

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 9/6/2021 (ENSO Condition: ENSO-neutral)

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 ENSO Neutral years³ and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with ENSO Neutral 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 ENSO Neutral Years ³		Sub-sampling of AMO Warm + ENSO Neutral Years ⁴	
	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	1.53	Wet	1.31	Normal	2.49	Very Wet
Multi Seasonal (Sep-Apr)	N/A	N/A	1.71	Normal	1.18	Normal	2.49	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:

4025 cfs 14-day running average for Lake Okeechobee Net Inflow through 9/5/2021. According to the classification in Tributary Hydrologic Conditions table, this condition is **Wet**.

-1.80 for Palmer Drought Index on 8/28/2021. According to the classification in Tributary Hydrologic Conditions table, this condition is **Normal**.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 9/6/2021:

Lake Okeechobee Stage: **14.71 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.45	
Operational Band	High sub-band	16.07	
	Intermediate sub-band	15.68	
	Low sub-band	13.91	← 14.71 ft
Base Flow sub-band		12.65	
Beneficial Use sub-band		12.48	
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 450 cfs at S-79 and up to 200 cfs at S-80.

LORS2008 Implementation on 9/6/2021 (ENSO Condition- ENSO-neutral):

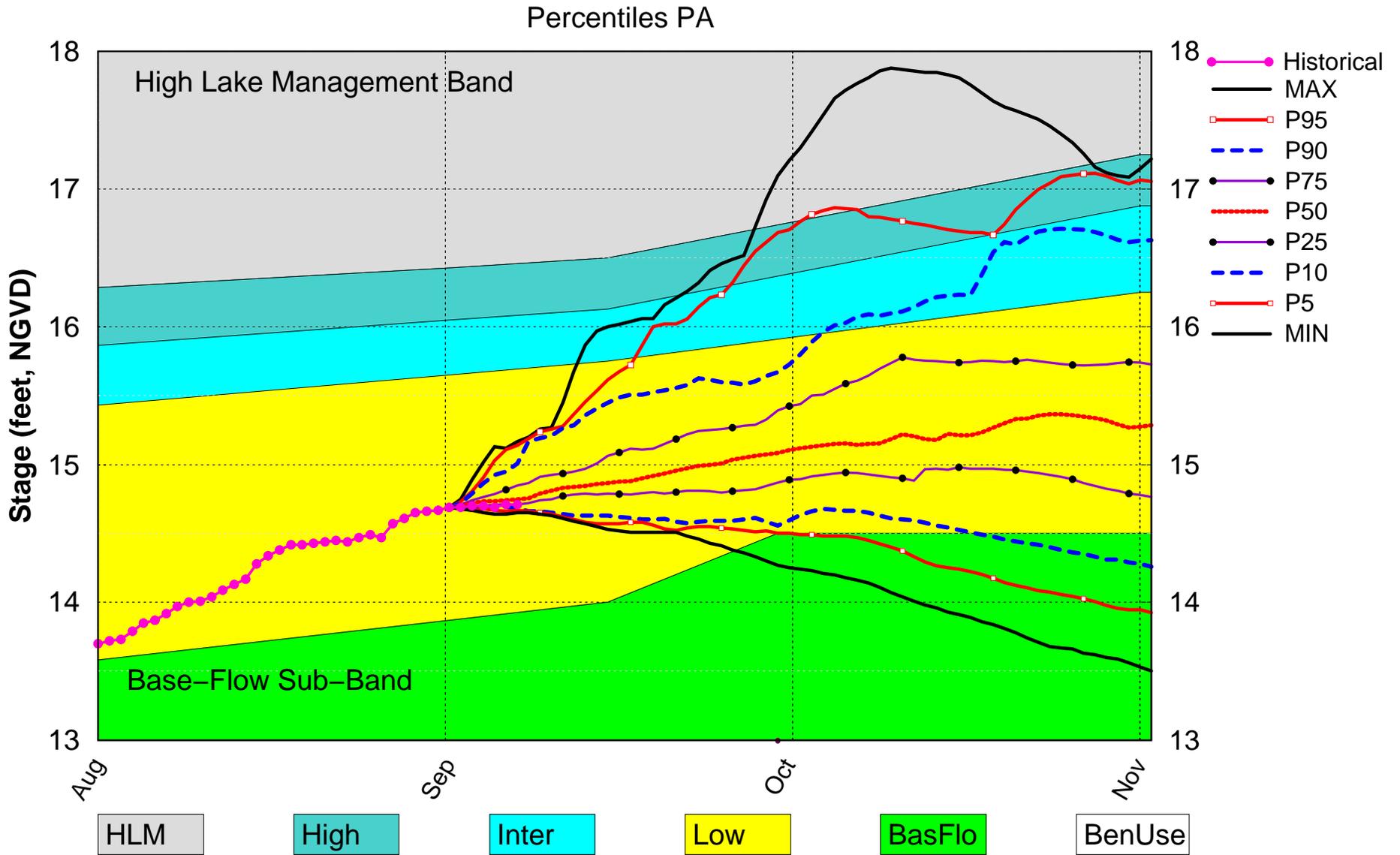
Status for week ending 9/6/2021:

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	-1.80 (8/28/2021) (Dry)	M
	CPC Precipitation Outlook	1 month: Normal	L
		3 months: Normal	L
	LOK Seasonal Net Inflow Outlook	1.31 ft	L
	ENSO Forecast	Normal to Extremely Wet	L
	LOK Multi-Seasonal Net Inflow Outlook	1.18 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Site 1-7, 1-8T and 1-9)	Above Line 1 (16.88 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (12.78 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (9.84 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.

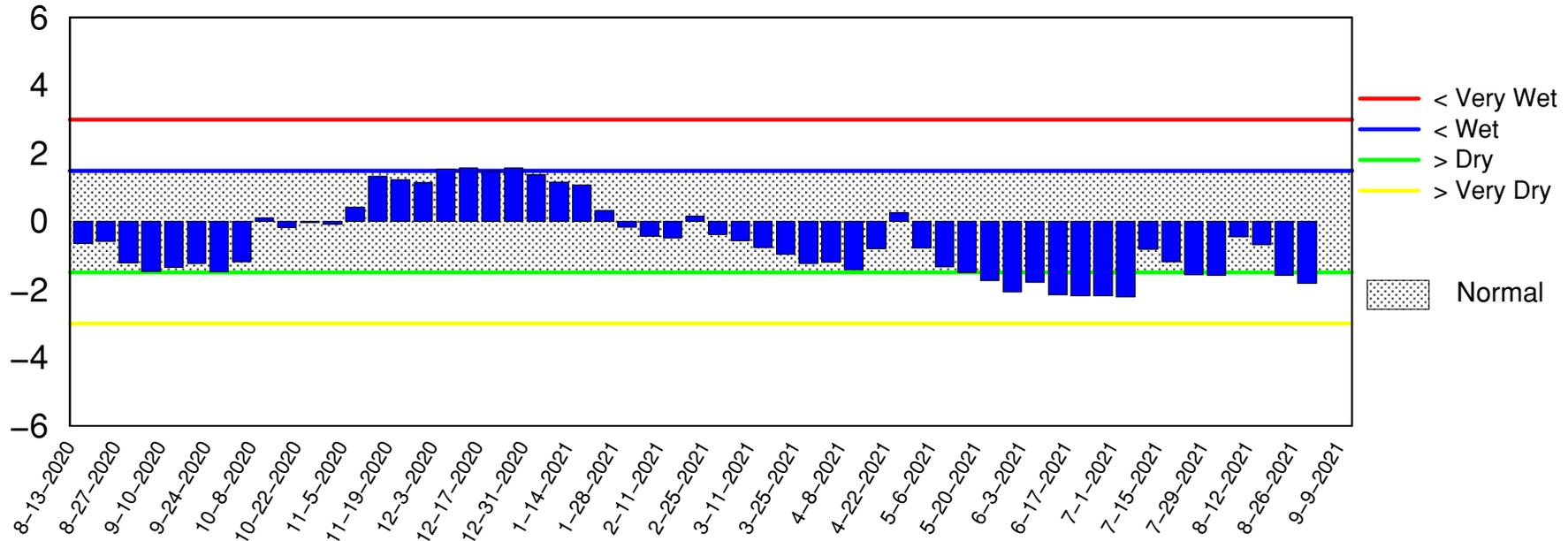
Lake Okeechobee SFWMM Sep 2021 Position Analysis



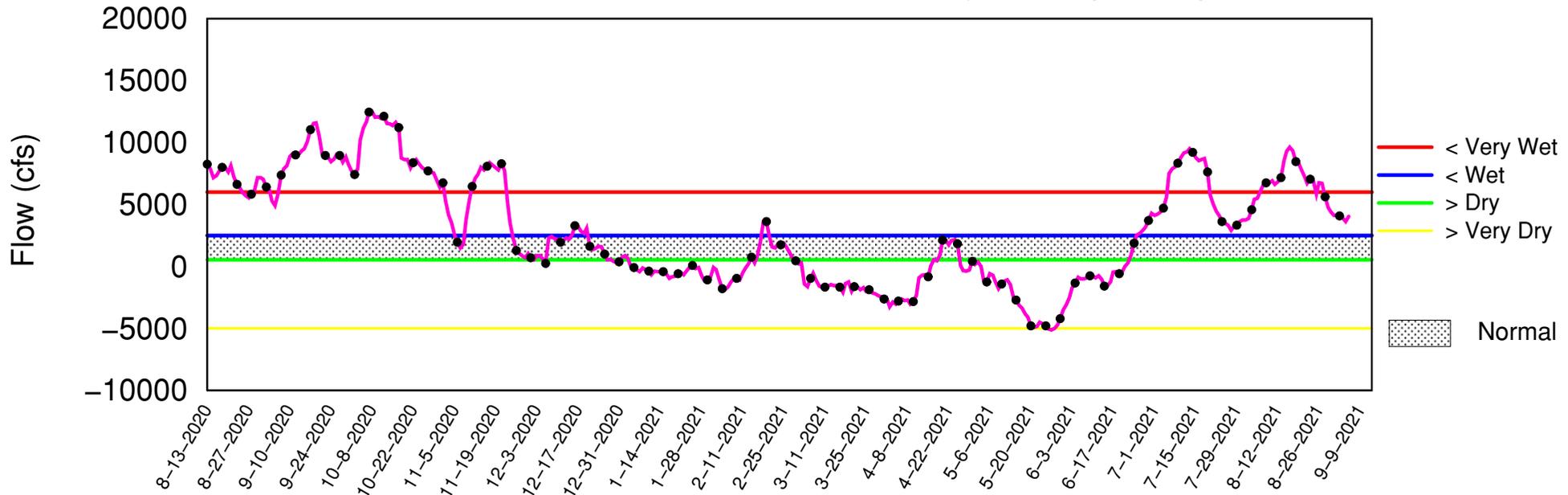
(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of September 6 2021

Palmer Index



Lake Okeechobee Net Inflow (LONIN) 14-day Running Average



2008 LORS

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

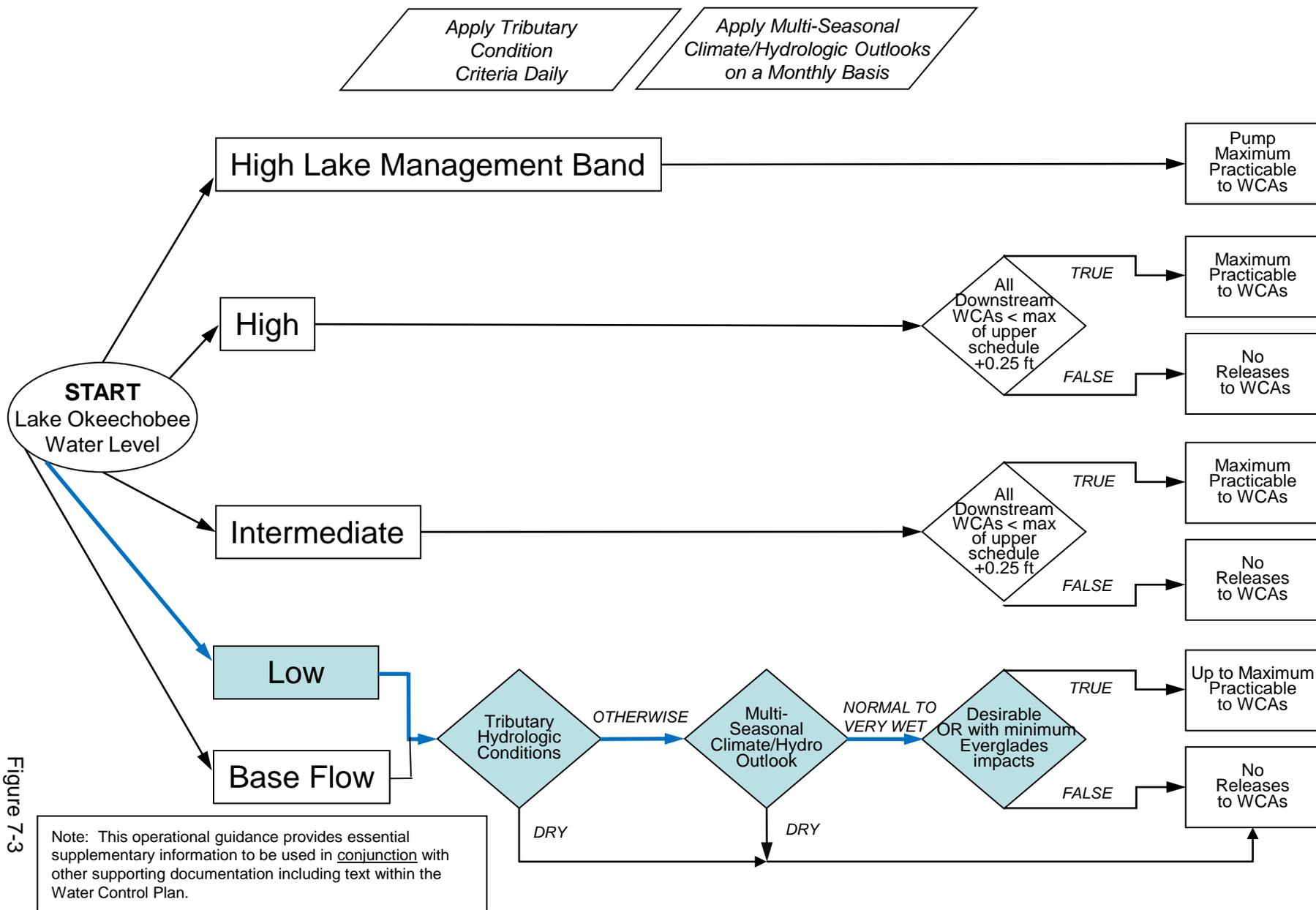


Figure 7-3

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

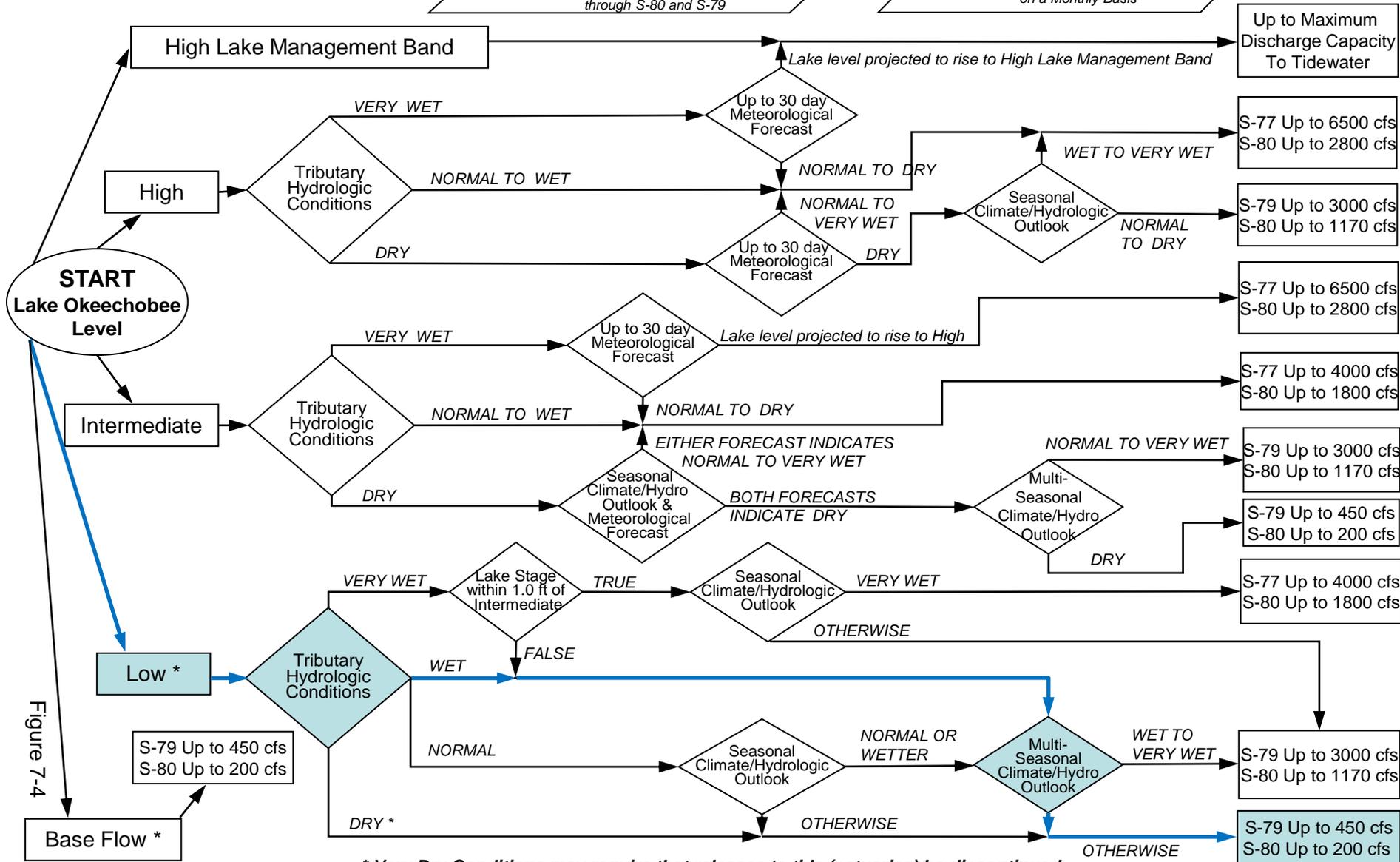
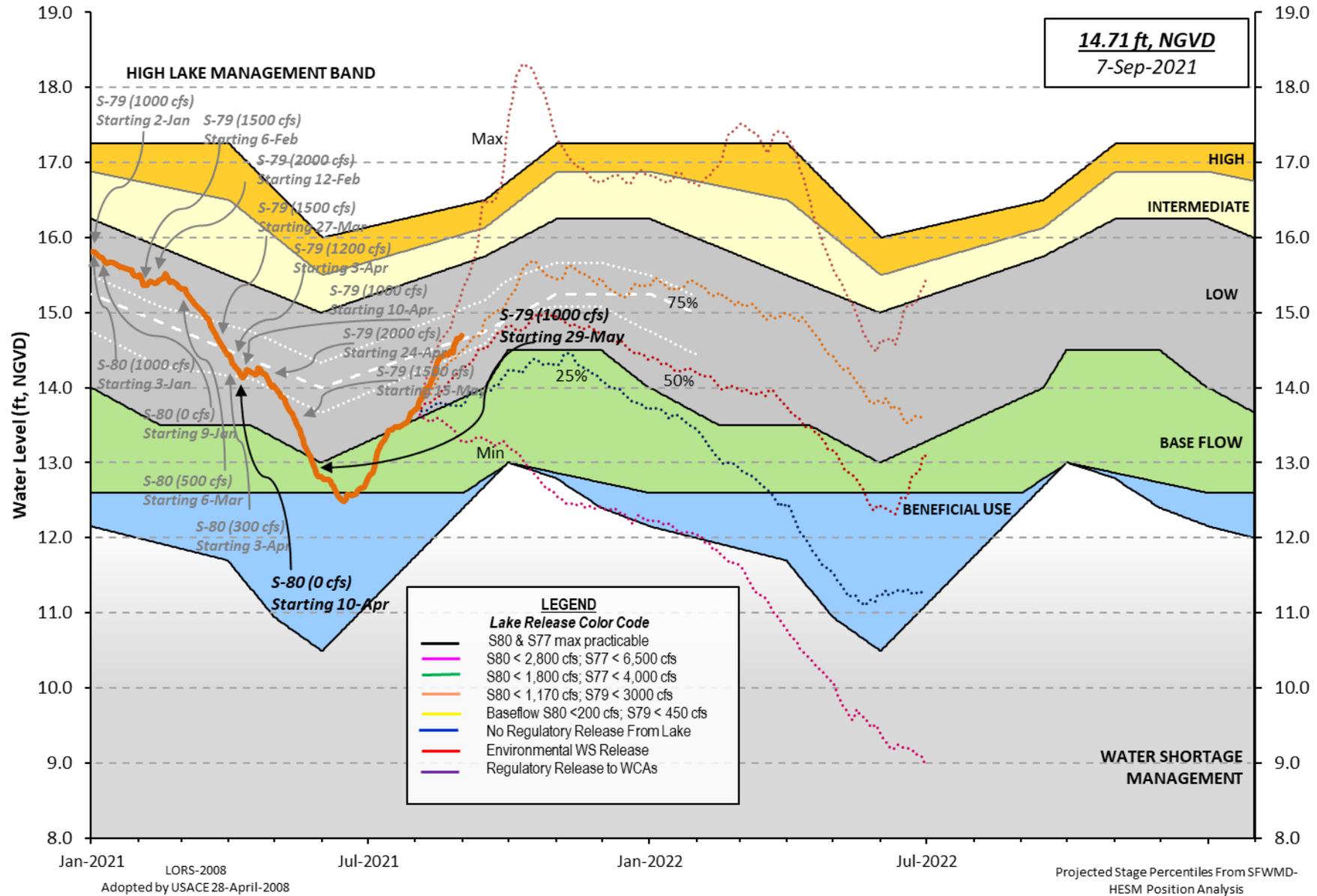


Figure 7-4

* 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 4235 cfs or 8400 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:	13.34	14.75	137	55	50	37	0	0	(cfs)		
S193:											
S191:	18.59	14.75	0	0.0	0.0	0.0					
S135 Pumps:	13.51	14.70	224	56	56	56	56		(cfs)		
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	21.00	14.55	1705	0.5	0.5	1.2	0.6	1.2	0.5		
S65EX1:	21.00	14.55	0								
S127 Pumps:	13.38	14.65	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	12.81	14.64	23	25	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	12.94	14.61	67	31	43				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		31.07	118								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.04	14.62	0	0	0	0			(cfs)		
S169:		-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	14.59		-13								
S3 Pumps:	9.76	14.66	0	0	0	0			(cfs)		
S354:	14.66	9.76	0	0.0	0.0						
S2 Pumps:	9.71	-NR-	0	0	0	0	0		(cfs)		
S351:	-NR-	9.71	0	0.0	0.0	0.0					
S352:	14.86	9.30	0	0.0	0.0						
C10A:	-NR-	14.69		8.0	8.0	8.0	0.0	0.0			
L8 Canal PT			-NR-								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.71	-NR-	0	-NR-						
S352:	9.30	14.86	0	-NR-	-NR-	-NR-	-NR-			
S354:	9.76	14.66	0	-NR-	-NR-	-NR-	-NR-			

Caloosahatchee River (S77, S78, S79)

S47B:	14.74	12.73		0.0	0.0					
S47D:	12.73	11.00	0	0.0						
S77:										
Spillway and Sector Preferred Flow:	14.60	10.88	0	0.0	0.0	0.0	0.0			
Flow Due to Lockages+:			5							

S78:

Spillway and Sector Flow:
 10.91 3.13 468 1.0 0.0 0.0 0.5
 Flow Due to Lockages+: 13

S79:

Spillway and Sector Flow:
 3.34 0.78 1547 0.0 0.0 0.0 2.0 2.0 0.0 0.0 0.0
 Flow Due to Lockages+: 11
 Percent of flow from S77 0%
 Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:
 14.72 14.40 0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 1

S153: 19.07 14.02 100 0.0 0.0

S80:

Spillway and Sector Flow:
 14.31 2.00 361 0.0 0.0 0.0 0.5 0.0 0.4 0.0
 Flow Due to Lockages+: 21
 Percent of flow from S308 0%

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:	16.15	17.28	17.28	229	2
S78:	11.34	11.52	11.85	235	1
S79:	33.90	35.07	35.63	114	2
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:	48.82	48.82	49.46	206	9
S80:	0.64	0.78	1.27	239	1
Okeechobee Average (Sites S78, S79 and S80 not included)	32.49	5.08	5.13		

Oke Nexrad Basin Avg	-NR-	0.00	0.00		

Okeechobee Lake Elevations 05 SEP 2021 14.71 Difference from 05SEP21
 05SEP21 -1 Day = 04 SEP 2021 14.69 -0.02

05SEP21	-2 Days =	03 SEP 2021	14.70	-0.01
05SEP21	-3 Days =	02 SEP 2021	14.70	-0.01
05SEP21	-4 Days =	01 SEP 2021	14.69	-0.02
05SEP21	-5 Days =	31 AUG 2021	14.69	-0.02
05SEP21	-6 Days =	30 AUG 2021	14.67	-0.04
05SEP21	-7 Days =	29 AUG 2021	14.66	-0.05
05SEP21	-30 Days =	06 AUG 2021	13.92	-0.79
05SEP21	-1 Year =	05 SEP 2020	14.42	-0.29
05SEP21	-2 Year =	05 SEP 2019	13.96	-0.75

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
05SEP21	Today =	05 SEP 2021	4144 MON	4235
05SEP21	-1 Day =	04 SEP 2021	3700 SUN	-2118
05SEP21	-2 Days =	03 SEP 2021	4014 SAT	0
05SEP21	-3 Days =	02 SEP 2021	4173 FRI	2118
05SEP21	-4 Days =	01 SEP 2021	4184 THU	0
05SEP21	-5 Days =	31 AUG 2021	4505 WED	4235
05SEP21	-6 Days =	30 AUG 2021	4528 TUE	2118
05SEP21	-7 Days =	29 AUG 2021	5057 MON	2118
05SEP21	-8 Days =	28 AUG 2021	5940 SUN	8470
05SEP21	-9 Days =	27 AUG 2021	7187 SAT	8470
05SEP21	-10 Days =	26 AUG 2021	7204 FRI	21326
05SEP21	-11 Days =	25 AUG 2021	6145 THU	-4300
05SEP21	-12 Days =	24 AUG 2021	7397 WED	4588
05SEP21	-13 Days =	23 AUG 2021	7544 TUE	6761

S65E

Average Flow over previous 14 days				Avg-Daily Flow
05SEP21	Today=	05 SEP 2021	2164 MON	1889
05SEP21	-1 Day =	04 SEP 2021	2198 SUN	1838
05SEP21	-2 Days =	03 SEP 2021	2237 SAT	1990
05SEP21	-3 Days =	02 SEP 2021	2268 FRI	2022
05SEP21	-4 Days =	01 SEP 2021	2299 THU	2072
05SEP21	-5 Days =	31 AUG 2021	2323 WED	2163
05SEP21	-6 Days =	30 AUG 2021	2353 TUE	2229
05SEP21	-7 Days =	29 AUG 2021	2378 MON	2284
05SEP21	-8 Days =	28 AUG 2021	2408 SUN	2290
05SEP21	-9 Days =	27 AUG 2021	2443 SAT	2311
05SEP21	-10 Days =	26 AUG 2021	2443 FRI	2297
05SEP21	-11 Days =	25 AUG 2021	2473 THU	2277
05SEP21	-12 Days =	24 AUG 2021	2488 WED	2305
05SEP21	-13 Days =	23 AUG 2021	2463 TUE	2334

S65EX1

Average Flow over previous 14 days				Avg-Daily Flow
05SEP21	Today=	05 SEP 2021	0 MON	0
05SEP21	-1 Day =	04 SEP 2021	0 SUN	0
05SEP21	-2 Days =	03 SEP 2021	0 SAT	0
05SEP21	-3 Days =	02 SEP 2021	0 FRI	0
05SEP21	-4 Days =	01 SEP 2021	0 THU	0
05SEP21	-5 Days =	31 AUG 2021	0 WED	0
05SEP21	-6 Days =	30 AUG 2021	0 TUE	0
05SEP21	-7 Days =	29 AUG 2021	0 MON	0
05SEP21	-8 Days =	28 AUG 2021	0 SUN	0
05SEP21	-9 Days =	27 AUG 2021	0 SAT	0
05SEP21	-10 Days =	26 AUG 2021	0 FRI	0
05SEP21	-11 Days =	25 AUG 2021	0 THU	0
05SEP21	-12 Days =	24 AUG 2021	0 WED	0
05SEP21	-13 Days =	23 AUG 2021	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)
05 SEP 2021	11	206	953	3018
04 SEP 2021	5	259	922	5002
03 SEP 2021	5	118	1161	2626
02 SEP 2021	5	190	820	5259
01 SEP 2021	9	-80	466	4119
31 AUG 2021	9	494	1887	7168
30 AUG 2021	7	408	1490	3628
29 AUG 2021	7	39	1280	3002
28 AUG 2021	8	519	2452	4215
27 AUG 2021	2	554	2618	5472
26 AUG 2021	8	363	1799	3334
25 AUG 2021	8	222	1241	2308
24 AUG 2021	5	116	608	3175
23 AUG 2021	6	41	844	1720

	S-310	S-351	S-352	S-354	L8 Canal Pt
	Discharge	Discharge	Discharge	Discharge	Discharge
	(ALL DAY)				
DATE	(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)
05 SEP 2021	-26	0	0	0	-NR-
04 SEP 2021	-12	0	0	0	-NR-
03 SEP 2021	-26	0	0	0	-NR-
02 SEP 2021	-15	0	0	0	-NR-
01 SEP 2021	27	0	0	0	-NR-
31 AUG 2021	-46	0	0	0	-NR-
30 AUG 2021	-60	0	0	0	-NR-
29 AUG 2021	-56	0	0	0	-NR-
28 AUG 2021	20	0	0	0	-NR-
27 AUG 2021	-68	0	0	0	-NR-
26 AUG 2021	-114	0	0	0	-NR-
25 AUG 2021	55	0	71	0	-NR-
24 AUG 2021	63	475	25	0	-NR-
23 AUG 2021	5	0	464	0	-NR-

	S-308	Below S-308	S-80
	Discharge	Discharge	Discharge
	(ALL DAY)	(ALL-DAY)	(ALL-DAY)
DATE	(AC-FT)	(AC-FT)	(AC-FT)
05 SEP 2021	1	-81	770
04 SEP 2021	1	181	407
03 SEP 2021	1	-238	431
02 SEP 2021	2	-408	533
01 SEP 2021	2	-147	933
31 AUG 2021	0	-293	921
30 AUG 2021	-0	-188	731
29 AUG 2021	1	-95	970
28 AUG 2021	-0	132	1682
27 AUG 2021	-0	68	1662
26 AUG 2021	-1	228	1170
25 AUG 2021	-0	186	427
24 AUG 2021	-0	109	472
23 AUG 2021	0	-149	39

*** 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

* 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

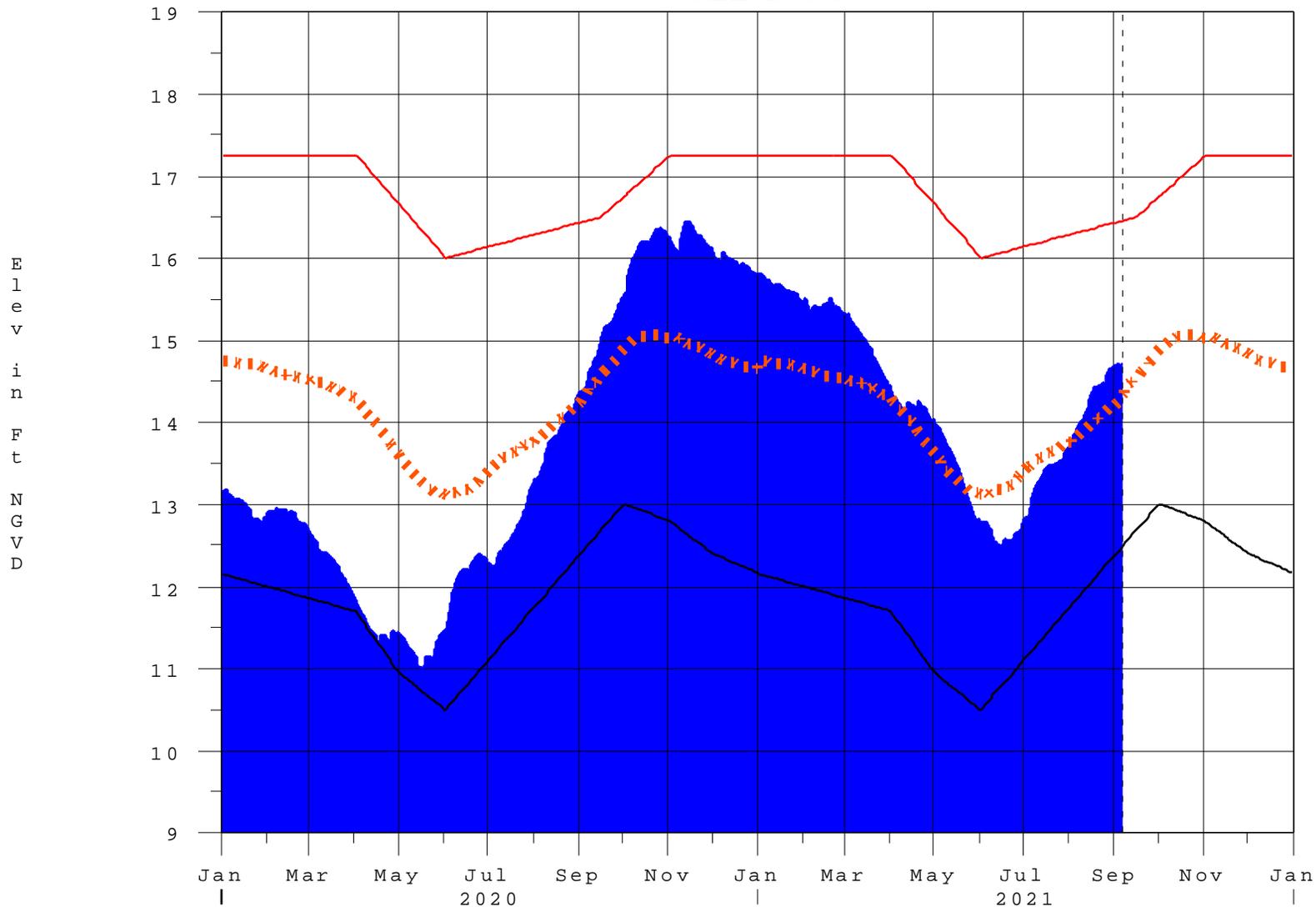
++ For more information see the Jacksonville District Navigation website at <http://www.saj.usace.army.mil/>

\$ For information regarding Lake Okeechobee Service Area water restrictions please refer to www.sfwmd.gov

Report Generated 06SEP2021 @ 18:39 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

06SEP21 19:30:33



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- 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

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[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

Under Construction