

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 09/18/2023 (ENSO Condition: El Niño)

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 El Niño years and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with El Niño 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 El Niño ENSO Years**		Sub-sampling of AMO Warm + El Niño ENSO Years***	
	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>
Current (Sep-Feb)	N/A	N/A	1.78	Wet	2.10	Very Wet	3.10	Very Wet
Multi Seasonal (Sep-Apr)	N/A	N/A	1.79	Normal	2.61	Wet	3.43	Wet

*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:

1375 cfs 14-day running average for Lake Okeechobee Net Inflow through 09/17/2023. According to the classification in Tributary Hydrologic Conditions table, this condition is Near Normal.

-2.89 for Palmer Drought Index on 09/16/2023.

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

The wetter of the two conditions above is **Near Normal**.

LORS2008 Classification Tables:

Lake Okeechobee Stage on 09/18/2023:

Lake Okeechobee Stage: **15.41 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.53	
Operational Band	High sub-band	16.16	
	Intermediate sub-band	15.77	
	Low sub-band	14.07	← 15.41 ft
Base Flow sub-band		12.81	
Beneficial Use sub-band		12.73	
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 09/18/2023 (ENSO Condition- El Niño):

Status for week ending 09/18/2023*:

Water Supply Risk Evaluation

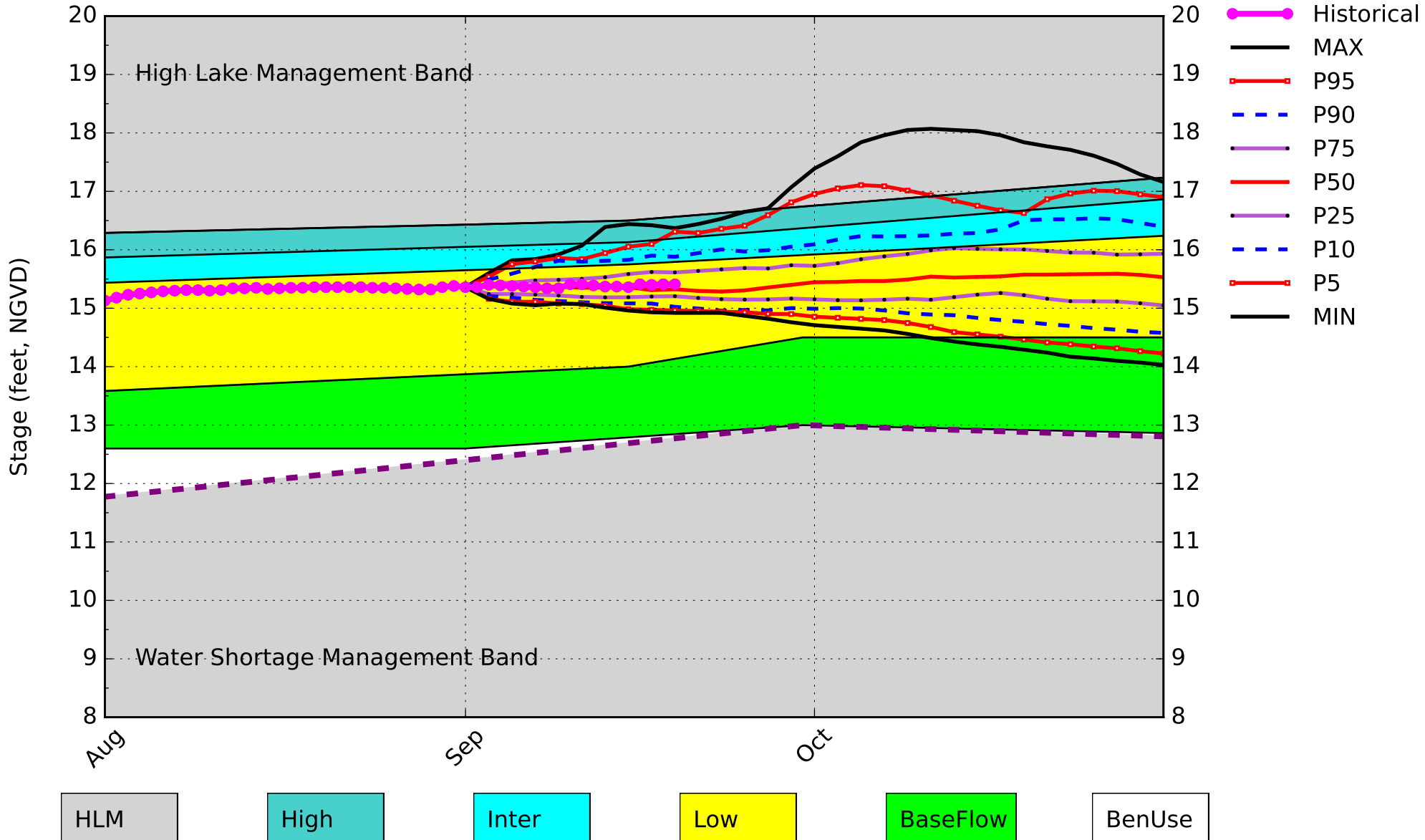
Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-band	L
	Palmer Drought Index for LOK Tributary Conditions	-2.89 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Equal Chances	L
		3 months: Above Normal	L
	LOK Seasonal Net Inflow Outlook	2.10 ft	L
	ENSO Forecast	Normal to Extremely Wet	L
	LOK Multi-Seasonal Net Inflow Outlook	2.61 ft	M
		ENSO Forecast	Normal
WCAs	WCA 1: 3 Station Average (Sites 1-7, 1-8T, and 1-9)	Above Line 1 (16.86 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (12.87 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (10.95 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.

*- L-8 at Canal Point flow data for September 12 is not available from USACE Daily Reports and was assumed to be 0.

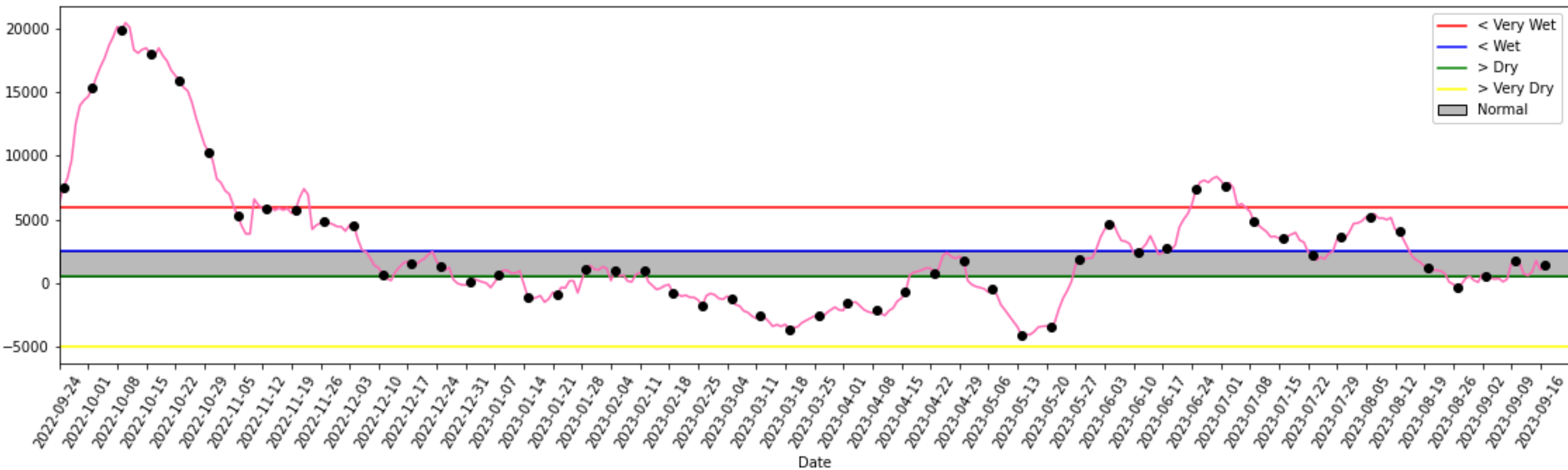
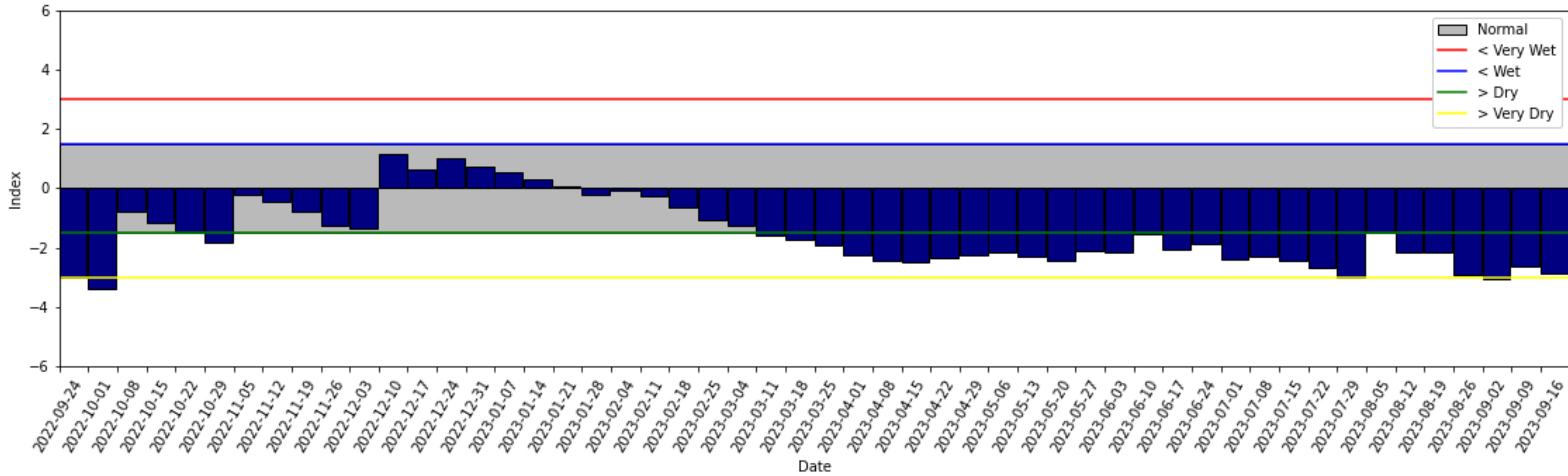
Lake Okeechobee SFWMM September 2023 Position Analysis

Percentiles PA



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of September 17 2023



2008 LORS

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

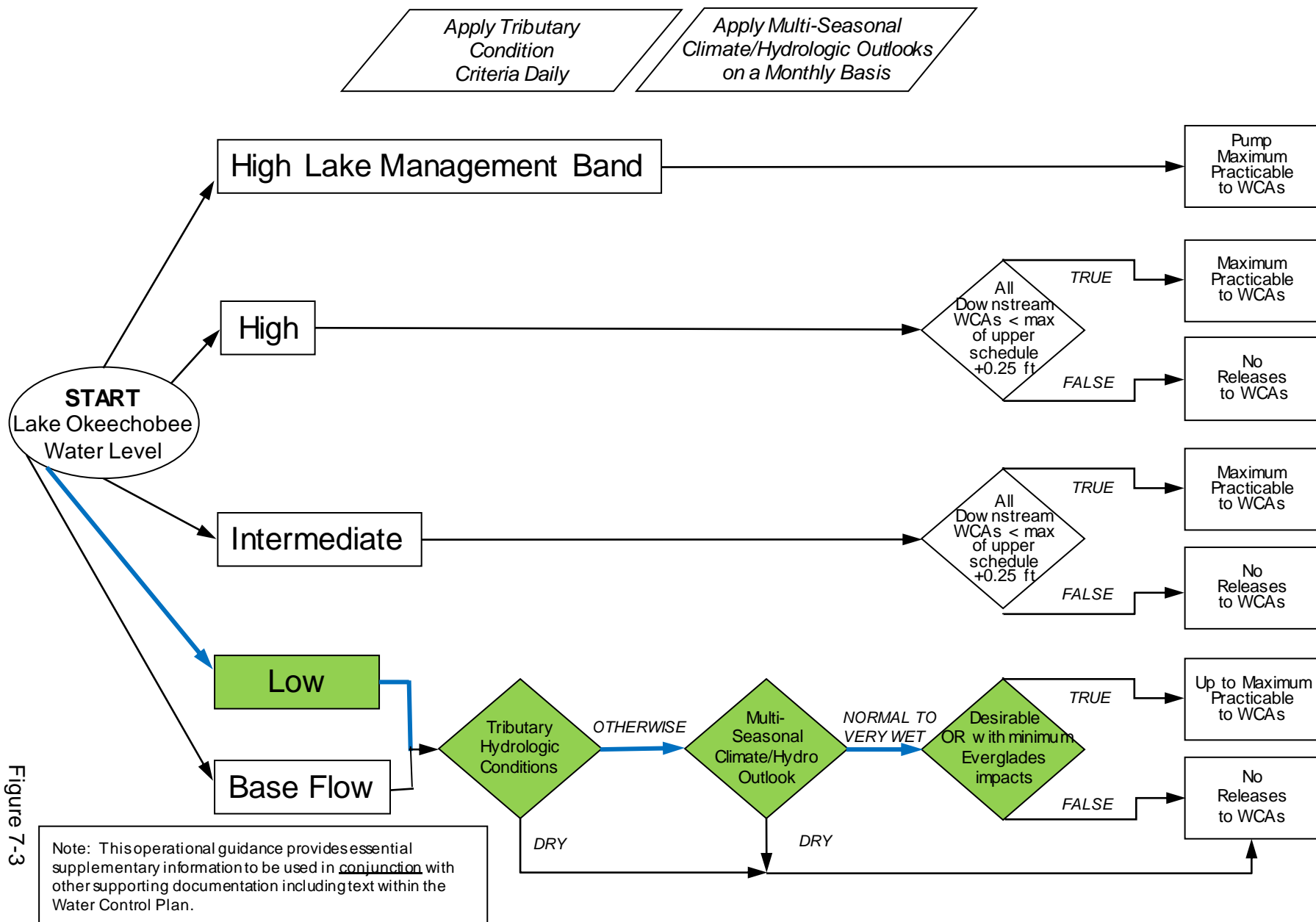


Figure 7-3

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

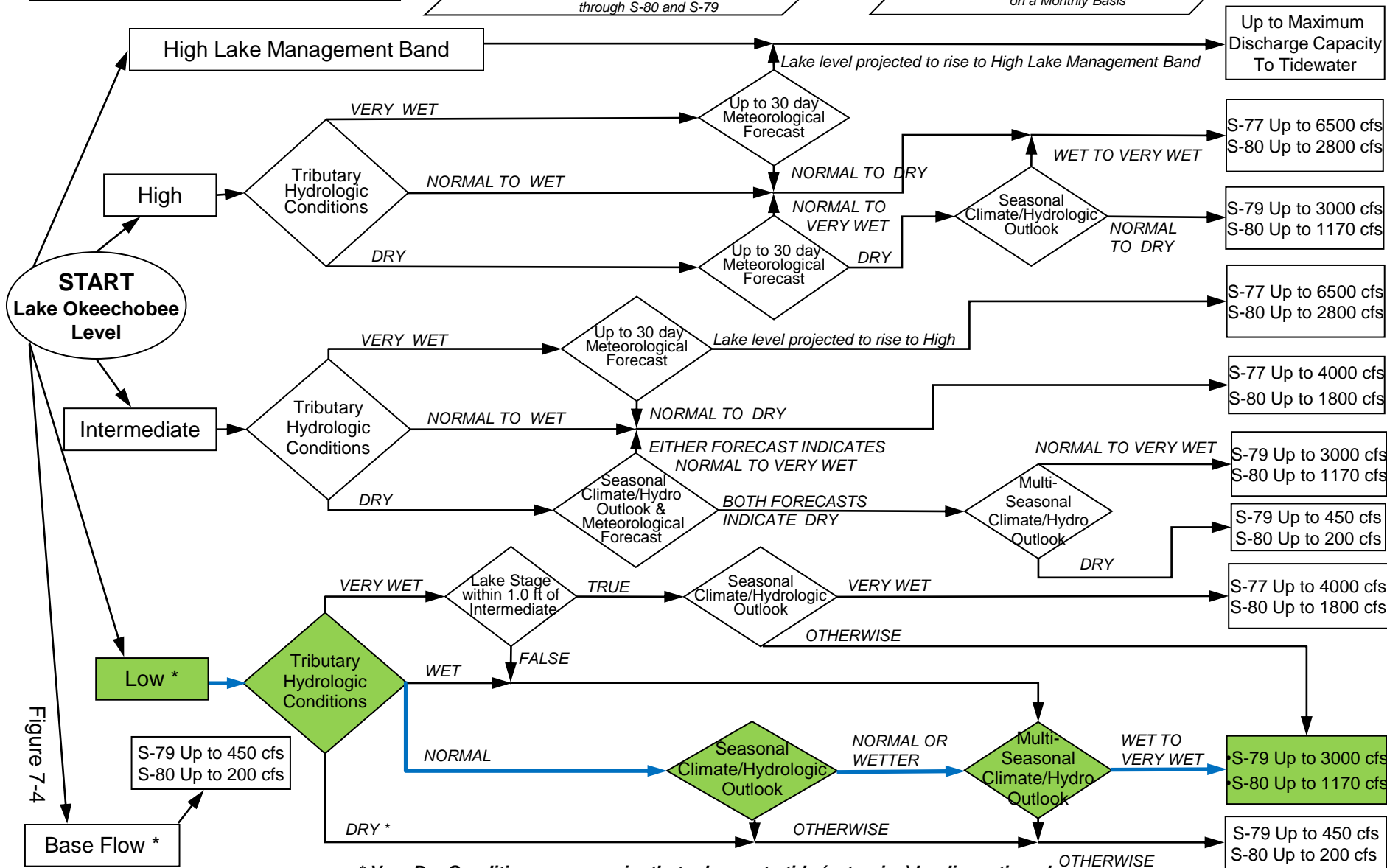
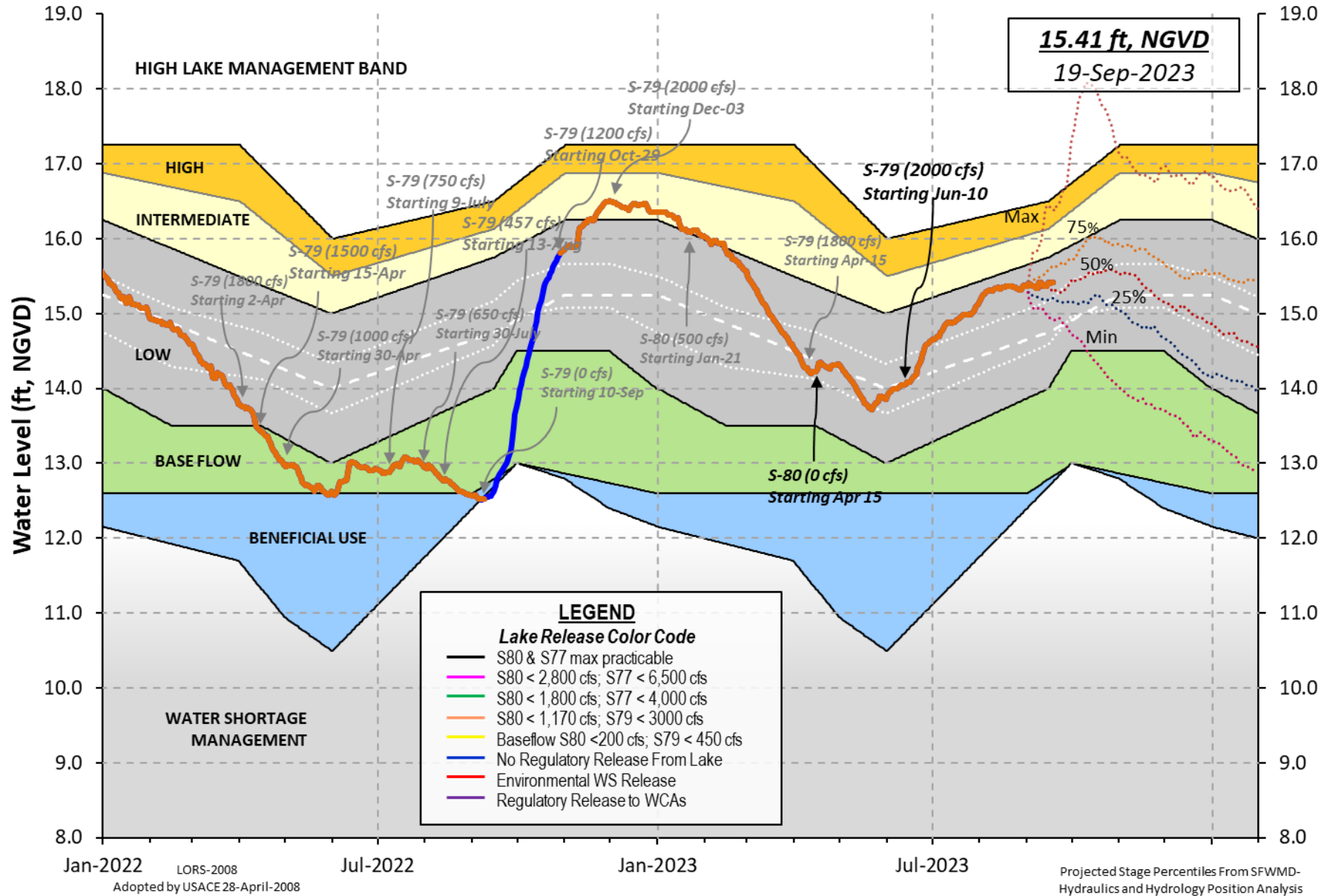


Figure 7-4

* Very Dry Conditions may require that releases to tide (estuaries) be discontinued (NORMAL TO DRY)

Lake Okeechobee Water Level History and Projected Stages



is equal to -NR-
 Lake Okeechobee (Change in Storage) Flow is 2168 cfs or 4300 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:	13.52	15.42	0	0	0	0	0	0	0	0	(cfs)
S193:											
S191:	18.45	15.44	0	0.0	0.0	0.0					
S135 Pumps:	13.27	15.38	0	0	0	0	0				(cfs)
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	21.13	15.44	613	0.0	0.0	0.3	0.5	0.5	0.5		
S65EX1:	21.13	15.44	0								
S127 Pumps:	13.45	15.35	0	0	0	0	0	0			(cfs)
S127 Culvert:			0	0.0							
S129 Pumps:	13.05	15.39	0	0	0	0					(cfs)
S129 Culvert:			0	0.0							
S131 Pumps:	12.97	-NR-	0	0	0						(cfs)
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		31.64	183								
nr Lakeport											
S282	15.36	15.40		0.0	0.0	0.1					
South Shore											
S4 Pumps:	11.10	-NR-	0	-NR-	-NR-	-NR-					(cfs)
S169:	15.57	-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	15.28		-95								
S3 Pumps:	10.70	15.37	0	0	0	0					(cfs)
S354:	15.37	10.70	0	0.0	0.0						
S2 Pumps:	10.19	15.45	0	0	0	0	0				(cfs)
S351:	15.45	10.19	0	0.0	0.0	0.0					
S352:	15.55	10.68	0	0.0	0.0						
S271:	15.72	14.19		-NR-	0.0	0.0	0.0				
L8 Canal PT		13.88	90								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.19	15.45	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-		
S352:	10.68	15.55	0	-NR-	-NR-	-NR-	-NR-				
S354:	10.70	15.37	0	-NR-	-NR-	-NR-	-NR-				

Caloosahatchee River (S77, S78, S79)

S47B:	13.38	10.90		0.0	0.0						
S47D:	10.92	10.89	28	6.5							
S77:											
Spillway and Sector Preferred Flow:	15.23	10.78	224	0.0	0.5	0.5	0.0				
Flow Due to Lockages+:			3								

S78:

Spillway and Sector Flow:
 10.83 2.76 1200 2.0 2.5 0.0 0.0
 Flow Due to Lockages+: 10

S79:
 Spillway and Sector Flow:
 2.91 1.29 1930 0.0 0.0 2.0 2.0 2.0 2.0 1.0 0.0
 Flow Due to Lockages+: 5
 Percent of flow from S77 12%
 Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:
 Spillway and Sector Preferred Flow:
 15.47 13.85 0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 2

S153: 18.71 13.60 0 0.0 0.0

S80:
 Spillway and Sector Flow:
 13.88 1.72 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 9
 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	223	4
S78:	-NR-	0.00	0.00	185	2
S79:	-NR-	0.00	0.00	3	1
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	210	8
S80:	-NR-	0.00	0.00	235	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 17 SEP 2023 15.41 Difference from 17SEP23
 17SEP23 -1 Day = 16 SEP 2023 15.40 -0.01

17SEP23	-2 Days =	15 SEP 2023	15.41	0.00
17SEP23	-3 Days =	14 SEP 2023	15.36	-0.05
17SEP23	-4 Days =	13 SEP 2023	15.37	-0.04
17SEP23	-5 Days =	12 SEP 2023	15.37	-0.04
17SEP23	-6 Days =	11 SEP 2023	15.39	-0.02
17SEP23	-7 Days =	10 SEP 2023	15.41	0.00
17SEP23	-30 Days =	18 AUG 2023	15.36	-0.05
17SEP23	-1 Year =	17 SEP 2022	12.78	-2.63
17SEP23	-2 Year =	17 SEP 2021	14.99	-0.42

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
17SEP23	Today =	17 SEP 2023	1686 MON	2392
17SEP23	-1 Day =	16 SEP 2023	1344 SUN	-1302
17SEP23	-2 Days =	15 SEP 2023	2120 SAT	12628
17SEP23	-3 Days =	14 SEP 2023	1155 FRI	-332
17SEP23	-4 Days =	13 SEP 2023	847 THU	2218
17SEP23	-5 Days =	12 SEP 2023	1010 WED	-NR-
17SEP23	-6 Days =	11 SEP 2023	1557 TUE	-2764
17SEP23	-7 Days =	10 SEP 2023	1754 MON	1002
17SEP23	-8 Days =	09 SEP 2023	1560 SUN	15335
17SEP23	-9 Days =	08 SEP 2023	310 SAT	571
17SEP23	-10 Days =	07 SEP 2023	115 FRI	-3607
17SEP23	-11 Days =	06 SEP 2023	373 THU	-1375
17SEP23	-12 Days =	05 SEP 2023	316 WED	-1296
17SEP23	-13 Days =	04 SEP 2023	421 TUE	-1551

S65E

Average Flow over previous 14 days				Avg-Daily Flow
17SEP23	Today=	17 SEP 2023	588 MON	696
17SEP23	-1 Day =	16 SEP 2023	590 SUN	646
17SEP23	-2 Days =	15 SEP 2023	610 SAT	574
17SEP23	-3 Days =	14 SEP 2023	635 FRI	476
17SEP23	-4 Days =	13 SEP 2023	635 THU	520
17SEP23	-5 Days =	12 SEP 2023	632 WED	560
17SEP23	-6 Days =	11 SEP 2023	618 TUE	613
17SEP23	-7 Days =	10 SEP 2023	617 MON	676
17SEP23	-8 Days =	09 SEP 2023	614 SUN	572
17SEP23	-9 Days =	08 SEP 2023	619 SAT	756
17SEP23	-10 Days =	07 SEP 2023	613 FRI	611
17SEP23	-11 Days =	06 SEP 2023	618 THU	430
17SEP23	-12 Days =	05 SEP 2023	648 WED	524
17SEP23	-13 Days =	04 SEP 2023	686 TUE	583

S65EX1

Average Flow over previous 14 days				Avg-Daily Flow
17SEP23	Today=	17 SEP 2023	0 MON	0
17SEP23	-1 Day =	16 SEP 2023	0 SUN	0
17SEP23	-2 Days =	15 SEP 2023	0 SAT	0
17SEP23	-3 Days =	14 SEP 2023	0 FRI	0
17SEP23	-4 Days =	13 SEP 2023	0 THU	0
17SEP23	-5 Days =	12 SEP 2023	0 WED	0
17SEP23	-6 Days =	11 SEP 2023	0 TUE	0
17SEP23	-7 Days =	10 SEP 2023	0 MON	0
17SEP23	-8 Days =	09 SEP 2023	0 SUN	0
17SEP23	-9 Days =	08 SEP 2023	0 SAT	0
17SEP23	-10 Days =	07 SEP 2023	0 FRI	0
17SEP23	-11 Days =	06 SEP 2023	0 THU	0
17SEP23	-12 Days =	05 SEP 2023	0 WED	0
17SEP23	-13 Days =	04 SEP 2023	0 TUE	0

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)
17 SEP 2023	451	748	2422	3844
16 SEP 2023	1666	2555	2660	4658
15 SEP 2023	3549	3649	4156	6164
14 SEP 2023	3635	4146	3796	3537
13 SEP 2023	3665	3967	3860	4427
12 SEP 2023	3378	3439	3548	4628
11 SEP 2023	3121	3401	2820	4616
10 SEP 2023	2058	2313	2267	4041
09 SEP 2023	293	1095	1851	2867
08 SEP 2023	1134	1277	912	2506
07 SEP 2023	1449	1541	1728	2982
06 SEP 2023	1528	1692	2018	3852
05 SEP 2023	1564	1699	1999	4280
04 SEP 2023	1253	1441	2394	5040

	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)
17 SEP 2023	-187	0	0	0	178
16 SEP 2023	-219	0	0	0	181
15 SEP 2023	-217	0	0	0	184
14 SEP 2023	11	0	0	0	182
13 SEP 2023	14	0	0	0	177
12 SEP 2023	37	0	0	0	-NR-
11 SEP 2023	-25	0	0	0	-NR-
10 SEP 2023	-27	0	0	0	-NR-
09 SEP 2023	-113	0	0	0	-NR-
08 SEP 2023	-2	0	0	0	-NR-
07 SEP 2023	160	0	0	0	-3
06 SEP 2023	44	0	0	49	-9
05 SEP 2023	12	170	0	0	0
04 SEP 2023	11	0	0	0	3

	S-308	Below S-308	S-80
	Discharge	Discharge	Discharge
	(ALL DAY)	(ALL-DAY)	(ALL-DAY)
DATE	(AC-FT)	(AC-FT)	(AC-FT)
17 SEP 2023	4	-NR-	18
16 SEP 2023	4	-NR-	15
15 SEP 2023	2	-NR-	19
14 SEP 2023	1	-NR-	22
13 SEP 2023	658	-NR-	33
12 SEP 2023	3	-NR-	26
11 SEP 2023	2	-NR-	34
10 SEP 2023	3	-NR-	15
09 SEP 2023	1	-NR-	38
08 SEP 2023	-NR-	-NR-	30
07 SEP 2023	-NR-	-NR-	11
06 SEP 2023	2	-NR-	19
05 SEP 2023	1	-NR-	30
04 SEP 2023	2	-NR-	29

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

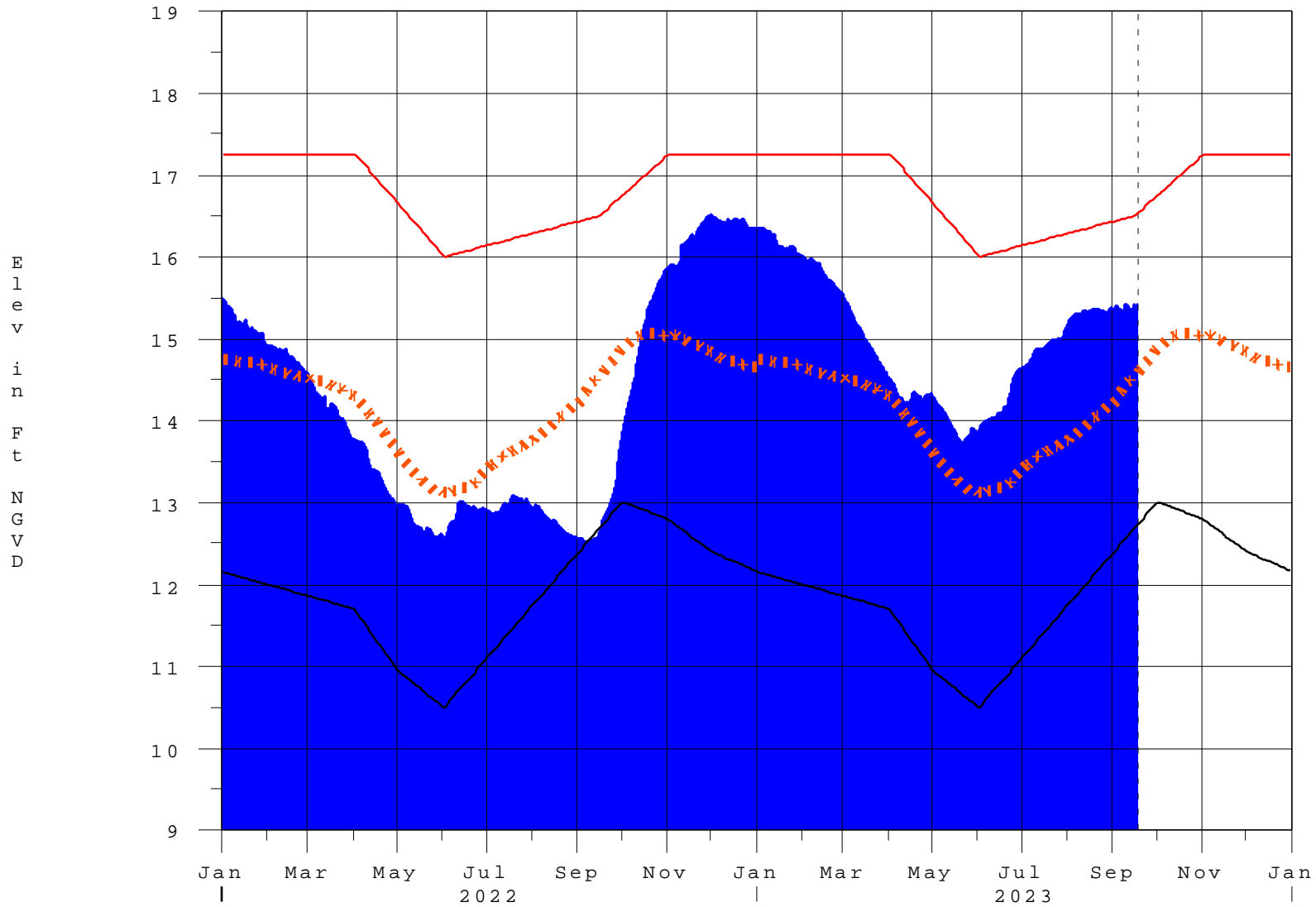
(I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

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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

Report Generated 18SEP2023 @ 13:07 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

18SEP23 13:00:22



- 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
<p>> 0.93</p>	<p>> 2.0</p>	<p>Very Wet</p>
<p>0.71 to 0.93</p>	<p>1.51 to 2.0</p>	<p>Wet</p>
<p>0.35 to 0.70</p>	<p>0.75 to 1.5</p>	<p>Normal</p>
<p>< 0.35</p>	<p>< 0.75</p>	<p>Dry</p>

****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**