

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 10/24/2022 (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	1.99	Wet	1.60	Wet	1.28	Normal
Multi Seasonal (Oct-Apr)	N/A	N/A	1.93	Normal	1.49	Normal	1.17	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:

15855 cfs 14-day running average for Lake Okeechobee Net Inflow through 10/24/2022. According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

-1.44 for Palmer Drought Index on 10/22/2022.

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 10/24/2022:

Lake Okeechobee Stage: **15.57 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.11	
Operational Band	High sub-band	16.74	
	Intermediate sub-band	16.15	
	Low sub-band	14.50	← 15.57 ft
Base Flow sub-band		12.90	
Beneficial Use sub-band		12.85	
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

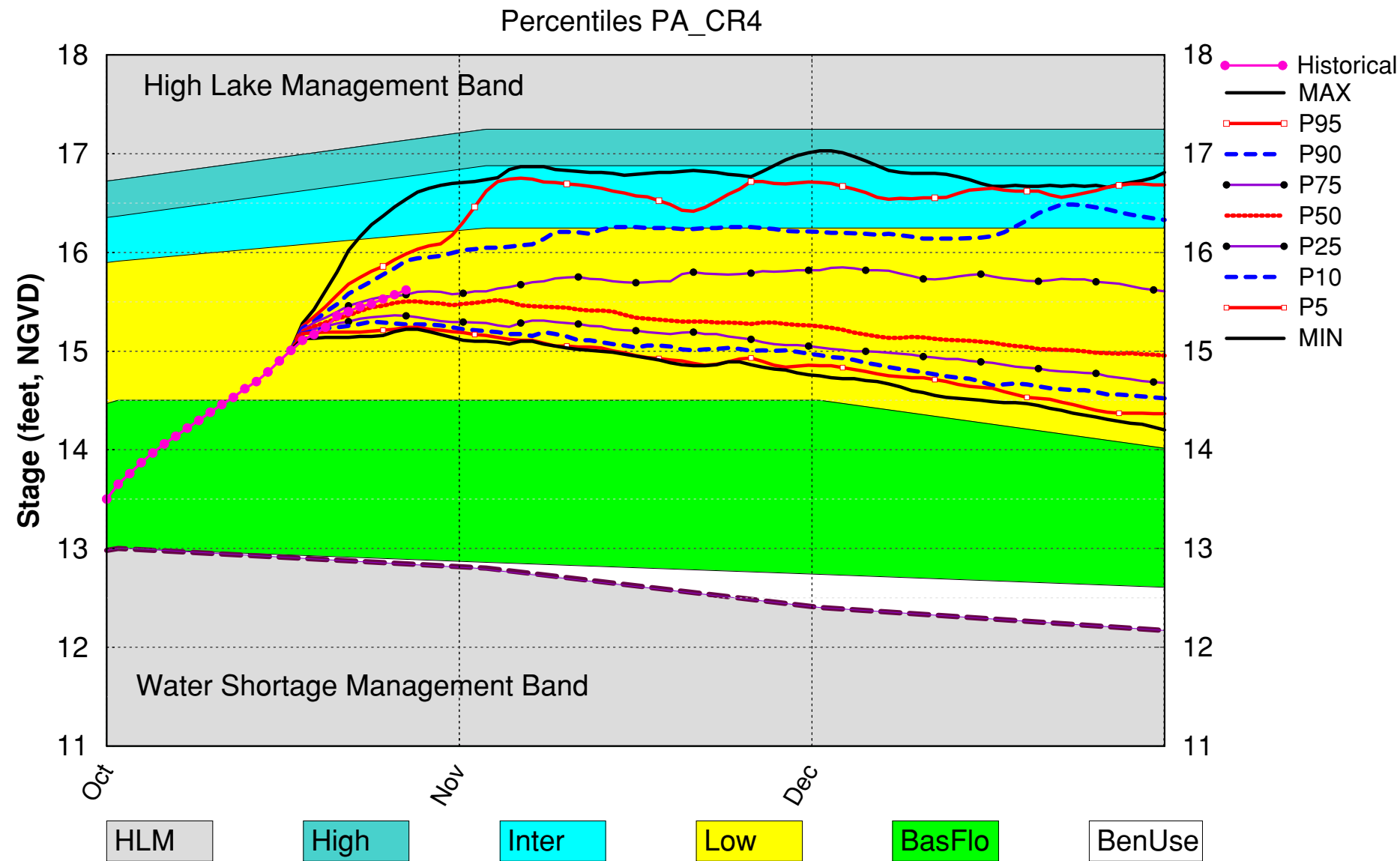
Up to 3000 cfs at S-79 and up to 1170 cfs at S-80.

LORS2008 Implementation on 10/24/2022 (ENSO Condition- La Niña Watch):**Status for week ending 10/24/2022:****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	-1.44 (Dry)	M
	CPC Precipitation Outlook	1 month: Below Normal	M
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	1.60 ft	L
	ENSO Forecast	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	1.49 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-7, 1-8T, 1-9)	Above Line 1 (17.23 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (13.79 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.78 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

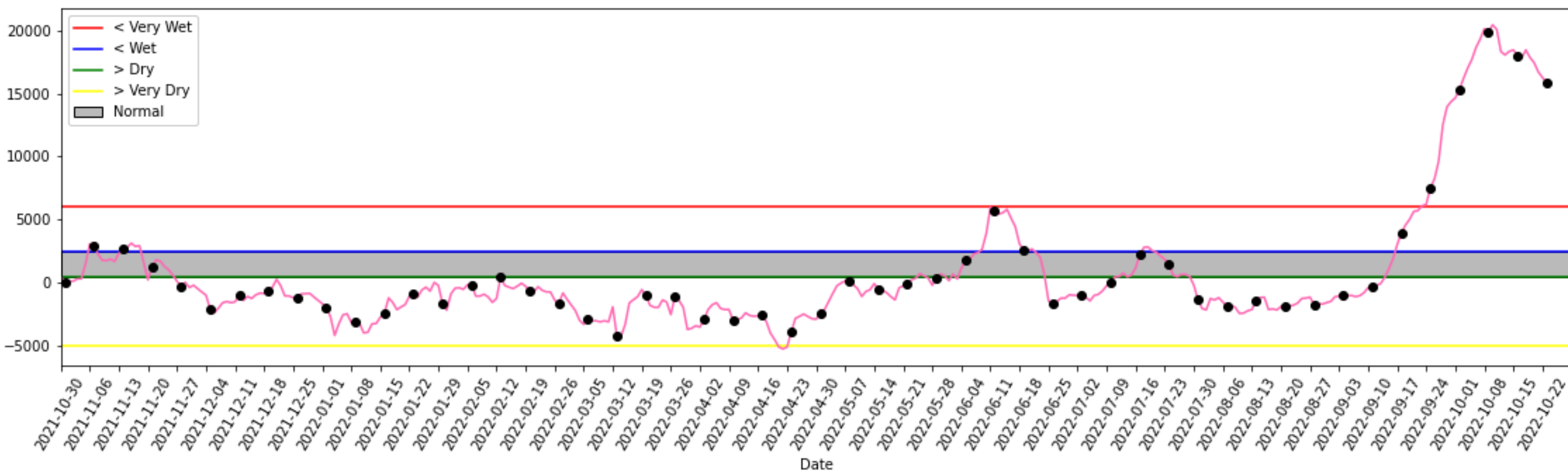
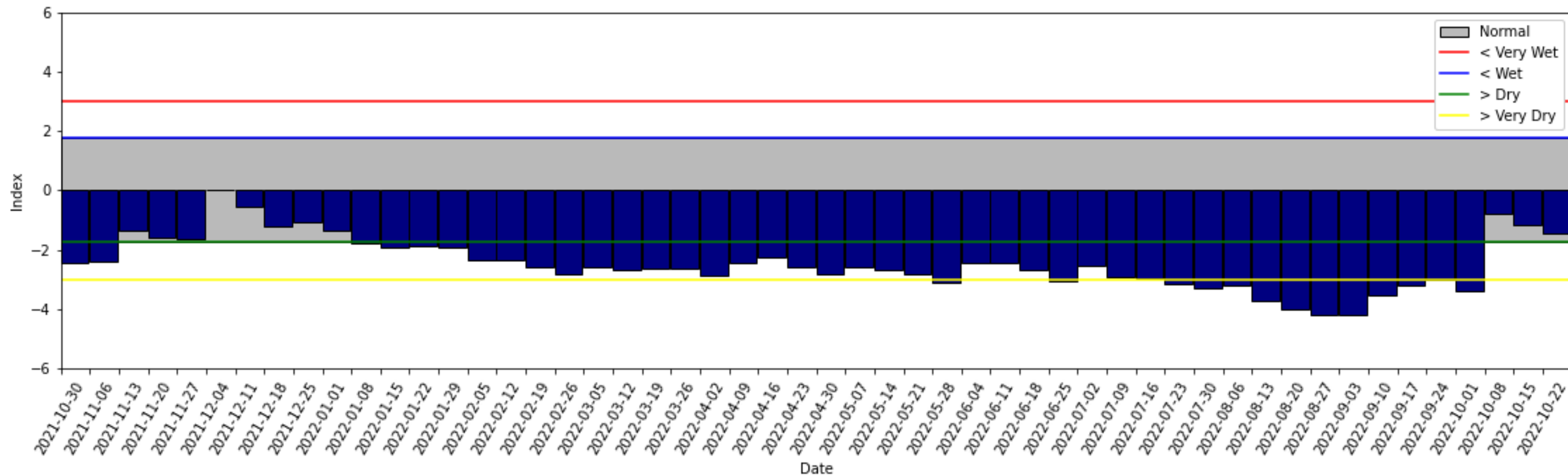
Note: The water supply risk classification based on the Palmer index, as well as the LOK seasonal and multi-seasonal net inflow outlooks use slightly different classification intervals than those used by the 2008-LORS.

Lake Okeechobee SFWMM Oct Mid–Mon 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of October 23 2022



2008 LORS

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

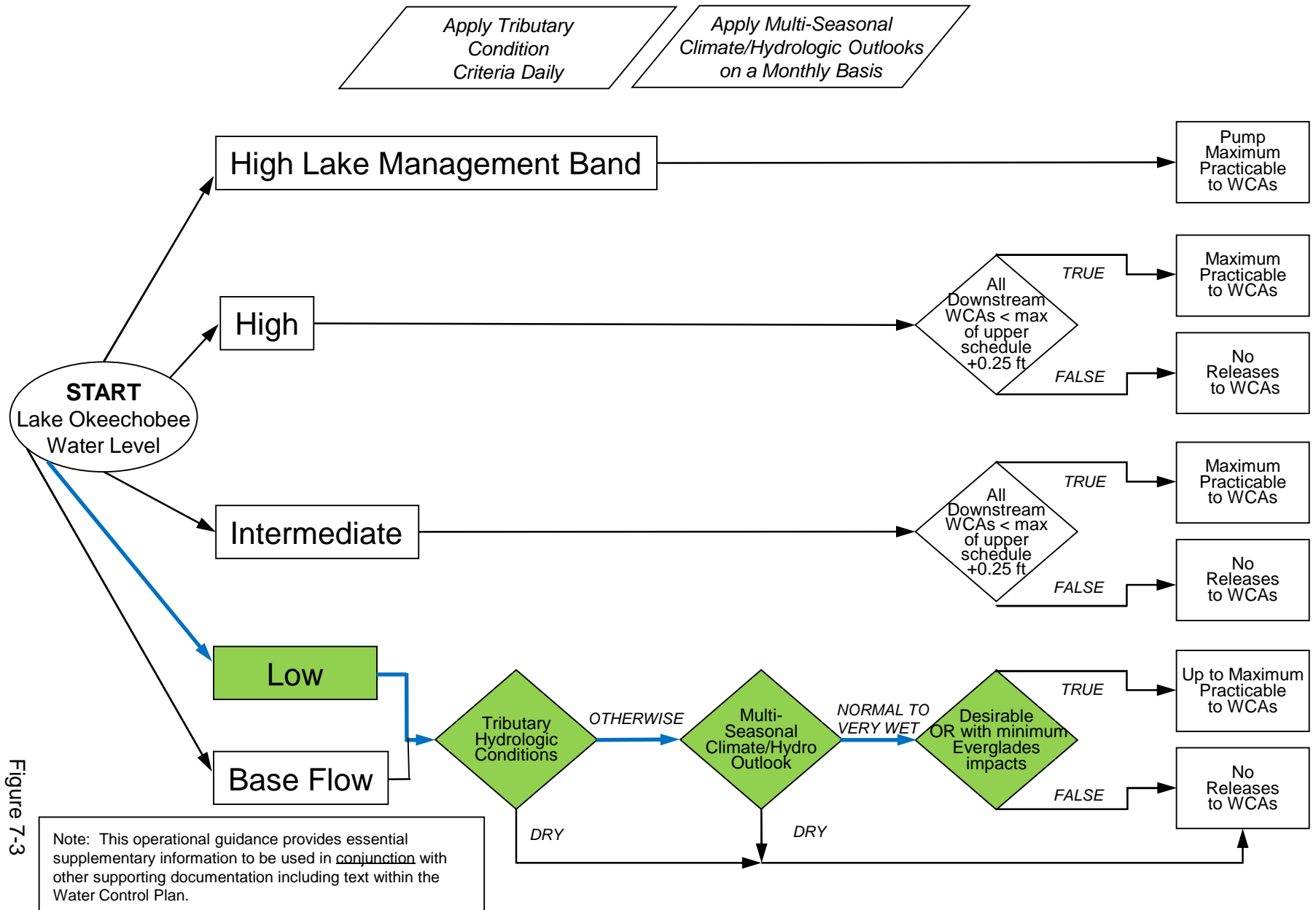


Figure 7-3

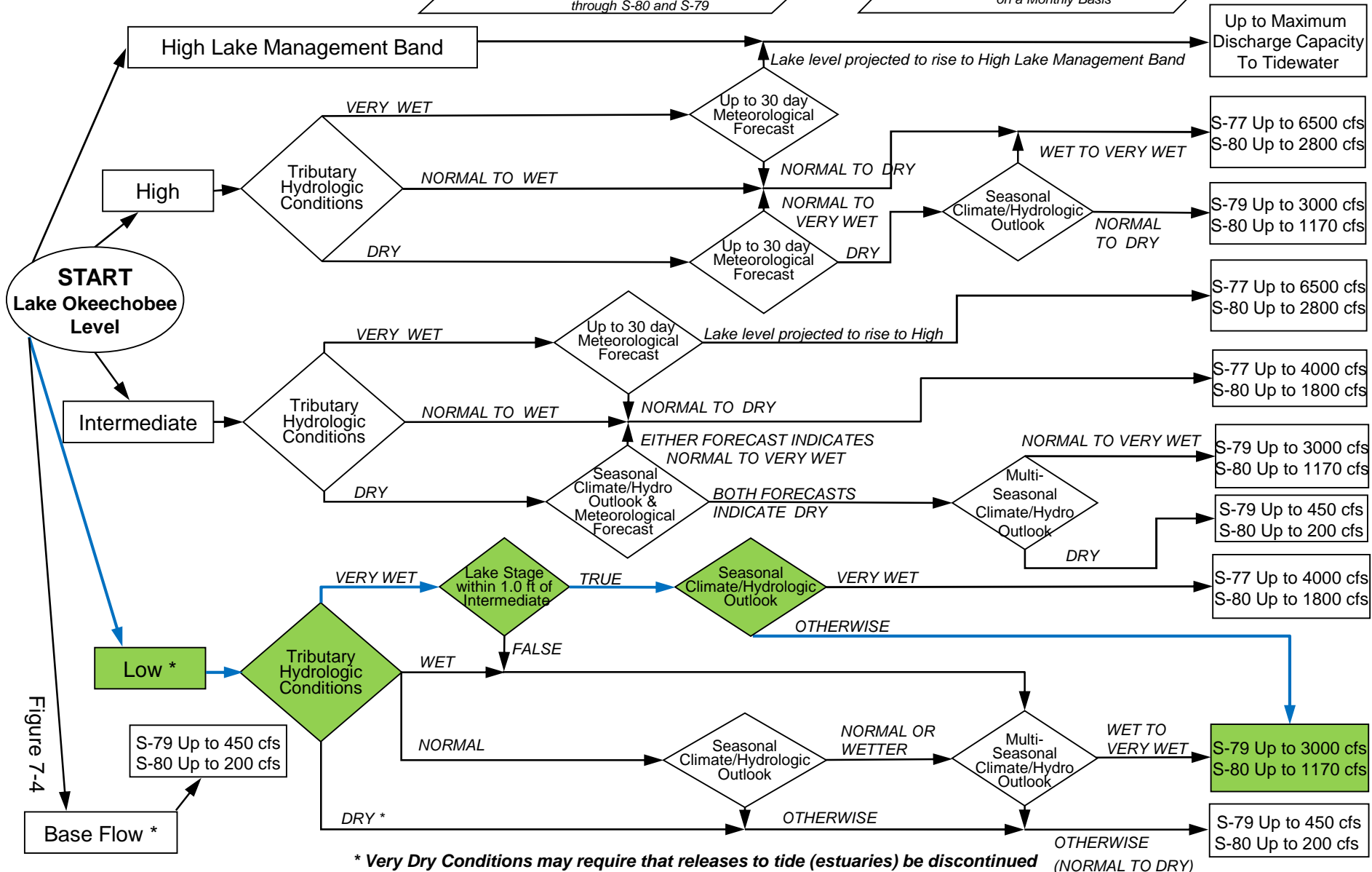
2008 LORS

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

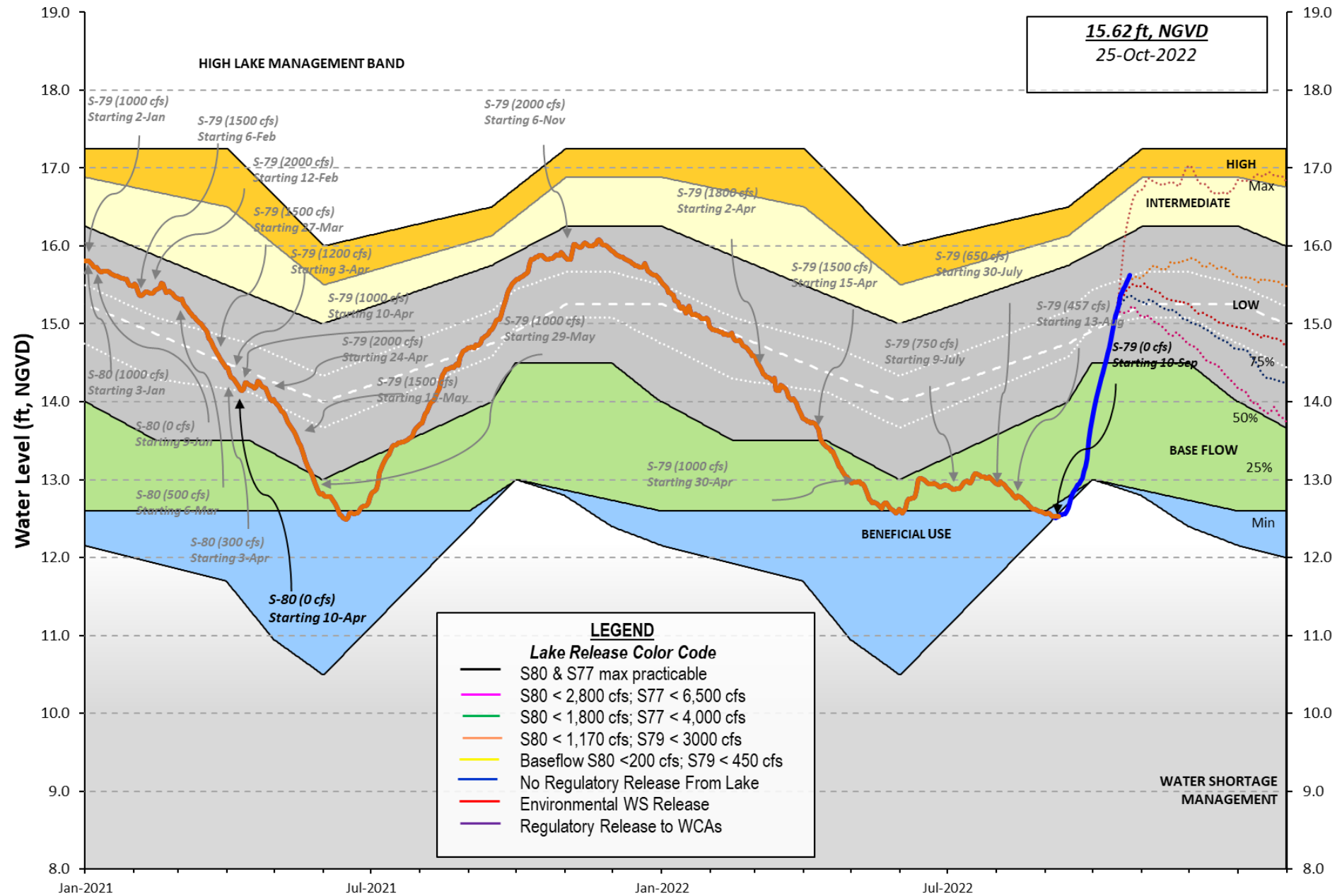
Note: This operational guidance provides essential supplementary information to be used in conjunction with other supporting documentation including text within the Water Control Plan.

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 23 OCT 2022

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	15.57	15.84	16.35 (Official Elv)
Bottom of High Lake Mngmt= 17.11 Top of Water Short Mngmt= 12.85			
Currently in Operational Management Band			

Simulated Average LORS2008 [1965-2000]	14.02
Difference from Average LORS2008	1.55

23OCT (1965-2007) Period of Record Average	15.06
Difference from POR Average	0.51

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ♦ 9.51'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ♦ 7.71'
Bridge Clearance = 50.17'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.62	15.57	15.65	15.60	15.62	15.70	15.45	15.43

*Combination Okeechobee Avg-Daily Lake Average = 15.57
(*See Note)

Okeechobee Inflows (cfs):

S65E	10729	S65EX1	261	Fisheating Cr	487
S154	29	S191	127	S135 Pumps	0
S84	974	S133 Pumps	0	S2 Pumps	0
S84X	342	S127 Pumps	0	S3 Pumps	0
S71	78	S129 Pumps	0	S4 Pumps	0
S72	69	S131 Pumps	0	C5	0

Total Inflows: 13094

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	148	S77	-NR-
S127 Culverts	0	S351	0	S308	275
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-2		

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	-NR-	S308	0.29
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 8672 cfs or 17200 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:	13.60	15.53	0	0	0	0	0	0	0	(cfs)
S193:										
S191:	19.44	15.51	127	0.0	0.0	0.0				
S135 Pumps:	13.33	15.47	0	0	0	0	0			(cfs)
S135 Culverts:			0	0.0	0.0					

North West Shore

S65E:	20.91	15.84	10729	4.6	4.9	4.5	4.5	5.2	4.6	
S65EX1:	20.91	15.84	261							
S127 Pumps:	13.41	15.46	0	0	0	0	0	0		(cfs)
S127 Culvert:			0	0.0						
S129 Pumps:	12.92	15.56	0	0	0	0				(cfs)
S129 Culvert:			0	0.0						
S131 Pumps:	12.92	15.59	0	0	0					(cfs)
S131 Culvert:			0							

Fisheating Creek
nr Palmdale
nr Lakeport

C5:		32.35	487							
		-NR-	0	-NR-	-NR-	-NR-				

South Shore

S4 Pumps:	11.28	-NR-	0	0	0	0				(cfs)
S169:		-NR-	-NR-	-NR-	-NR-	-NR-				
S310:	15.57		10							
S3 Pumps:	9.93	15.70	0	0	0	0				(cfs)
S354:	15.70	9.93	148	0.0	0.0					
S2 Pumps:	9.70	15.64	0	0	0	0	0			(cfs)
S351:	15.64	9.70	0	0.0	0.0	0.0				
S352:	15.70	10.22	0	0.0	0.0					
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-		
L8 Canal PT		14.15	-2							

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.70	15.64	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-
S352:	10.22	15.70	0	-NR-	-NR-	-NR-	-NR-		
S354:	9.93	15.70	148	-NR-	-NR-	-NR-	-NR-		

Caloosahatchee River (S77, S78, S79)

S47B:	14.93	11.82		0.5	1.0				
S47D:	11.71	11.27	30	1.0					
S77:									
Spillway and Sector Preferred Flow:									
	15.49	11.13	0	0.0	0.0	0.0	0.0		
Flow Due to Lockages+:			-NR-						

S78:

Spillway and Sector Flow:
11.18 2.89 176 0.0 0.0 0.0 0.5
Flow Due to Lockages+: 11

S79:

Spillway and Sector Flow:
3.11 1.62 1038 0.0 0.0 2.0 2.0 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:
15.48 13.33 272 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 3

S153: 19.01 13.14 31 0.0 0.0

S80:

Spillway and Sector Flow:
13.46 2.29 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 20
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	51	5
S78:	-NR-	0.00	0.00	45	1
S79:	-NR-	0.00	0.00	-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:	-NR-	0.00	0.00	58	2
S80:	-NR-	0.00	0.00	102	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	23 OCT 2022	15.57	Difference from 23OCT22
23OCT22 -1 Day =	22 OCT 2022	15.53	-0.04

23OCT22	-2 Days =	21 OCT 2022	15.48	-0.09
23OCT22	-3 Days =	20 OCT 2022	15.45	-0.12
23OCT22	-4 Days =	19 OCT 2022	15.40	-0.17
23OCT22	-5 Days =	18 OCT 2022	15.36	-0.21
23OCT22	-6 Days =	17 OCT 2022	15.24	-0.33
23OCT22	-7 Days =	16 OCT 2022	15.17	-0.40
23OCT22	-30 Days =	23 SEP 2022	12.99	-2.58
23OCT22	-1 Year =	23 OCT 2021	15.84	0.27
23OCT22	-2 Year =	23 OCT 2020	16.35	0.78

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
23OCT22	Today =	23 OCT 2022	16001	MON	9091
23OCT22	-1 Day =	22 OCT 2022	16425	SUN	10840
23OCT22	-2 Days =	21 OCT 2022	16883	SAT	6504
23OCT22	-3 Days =	20 OCT 2022	17628	FRI	10840
23OCT22	-4 Days =	19 OCT 2022	18064	THU	8672
23OCT22	-5 Days =	18 OCT 2022	18676	WED	26015
23OCT22	-6 Days =	17 OCT 2022	18042	TUE	15175
23OCT22	-7 Days =	16 OCT 2022	18320	MON	13008
23OCT22	-8 Days =	15 OCT 2022	18903	SUN	21679
23OCT22	-9 Days =	14 OCT 2022	19018	SAT	23343
23OCT22	-10 Days =	13 OCT 2022	19015	FRI	23797
23OCT22	-11 Days =	12 OCT 2022	19584	THU	21175
23OCT22	-12 Days =	11 OCT 2022	21514	WED	14823
23OCT22	-13 Days =	10 OCT 2022	21968	TUE	19058

S65E					
Average Flow over previous 14 days					Avg-Daily Flow
23OCT22	Today=	23 OCT 2022	12522	MON	10762
23OCT22	-1 Day =	22 OCT 2022	12693	SUN	11281
23OCT22	-2 Days =	21 OCT 2022	12830	SAT	11838
23OCT22	-3 Days =	20 OCT 2022	12908	FRI	12231
23OCT22	-4 Days =	19 OCT 2022	12928	THU	12461
23OCT22	-5 Days =	18 OCT 2022	12876	WED	12631
23OCT22	-6 Days =	17 OCT 2022	12763	TUE	12721
23OCT22	-7 Days =	16 OCT 2022	12570	MON	12904
23OCT22	-8 Days =	15 OCT 2022	12312	SUN	13298
23OCT22	-9 Days =	14 OCT 2022	12012	SAT	13095
23OCT22	-10 Days =	13 OCT 2022	11691	FRI	12926
23OCT22	-11 Days =	12 OCT 2022	11314	THU	13120
23OCT22	-12 Days =	11 OCT 2022	10858	WED	13054
23OCT22	-13 Days =	10 OCT 2022	10321	TUE	12990

S65EX1					
Average Flow over previous 14 days					Avg-Daily Flow
23OCT22	Today=	23 OCT 2022	266	MON	261
23OCT22	-1 Day =	22 OCT 2022	268	SUN	264
23OCT22	-2 Days =	21 OCT 2022	269	SAT	266
23OCT22	-3 Days =	20 OCT 2022	270	FRI	269
23OCT22	-4 Days =	19 OCT 2022	272	THU	264
23OCT22	-5 Days =	18 OCT 2022	273	WED	259
23OCT22	-6 Days =	17 OCT 2022	276	TUE	259
23OCT22	-7 Days =	16 OCT 2022	278	MON	260
23OCT22	-8 Days =	15 OCT 2022	281	SUN	262
23OCT22	-9 Days =	14 OCT 2022	283	SAT	268
23OCT22	-10 Days =	13 OCT 2022	286	FRI	269
23OCT22	-11 Days =	12 OCT 2022	292	THU	272
23OCT22	-12 Days =	11 OCT 2022	346	WED	277
23OCT22	-13 Days =	10 OCT 2022	392	TUE	278

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)
23 OCT 2022	-NR-	-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
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

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)
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
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

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
23 OCT 2022	528	-NR-	39
22 OCT 2022	-NR-	-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
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

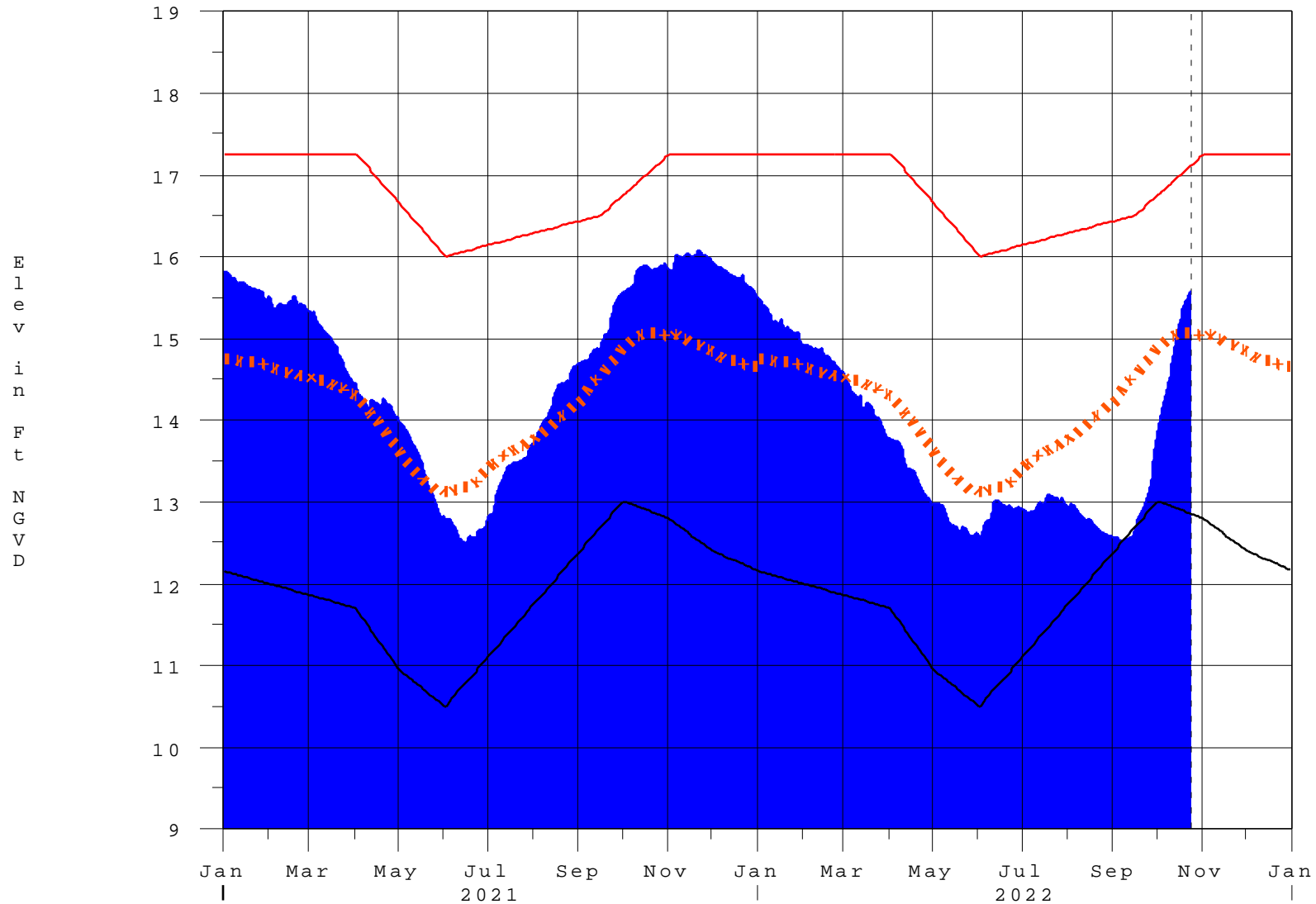
*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(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

24OCT22 09:30:25



- 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**