0.0	0.2	0.0					
S135 Pumps:	13.35	15.69	0	0	0	0	0		(cfs)		
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	20.81	15.62	5399	2.4	2.7	2.7	2.0	2.0	2.7		
S65EX1:	20.81	15.62	264								
S127 Pumps:	13.40	15.74	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.02	15.82	0	0	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	12.90	15.84	0	0	0				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		31.92	265								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.33	-NR-	0	0	0	0			(cfs)		
S169:		-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	15.84		37								
S3 Pumps:	10.10	15.94	0	0	0	0			(cfs)		
S354:	15.94	10.10	0	0.0	0.0						
S2 Pumps:	9.64	15.92	0	0	0	0	0		(cfs)		
S351:	15.92	9.64	37	0.2	0.2	0.0					
S352:	15.94	9.71	45	0.1	0.0						
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-			
L8 Canal PT		13.73	1								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.64	15.92	37	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-	
S352:	9.71	15.94	45	-NR-	-NR-	-NR-	-NR-			
S354:	10.10	15.94	0	-NR-	-NR-	-NR-	-NR-			

Caloosahatchee River (S77, S78, S79)

S47B:	14.92	11.81		0.5	1.0					
S47D:	11.91	10.78	44	0.0						
S77:										
Spillway and Sector Preferred Flow:										
	15.70	10.68	0	0.0	0.0	0.0	0.0			
Flow Due to Lockages+:			7							

S78:

Spillway and Sector Flow:
10.71 2.56 0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 14

S79:

Spillway and Sector Flow:
2.77 1.91 625 0.0 0.0 1.0 0.0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 6
Percent of flow from S77 0%
Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:
15.69 14.06 0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 3

S153: 18.90 13.84 18 0.0 0.0

S80:

Spillway and Sector Flow:
14.13 1.58 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 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 (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	49	6
S78:	-NR-	0.00	0.00	350	1
S79:	-NR-	0.00	0.00	1	3
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	78	1
S80:	-NR-	0.00	0.00	99	0
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	30 OCT 2022	15.83	Difference from 30OCT22
30OCT22 -1 Day =	29 OCT 2022	15.81	-0.02

30OCT22	-2 Days =	28 OCT 2022	15.78	-0.05
30OCT22	-3 Days =	27 OCT 2022	15.74	-0.09
30OCT22	-4 Days =	26 OCT 2022	15.71	-0.12
30OCT22	-5 Days =	25 OCT 2022	15.67	-0.16
30OCT22	-6 Days =	24 OCT 2022	15.62	-0.21
30OCT22	-7 Days =	23 OCT 2022	15.57	-0.26
30OCT22	-30 Days =	30 SEP 2022	13.76	-2.07
30OCT22	-1 Year =	30 OCT 2021	15.90	0.07
30OCT22	-2 Year =	30 OCT 2020	16.30	0.47

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	
30OCT22	Today =	30 OCT 2022	10362	MON	4418
30OCT22	-1 Day =	29 OCT 2022	10975	SUN	6633
30OCT22	-2 Days =	28 OCT 2022	12050	SAT	8697
30OCT22	-3 Days =	27 OCT 2022	13096	FRI	6645
30OCT22	-4 Days =	26 OCT 2022	14321	THU	8672
30OCT22	-5 Days =	25 OCT 2022	15214	WED	10840
30OCT22	-6 Days =	24 OCT 2022	15499	TUE	11242
30OCT22	-7 Days =	23 OCT 2022	16057	MON	9603
30OCT22	-8 Days =	22 OCT 2022	16444	SUN	11108
30OCT22	-9 Days =	21 OCT 2022	16883	SAT	6504
30OCT22	-10 Days =	20 OCT 2022	17628	FRI	10840
30OCT22	-11 Days =	19 OCT 2022	18064	THU	8672
30OCT22	-12 Days =	18 OCT 2022	18676	WED	26015
30OCT22	-13 Days =	17 OCT 2022	18042	TUE	15175

S65E					
Average Flow over previous 14 days				Avg-Daily Flow	
30OCT22	Today=	30 OCT 2022	9890	MON	5608
30OCT22	-1 Day =	29 OCT 2022	10411	SUN	6111
30OCT22	-2 Days =	28 OCT 2022	10924	SAT	7062
30OCT22	-3 Days =	27 OCT 2022	11355	FRI	7768
30OCT22	-4 Days =	26 OCT 2022	11724	THU	8632
30OCT22	-5 Days =	25 OCT 2022	12044	WED	9410
30OCT22	-6 Days =	24 OCT 2022	12304	TUE	9991
30OCT22	-7 Days =	23 OCT 2022	12519	MON	10745
30OCT22	-8 Days =	22 OCT 2022	12691	SUN	11266
30OCT22	-9 Days =	21 OCT 2022	12829	SAT	11830
30OCT22	-10 Days =	20 OCT 2022	12907	FRI	12240
30OCT22	-11 Days =	19 OCT 2022	12927	THU	12443
30OCT22	-12 Days =	18 OCT 2022	12875	WED	12630
30OCT22	-13 Days =	17 OCT 2022	12763	TUE	12721

S65EX1					
Average Flow over previous 14 days				Avg-Daily Flow	
30OCT22	Today=	30 OCT 2022	263	MON	264
30OCT22	-1 Day =	29 OCT 2022	263	SUN	265
30OCT22	-2 Days =	28 OCT 2022	263	SAT	265
30OCT22	-3 Days =	27 OCT 2022	263	FRI	263
30OCT22	-4 Days =	26 OCT 2022	264	THU	263
30OCT22	-5 Days =	25 OCT 2022	264	WED	264
30OCT22	-6 Days =	24 OCT 2022	265	TUE	261
30OCT22	-7 Days =	23 OCT 2022	266	MON	261
30OCT22	-8 Days =	22 OCT 2022	268	SUN	264
30OCT22	-9 Days =	21 OCT 2022	269	SAT	266
30OCT22	-10 Days =	20 OCT 2022	270	FRI	269
30OCT22	-11 Days =	19 OCT 2022	272	THU	264
30OCT22	-12 Days =	18 OCT 2022	273	WED	259
30OCT22	-13 Days =	17 OCT 2022	276	TUE	259

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)
30 OCT 2022	14	-89	28	1193
29 OCT 2022	16	-149	34	1545
28 OCT 2022	15	-83	21	423
27 OCT 2022	13	92	21	473
26 OCT 2022	4	294	167	-NR-
25 OCT 2022	3	-73	358	1521
24 OCT 2022	3	-161	366	1885
23 OCT 2022	12	-140	370	2066
22 OCT 2022	12	-208	364	2240
21 OCT 2022	12	-294	557	2286
20 OCT 2022	14	-97	670	2594
19 OCT 2022	12	-0	663	3754
18 OCT 2022	5	172	583	3678
17 OCT 2022	8	142	1499	5277

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)
30 OCT 2022	73	74	89	0	2
29 OCT 2022	4	0	256	0	-0
28 OCT 2022	-0	0	51	0	1
27 OCT 2022	89	0	281	0	-3
26 OCT 2022	88	0	0	0	0
25 OCT 2022	91	0	0	0	-6
24 OCT 2022	54	0	0	0	-3
23 OCT 2022	20	0	0	293	-4
22 OCT 2022	41	0	0	0	-2
21 OCT 2022	-5	0	0	0	3
20 OCT 2022	-5	0	0	0	-39
19 OCT 2022	62	0	0	0	-NR-
18 OCT 2022	-24	0	0	0	-422
17 OCT 2022	-132	0	0	0	-550

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
30 OCT 2022	7	-NR-	-NR-
29 OCT 2022	8	-NR-	49
28 OCT 2022	9	-NR-	43
27 OCT 2022	10	-NR-	61
26 OCT 2022	4	-NR-	46
25 OCT 2022	3	-NR-	27
24 OCT 2022	832	-NR-	26
23 OCT 2022	1515	-NR-	39
22 OCT 2022	567	-NR-	37
21 OCT 2022	9	-NR-	20
20 OCT 2022	5	-NR-	43
19 OCT 2022	3	-NR-	25
18 OCT 2022	3	-NR-	1063
17 OCT 2022	1	-NR-	22

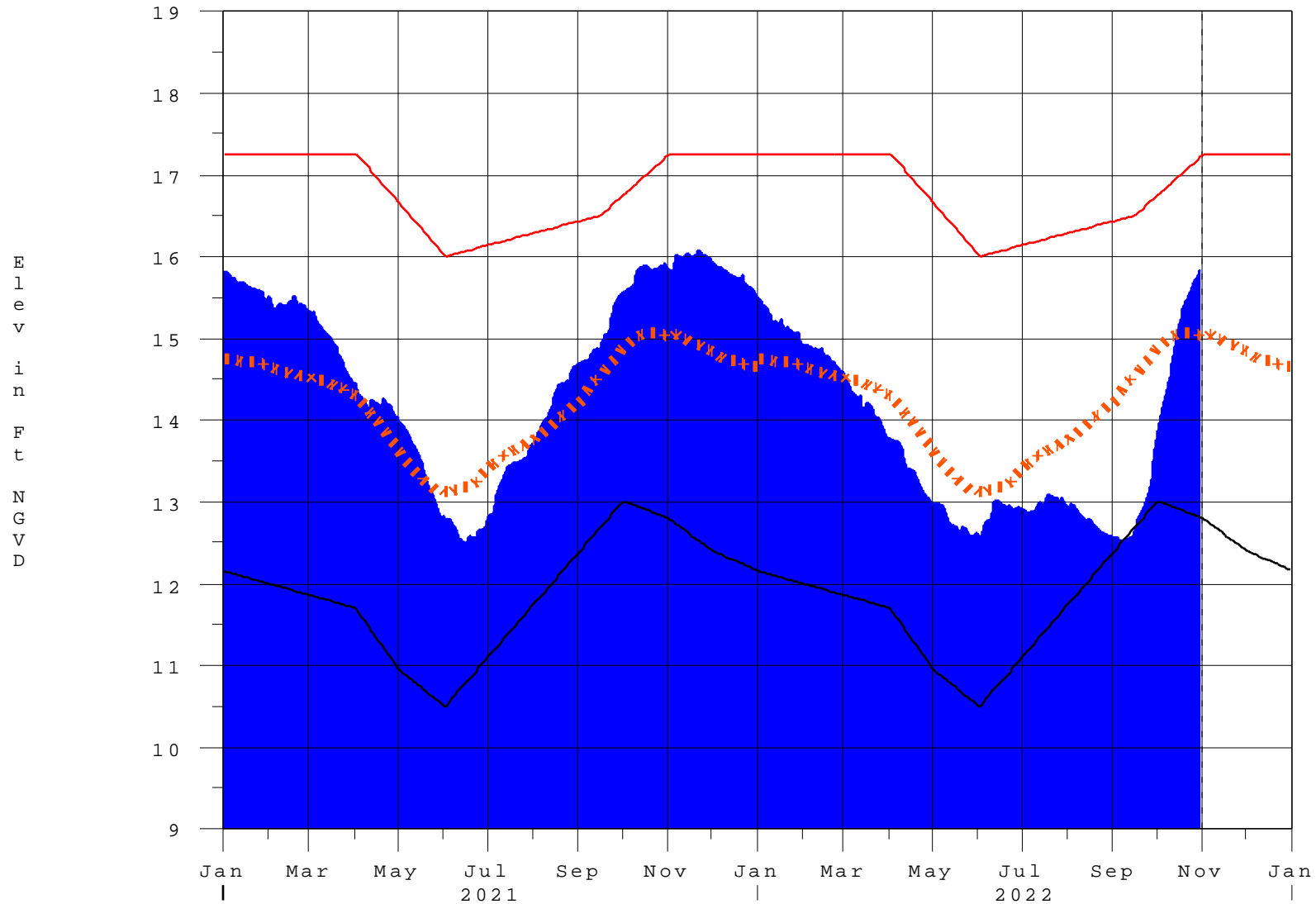
*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(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 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

Lake Okeechobee

31OCT22 11:00:26



- 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**