

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 12/05/2022 (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)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>
Current (Dec-May)	N/A	N/A	0.06	Dry	-0.19	Dry	-0.38	Dry
Multi Seasonal (Dec-Oct)	N/A	N/A	2.42	Normal	2.54	Wet	2.12	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 Graph:

4570 cfs 14-day running average for Lake Okeechobee Net Inflow through 12/05/2022. According to the classification in Tributary Hydrologic Conditions table, this condition is **Wet**.

-1.36 for Palmer Drought Index on 12/03/2022.

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 12/05/2022:

Lake Okeechobee Stage: **16.48 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.25	
Operational Band	High sub-band	16.88	
	Intermediate sub-band	16.25	← 16.48 ft
	Low sub-band	14.44	
Base Flow sub-band		12.72	
Beneficial Use sub-band		12.37	
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

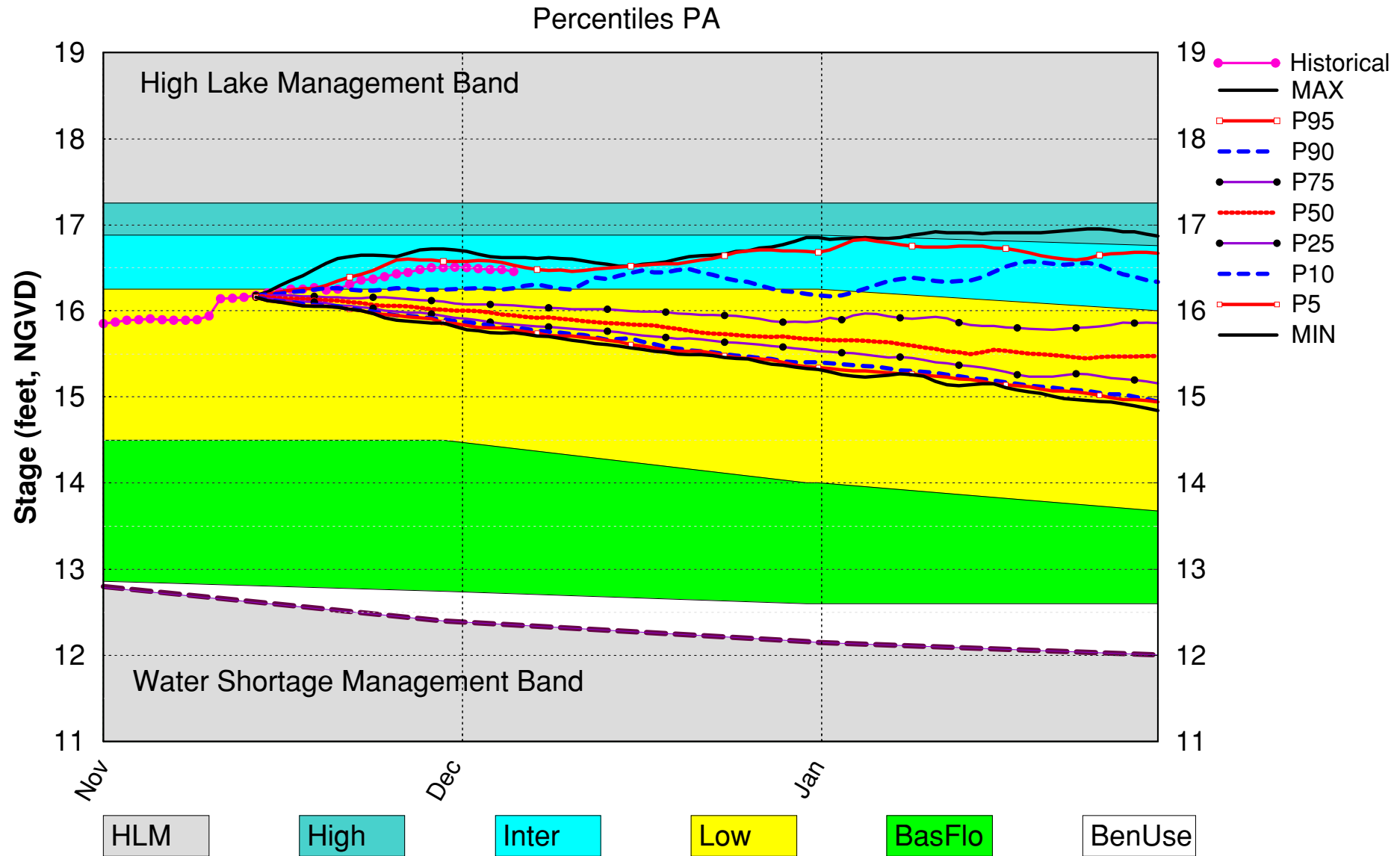
Up to 4000 cfs at S-77 and up to 1800 cfs at S-80.

LORS2008 Implementation on 12/05/2022 (ENSO Condition- La Niña Watch):**Status for week ending 12/05/2022:****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	-1.36 (Dry)	M
	CPC Precipitation Outlook	1 month: Below Normal	M
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	-0.19 ft	H
	ENSO Forecast	Extremely Dry	
	LOK Multi-Seasonal Net Inflow Outlook	2.54 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-7, 1-8T, 1-9)	Above Line 1 (17.36 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (13.13 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.55 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

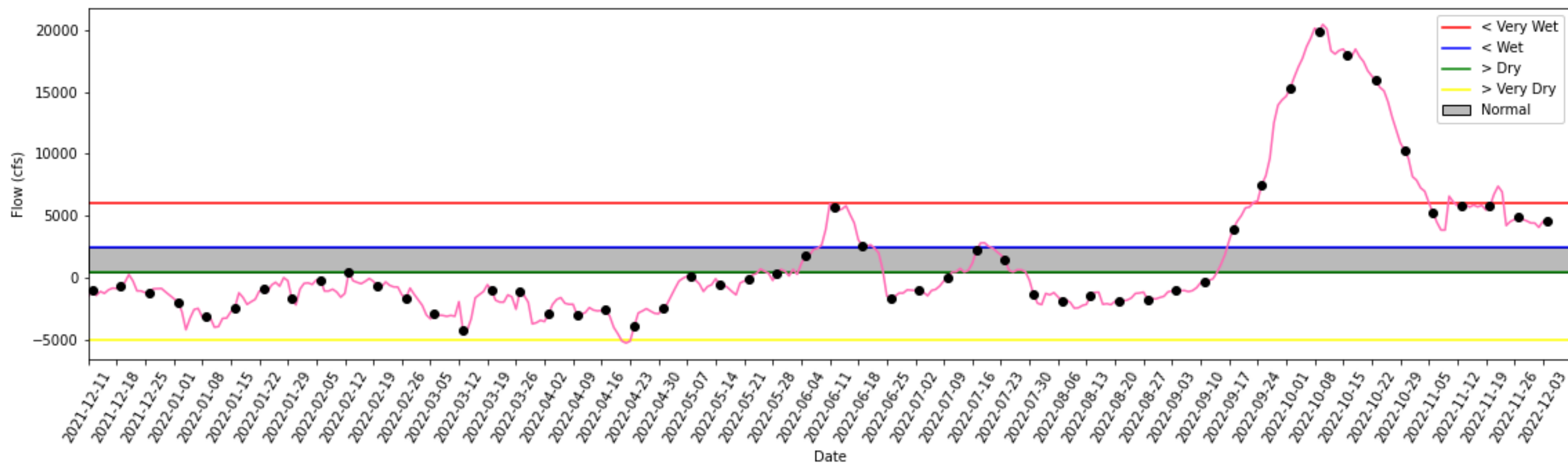
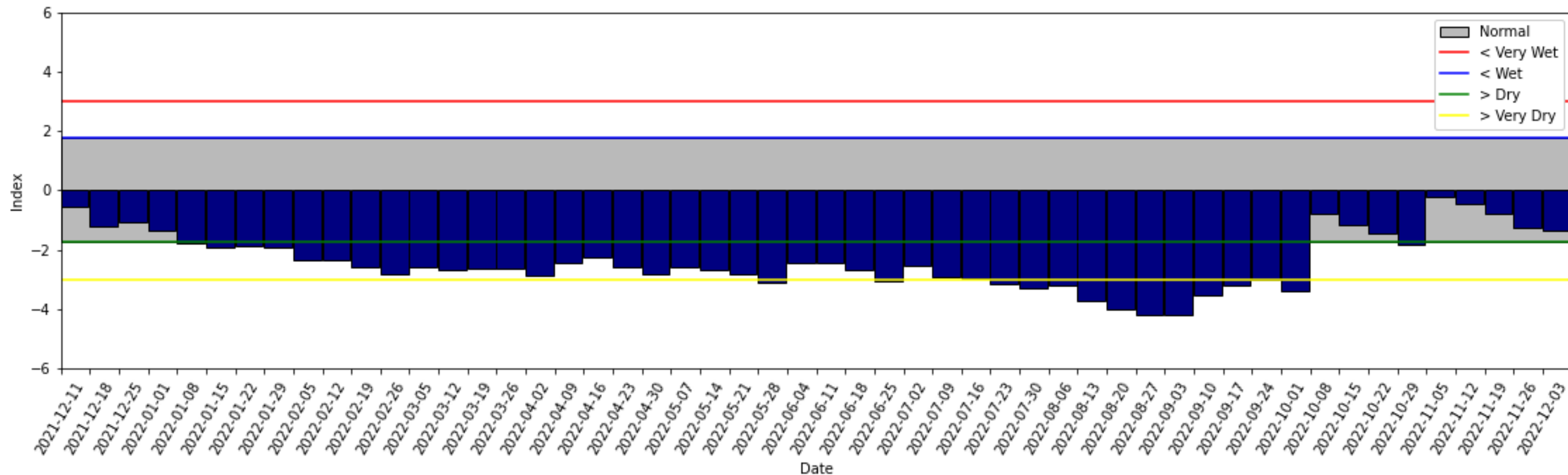
Note: The water supply risk classification based on the Palmer index, as well as the LOK seasonal and multi-seasonal net inflow outlooks use slightly different classification intervals than those used by the 2008-LORS.

Lake Okeechobee SFWMM Nov Mid–Mon 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of December 04 2022



2008 LORS

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

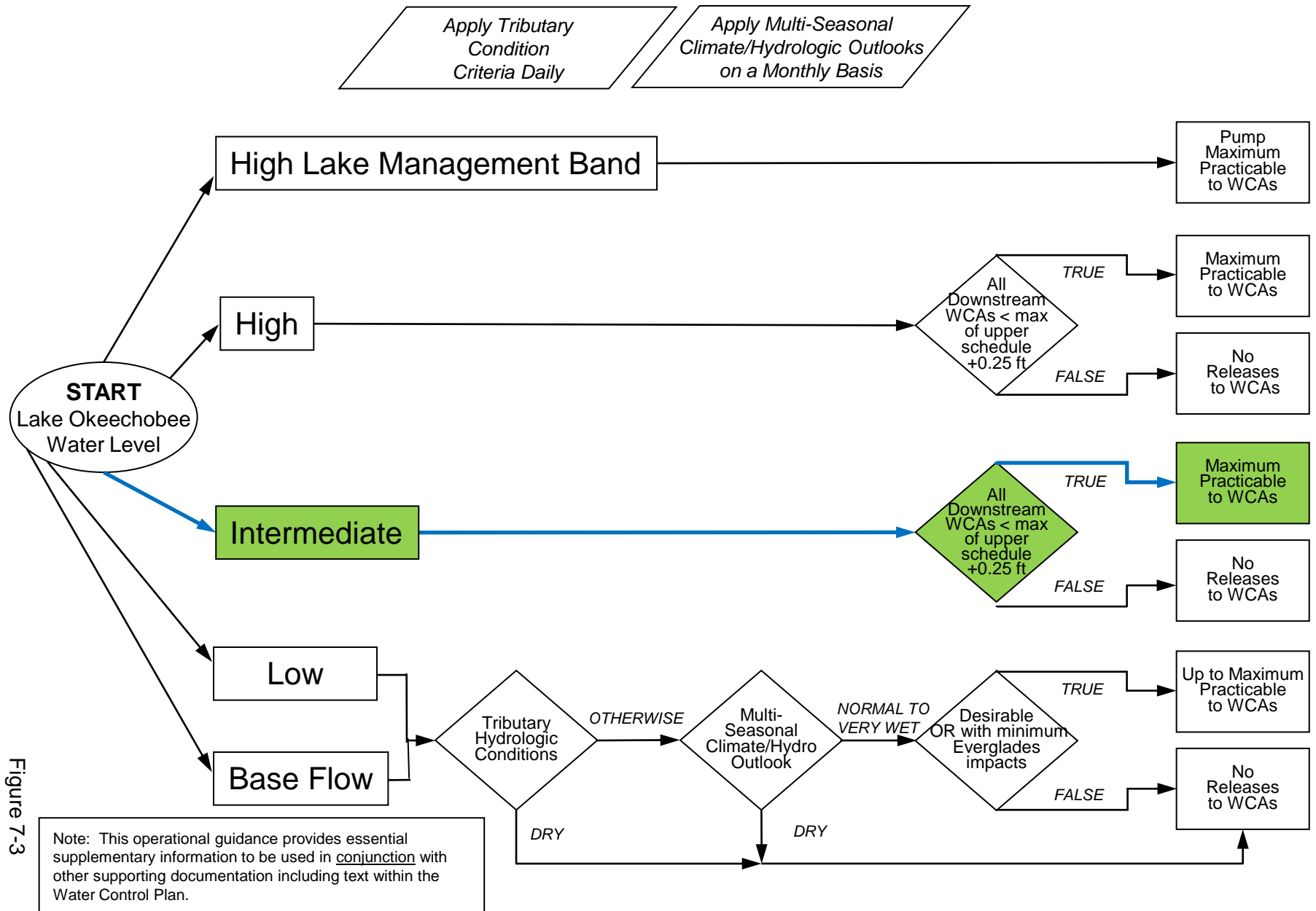


Figure 7-3

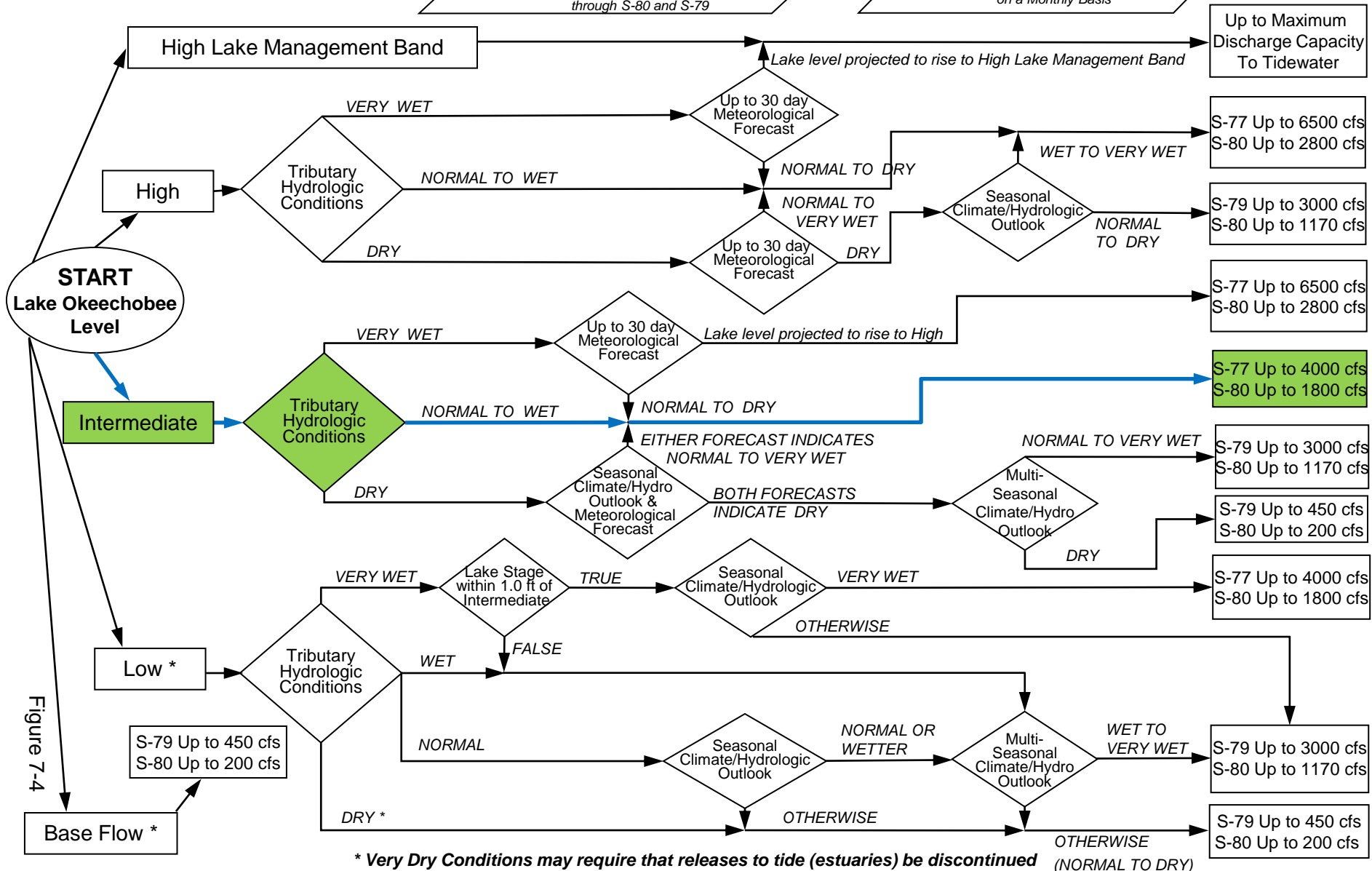
2008 LORS

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

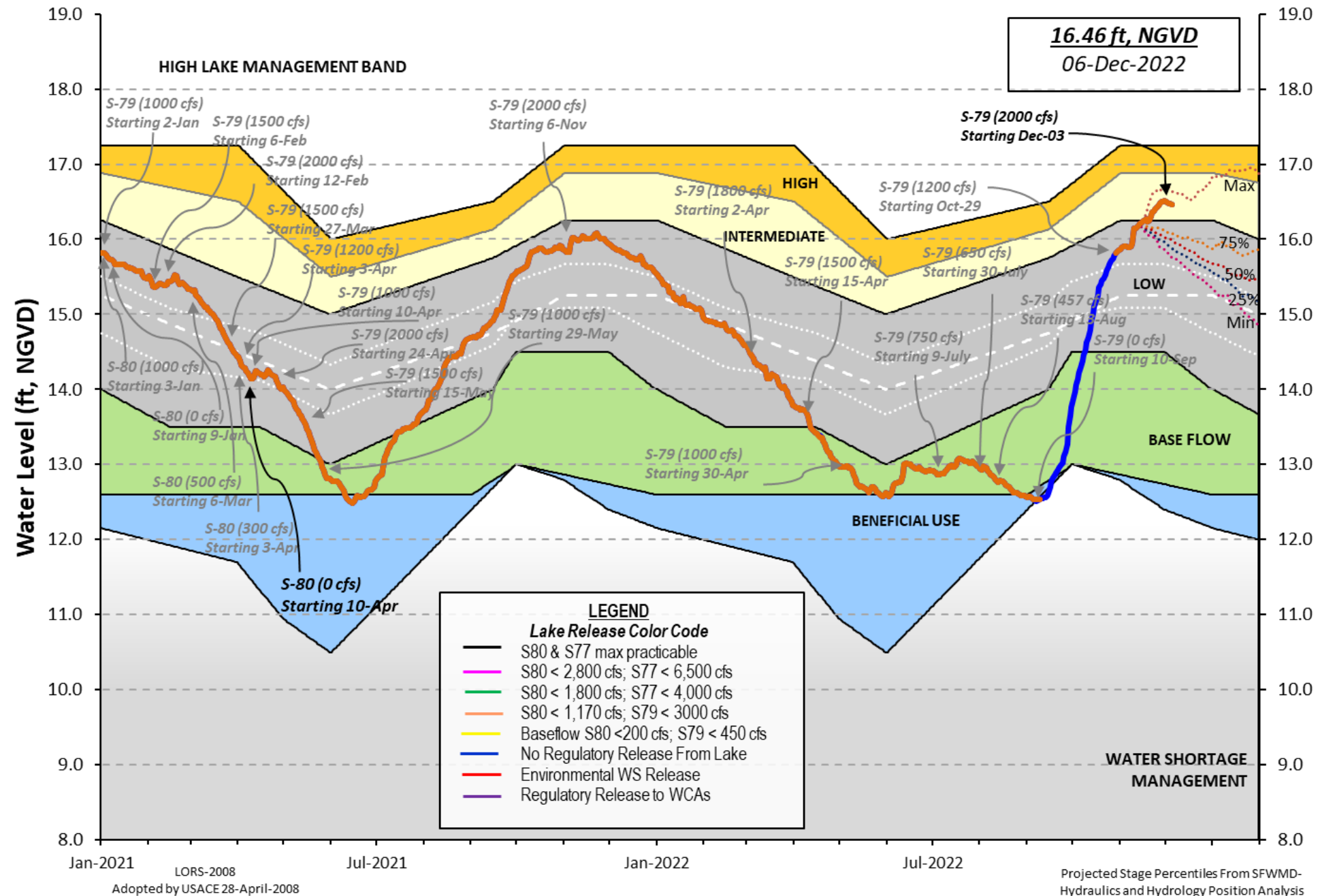
Note: This operational guidance provides essential supplementary information to be used in conjunction with other supporting documentation including text within the Water Control Plan.

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 04 DEC 2022

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	16.48	15.88	15.98 (Official Elv)
Bottom of High Lake Mngmt= 17.25 Top of Water Short Mngmt= 12.37			
Currently in Operational Management Band			
Simulated Average LORS2008 [1965-2000]	13.73		
Difference from Average LORS2008	2.75		

04DEC (1965-2007) Period of Record Average 14.79
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 ♦ 10.42'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ♦ 8.62'
Bridge Clearance = 49.63'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
16.61	16.53	16.58	16.55	16.52	16.64	16.11	16.43

*Combination Okeechobee Avg-Daily Lake Average = 16.48
(*See Note)

Okeechobee Inflows (cfs):

S65E	2065	S65EX1	0	Fisheating Cr	167
S154	29	S191	18	S135 Pumps	0
S84	1	S133 Pumps	0	S2 Pumps	0
S84X	0	S127 Pumps	0	S3 Pumps	0
S71	167	S129 Pumps	0	S4 Pumps	0
S72	210	S131 Pumps	0	C5	0
Total Inflows: 2657					

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	212	S77	1746
S127 Culverts	0	S351	120	S308	5
S129 Culverts	0	S352	110		
S131 Culverts	0	L8 Canal Pt	170		
Total Outflows: 2364					

****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	0.17	S308	0.18
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 0 cfs or 0 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:	13.53	16.46	0	0	0	0	0	0	0	(cfs)
S193:										
S191:	19.45	16.45	18	0.0	0.0	0.0				
S135 Pumps:	13.34	16.40	0	0	0	0	0			(cfs)
S135 Culverts:			0	0.0	0.0					

North West Shore

S65E:	20.87	16.23	2065	1.4	1.2	0.7	1.4	0.9	0.7	
S65EX1:	20.87	16.23	0							
S127 Pumps:	13.47	16.43	0	0	0	0	0	0	(cfs)	
S127 Culvert:			0	0.0						
S129 Pumps:	12.99	16.48	0	0	0	0			(cfs)	
S129 Culvert:			0	0.0						
S131 Pumps:	13.15	16.48	0	0	0				(cfs)	
S131 Culvert:			0							

Fisheating Creek
nr Palmdale
nr Lakeport

C5:		31.47	167							
		-NR-	0	-NR-	-NR-	-NR-				

South Shore

S4 Pumps:	11.77	-NR-	0	-NR-	-NR-	-NR-				(cfs)
S169:		-NR-	-NR-	-NR-	-NR-	-NR-				
S310:	16.45		1							
S3 Pumps:	10.44	16.51	0	0	0	0				(cfs)
S354:	16.51	10.44	212	0.9	0.1					
S2 Pumps:	10.03	16.55	0	0	0	0	0			(cfs)
S351:	16.55	10.03	120	0.2	0.2	0.0				
S352:	16.63	10.27	110	0.2	0.2					
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-		
L8 Canal PT		14.42	170							

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.03	16.55	120	-NR-	-NR-	-NR-	-NR-	-NR-	
S352:	10.27	16.63	110	-NR-	-NR-	-NR-	-NR-		
S354:	10.44	16.51	212	-NR-	-NR-	-NR-	-NR-		

Caloosahatchee River (S77, S78, S79)

S47B:	14.28	11.21		0.5	1.0		
S47D:	11.16	11.16	-40	6.0			
S77:							
Spillway and Sector Preferred Flow:							
	16.32	11.06	1738	0.0	3.0	3.0	0.0
Flow Due to Lockages+:			8				

S78:

Spillway and Sector Flow:
11.03 2.83 1808 1.5 2.5 2.5 0.0
Flow Due to Lockages+: 14

S79:

Spillway and Sector Flow:
2.98 2.00 2811 0.0 0.0 0.0 2.5 2.5 3.5 2.5 0.0
Flow Due to Lockages+: 7
Percent of flow from S77 62%
Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:
16.12 13.87 0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 5

S153: 18.84 14.26 64 0.0 0.0

S80:

Spillway and Sector Flow:
14.51 0.98 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 23
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	228	1
S78:	-NR-	0.00	0.00	236	1
S79:	-NR-	0.00	0.00	3	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	56	1
S80:	-NR-	0.00	0.00	255	2
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	04 DEC 2022	16.48	Difference from 04DEC22
04DEC22 -1 Day =	03 DEC 2022	16.48	0.00

04DEC22	-2 Days =	02 DEC 2022	16.49	0.01
04DEC22	-3 Days =	01 DEC 2022	16.50	0.02
04DEC22	-4 Days =	30 NOV 2022	16.51	0.03
04DEC22	-5 Days =	29 NOV 2022	16.50	0.02
04DEC22	-6 Days =	28 NOV 2022	16.50	0.02
04DEC22	-7 Days =	27 NOV 2022	16.48	0.00
04DEC22	-30 Days =	04 NOV 2022	15.91	-0.57
04DEC22	-1 Year =	04 DEC 2021	15.88	-0.60
04DEC22	-2 Year =	04 DEC 2020	15.98	-0.50

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
04DEC22	Today =	04 DEC 2022	4574	MON	2350
04DEC22	-1 Day =	03 DEC 2022	4570	SUN	-78
04DEC22	-2 Days =	02 DEC 2022	4092	SAT	-314
04DEC22	-3 Days =	01 DEC 2022	4440	FRI	-70
04DEC22	-4 Days =	30 NOV 2022	4447	THU	4453
04DEC22	-5 Days =	29 NOV 2022	4616	WED	512
04DEC22	-6 Days =	28 NOV 2022	4743	TUE	4829
04DEC22	-7 Days =	27 NOV 2022	4886	MON	6829
04DEC22	-8 Days =	26 NOV 2022	4724	SUN	4575
04DEC22	-9 Days =	25 NOV 2022	4561	SAT	6828
04DEC22	-10 Days =	24 NOV 2022	4237	FRI	6828
04DEC22	-11 Days =	23 NOV 2022	6949	THU	2293
04DEC22	-12 Days =	22 NOV 2022	7406	WED	11368
04DEC22	-13 Days =	21 NOV 2022	6751	TUE	13637

S65E					
Average Flow over previous 14 days					Avg-Daily Flow
04DEC22	Today=	04 DEC 2022	3003	MON	2213
04DEC22	-1 Day =	03 DEC 2022	3044	SUN	2239
04DEC22	-2 Days =	02 DEC 2022	3080	SAT	2384
04DEC22	-3 Days =	01 DEC 2022	3122	FRI	2721
04DEC22	-4 Days =	30 NOV 2022	3150	THU	2814
04DEC22	-5 Days =	29 NOV 2022	3176	WED	2960
04DEC22	-6 Days =	28 NOV 2022	3187	TUE	3155
04DEC22	-7 Days =	27 NOV 2022	3181	MON	3441
04DEC22	-8 Days =	26 NOV 2022	3154	SUN	3666
04DEC22	-9 Days =	25 NOV 2022	3093	SAT	3544
04DEC22	-10 Days =	24 NOV 2022	3043	FRI	3416
04DEC22	-11 Days =	23 NOV 2022	2997	THU	3145
04DEC22	-12 Days =	22 NOV 2022	2939	WED	3134
04DEC22	-13 Days =	21 NOV 2022	2884	TUE	3212

S65EX1					
Average Flow over previous 14 days					Avg-Daily Flow
04DEC22	Today=	04 DEC 2022	97	MON	0
04DEC22	-1 Day =	03 DEC 2022	109	SUN	0
04DEC22	-2 Days =	02 DEC 2022	121	SAT	0
04DEC22	-3 Days =	01 DEC 2022	133	FRI	0
04DEC22	-4 Days =	30 NOV 2022	145	THU	0
04DEC22	-5 Days =	29 NOV 2022	157	WED	40
04DEC22	-6 Days =	28 NOV 2022	166	TUE	162
04DEC22	-7 Days =	27 NOV 2022	167	MON	161
04DEC22	-8 Days =	26 NOV 2022	167	SUN	166
04DEC22	-9 Days =	25 NOV 2022	167	SAT	166
04DEC22	-10 Days =	24 NOV 2022	167	FRI	165
04DEC22	-11 Days =	23 NOV 2022	167	THU	164
04DEC22	-12 Days =	22 NOV 2022	168	WED	164
04DEC22	-13 Days =	21 NOV 2022	169	TUE	165

Lake Okeechobee Outlets Last 14 Days

		S-77	Below S-77	S-78	S-79
		Discharge	Discharge	Discharge	Discharge
		(ALL DAY)	(ALL-DAY)	(ALL DAY)	(ALL DAY)
DATE		(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)
04 DEC 2022		3464	3852	3640	5630
03 DEC 2022		3901	4556	3361	4724
02 DEC 2022		3683	4374	3113	4503
01 DEC 2022		4144	4571	3276	5622
30 NOV 2022		4338	4248	3507	3816
29 NOV 2022		1024	1016	1148	2949
28 NOV 2022		589	770	361	2014
27 NOV 2022		24	238	553	1596
26 NOV 2022		19	37	672	1847
25 NOV 2022		13	411	661	2222
24 NOV 2022		9	299	447	1569
23 NOV 2022		10	-29	203	1436
22 NOV 2022		9	-284	679	2799
21 NOV 2022		18	262	1606	3270

		S-310	S-351	S-352	S-354	L8 Canal Pt
		Discharge	Discharge	Discharge	Discharge	Discharge
		(ALL DAY)	(ALL DAY)	(ALL DAY)	(ALL DAY)	(ALL DAY)
DATE		(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)
04 DEC 2022		1	238	218	421	338
03 DEC 2022		8	0	47	34	369
02 DEC 2022		9	0	46	33	136
01 DEC 2022		3	0	46	154	6
30 NOV 2022		15	0	45	0	-6
29 NOV 2022		5	0	46	0	8
28 NOV 2022		-3	0	46	0	-19
27 NOV 2022		4	0	44	0	9
26 NOV 2022		-5	0	46	0	31
25 NOV 2022		11	0	44	0	-0
24 NOV 2022		8	0	44	0	-16
23 NOV 2022		3	0	48	0	-20
22 NOV 2022		10	0	49	0	-13
21 NOV 2022		7	0	48	0	4

		S-308	Below S-308	S-80
		Discharge	Discharge	Discharge
		(ALL DAY)	(ALL-DAY)	(ALL-DAY)
DATE		(AC-FT)	(AC-FT)	(AC-FT)
04 DEC 2022		9	-NR-	45
03 DEC 2022		16	-NR-	54
02 DEC 2022		13	-NR-	56
01 DEC 2022		18	-NR-	51
30 NOV 2022		14	-NR-	245
29 NOV 2022		12	-NR-	556
28 NOV 2022		8	-NR-	632
27 NOV 2022		14	-NR-	886
26 NOV 2022		14	-NR-	839
25 NOV 2022		7	-NR-	544
24 NOV 2022		3	-NR-	1220
23 NOV 2022		8	-NR-	1514
22 NOV 2022		9	-NR-	1433
21 NOV 2022		3	-NR-	776

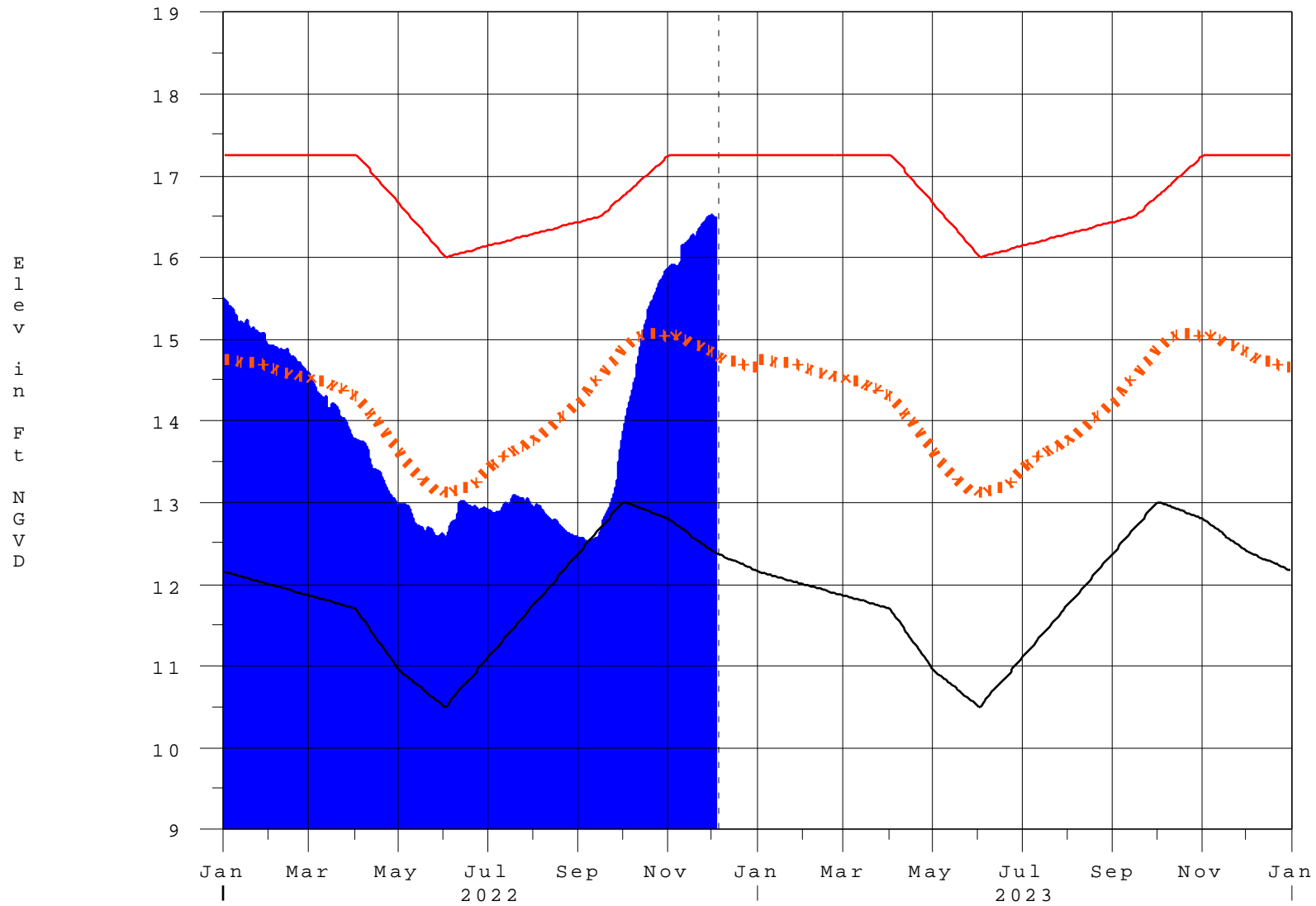
*** NOTE: Discharge (ALL DAY) is computed using Spillway, Sector Gate and Lockages Discharges from 0015 hrs to 2400 hrs.

(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 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

Lake Okeechobee

05DEC22 09:00:31



- 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**