

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on  
10/4/2021 (ENSO Condition: La Nina watch)

**Lake Okeechobee Net Inflow Outlook:**

The Lake Okeechobee Net Inflow Outlook has been computed using 4 methods: Croley's method<sup>1</sup>, the SFWMD empirical method<sup>2</sup>, a sub-sampling of ENSO Neutral years<sup>3</sup> and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with ENSO Neutral years<sup>4</sup>. 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 <sup>1*</sup>		SFWMD Empirical Method <sup>2</sup>		Sub-sampling of La Nina Years <sup>3</sup>		Sub-sampling of AMO Warm + La Nina Years <sup>4</sup>	
	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	0.93	Normal	0.50	Dry	0.38	Dry
Multi Seasonal (Oct-Apr)	N/A	N/A	1.00	Dry	0.37	Dry	0.28	Dry

**\*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:***

**8175 cfs** 14-day running average for Lake Okeechobee Net Inflow through 10/3/2021. According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

**-2.61** for Palmer Drought Index on 10/2/2021. 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 10/4/2021:**

Lake Okeechobee Stage: **15.59 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.79	
Operational Band	High sub-band	16.42	
	Intermediate sub-band	15.94	
	Low sub-band	14.50	← 15.59 ft
Base Flow sub-band		12.99	
Beneficial Use sub-band		12.99	
Water Shortage Management Band			

**Part C of LORS2008: Discharge to WCAs**

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 10/4/2021 (ENSO Condition- La Nina Watch):

Status for week ending 10/4/2021:

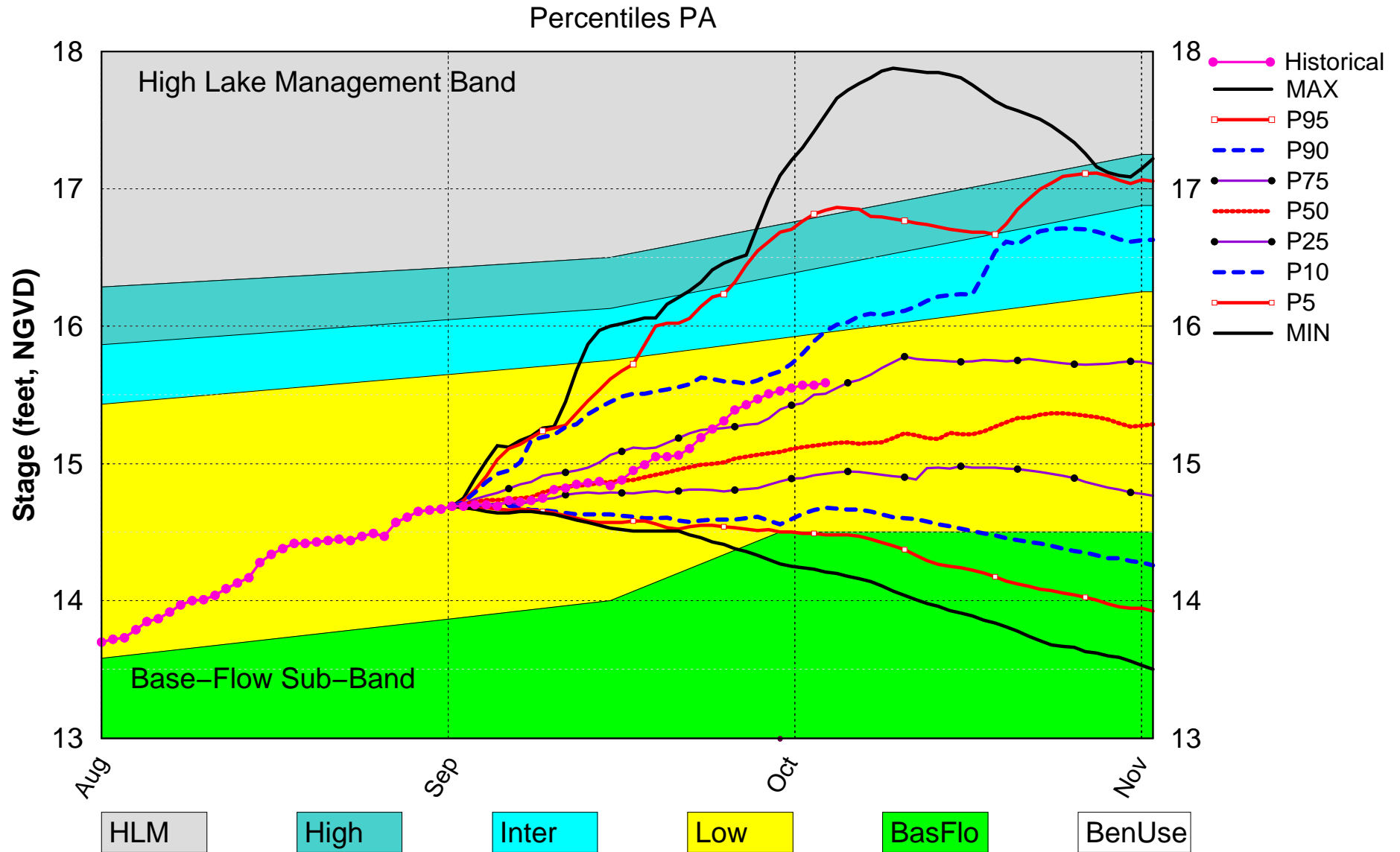
### Water Supply Risk Evaluation

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	-2.61 (10/2/2021) (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Normal	L
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	0.50 ft	M
	ENSO Forecast	Dry	
	LOK Multi-Seasonal Net Inflow Outlook	0.37 ft	H
	ENSO Forecast	Dry	
WCAs	WCA 1: 3 Station Average (Site 1-7, 1-8T and 1-9)	Above Line 1 (17.28 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (14.18 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (10.35 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.

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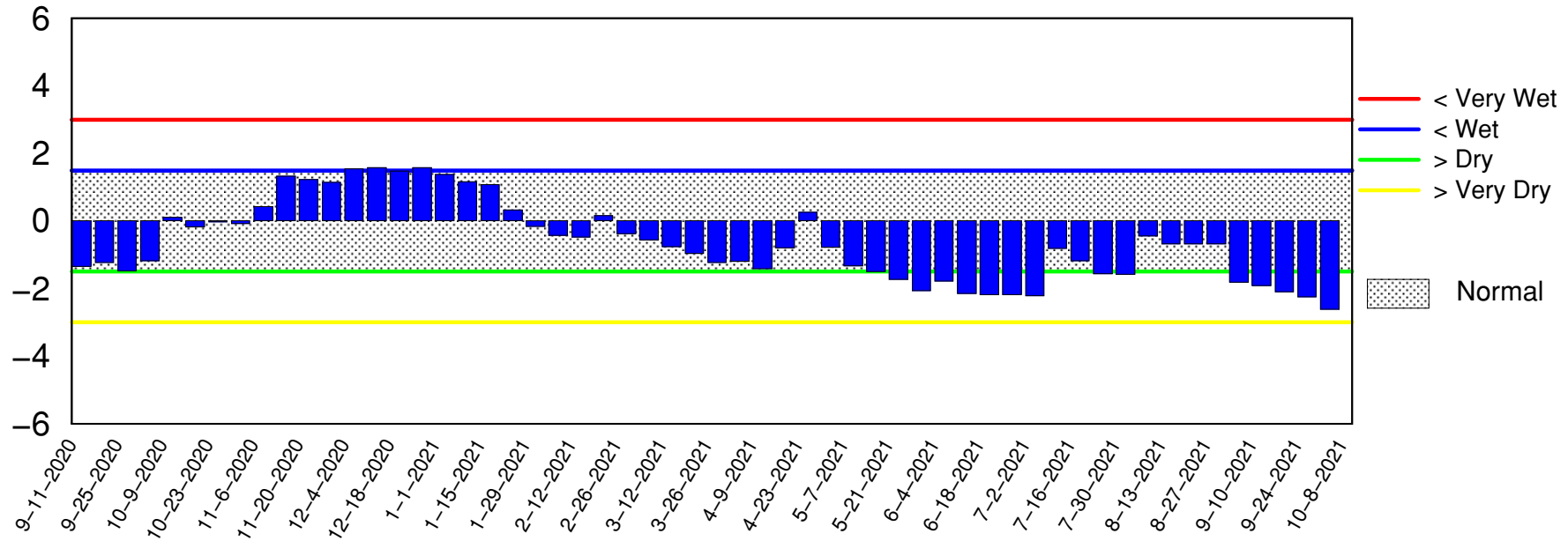
# Lake Okeechobee SFWMM Sep 2021 Position Analysis



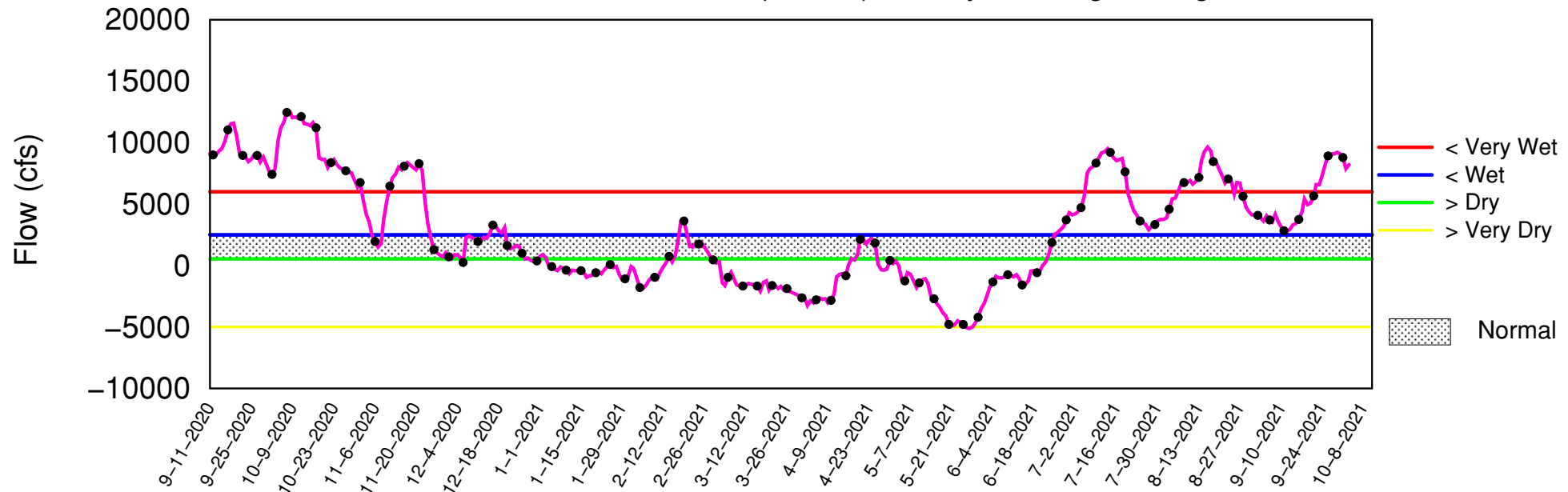
(See assumptions on the Position Analysis Results website)

# Tributary Basin Condition Indicators as of October 4 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

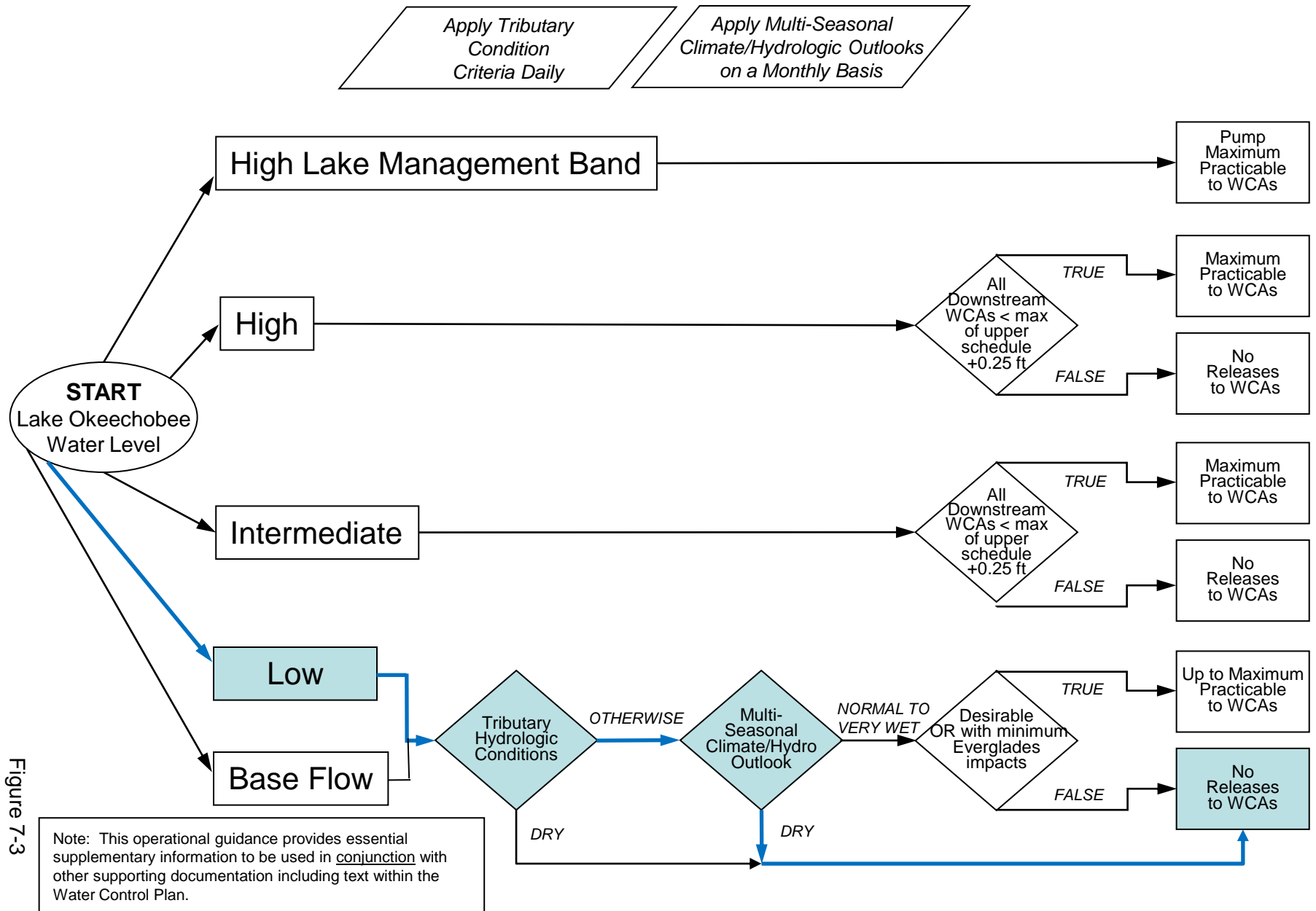


Figure 7-3

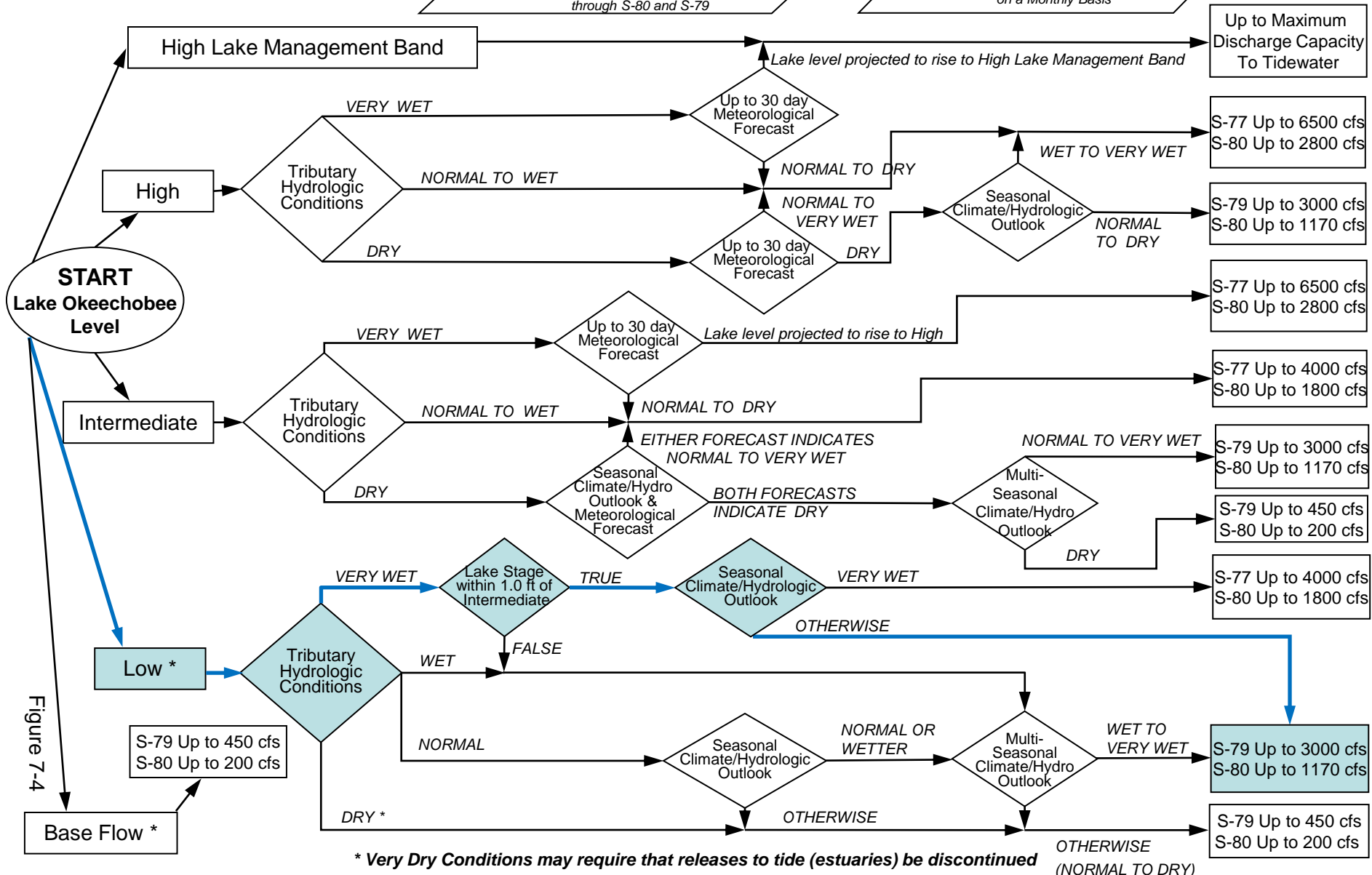
# 2008 LORS

## 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.

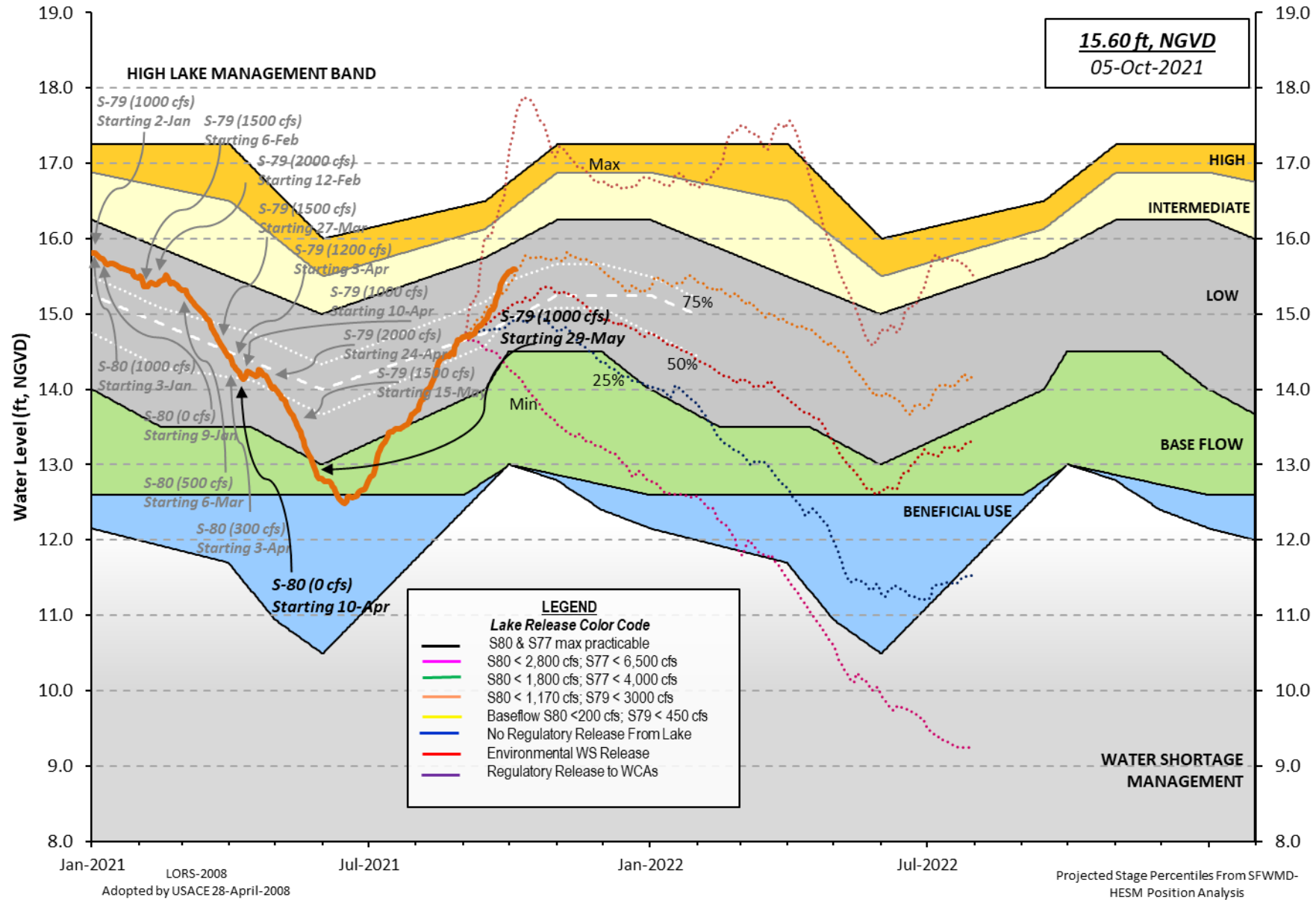
When conducting Base Flow releases, flows can be distributed East and West up to 650 cfs as needed to minimize impacts or provide benefits through S-80 and S-79

Apply Meteorological Forecasts on a Weekly Basis; apply Seasonal and Multi-Seasonal Climate/Hydrologic Outlooks on a Monthly Basis





# 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 03 OCT 2021

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Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	15.59	15.63	13.49 (Official Elv)
Bottom of High Lake Mngmt=	16.79	Top of Water Short Mngmt=	12.99
Currently in Operational Management Band			
Simulated Average LORS2008 [1965-2000]	13.81		
Difference from Average LORS2008	1.78		

03OCT (1965-2007) Period of Record Average 14.93  
Difference from POR Average 0.66

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 9.53'  
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 7.73'  
Bridge Clearance = 49.08'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.54	15.65	15.59	15.56	15.65	15.64	15.53	15.52

\*Combination Okeechobee Avg-Daily Lake Average = 15.59  
(\*See Note)

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Okeechobee Inflows (cfs):

S65E	2625	S65EX1	0	Fisheating Cr	946
S154	127	S191	0	S135 Pumps	178
S84	476	S133 Pumps	39	S2 Pumps	0
S84X	198	S127 Pumps	44	S3 Pumps	0
S71	190	S129 Pumps	17	S4 Pumps	0
S72	271	S131 Pumps	24	C5	0
Total Inflows:	5134				

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	4
S127 Culverts	0	S351	0	S308	2
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-NR-		
Total Outflows:	6				

\*\*\*\*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	0.28	S308	0.23
Average Pan Evap x 0.75 Pan Coefficient = 0.19" = 0.02'			

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 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:	13.28	15.52	39	30	0	0	0	0	0	(cfs)
S193:										
S191:	18.20	15.51	0	0.0	0.0	0.0				
S135 Pumps:	13.41	15.43	178	43	43	43	49			(cfs)
S135 Culverts:			0	0.0	0.0					

#### North West Shore

S65E:	20.88	15.41	2625	1.0	1.6	0.9	1.6	0.9	1.0	
S65EX1:	20.88	15.41	0							
S127 Pumps:	13.35	15.51	44	0	33	0	17	0		(cfs)
S127 Culvert:			0	0.0						
S129 Pumps:	12.80	15.61	17	0	18	0				(cfs)
S129 Culvert:			0	0.0						
S131 Pumps:	12.86	15.68	24	24	0					(cfs)
S131 Culvert:			0							

#### Fisheating Creek

nr Palmdale		32.87	946							
nr Lakeport										
C5:		-NR-	0	-NR-	-NR-	-NR-				

#### South Shore

S4 Pumps:	11.12	15.62	0	0	0	0				(cfs)
S169:		-NR-	-NR-	-NR-	-NR-	-NR-				
S310:	15.54		26							
S3 Pumps:	10.00	15.59	0	0	0	0				(cfs)
S354:	15.59	10.00	0	0.0	0.0					
S2 Pumps:	9.27	-NR-	0	-NR-	-NR-	-NR-	-NR-			(cfs)
S351:	-NR-	9.27	0	0.0	0.0	0.0				
S352:	15.64	9.75	0	0.0	0.0					
C10A:	-NR-	-NR-		8.0	8.0	8.0	0.0	0.0		
L8 Canal PT			-NR-							

#### S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.27	-NR-	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-
S352:	9.75	15.64	0	-NR-	-NR-	-NR-	-NR-		
S354:	10.00	15.59	0	-NR-	-NR-	-NR-	-NR-		

#### Caloosahatchee River (S77, S78, S79)

S47B:	12.88	12.14		1.0	1.5				
S47D:	12.12	11.02	61	0.0					
S77:									
Spillway and Sector Preferred Flow:	15.56	10.88	0	0.0	0.0	0.0	0.0		
Flow Due to Lockages+:			4						

S78:

Spillway and Sector Flow:  
10.91 3.08 505 0.5 0.0 0.0 1.0  
Flow Due to Lockages+: -NR-

S79:

Spillway and Sector Flow:  
3.21 1.57 1716 0.0 0.0 0.0 2.5 2.0 0.0 0.0 0.0  
Flow Due to Lockages+: 9  
Percent of flow from S77 0%  
Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:  
15.57 14.42 0 0.0 0.0 0.0 0.0  
Flow Due to Lockages+: 2

S153: 18.92 14.10 55 0.0 0.5

S80:

Spillway and Sector Flow:  
14.34 1.63 132 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
Flow Due to Lockages+: 4  
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 Speed (Deg) (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:	0.00	0.02	0.37	114 4
S78:	0.00	0.03	0.03	133 3
S79:	0.00	0.02	0.02	357 5
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:	0.00	0.17	0.22	80 1
S80:	0.00	0.61	0.61	190 0
Okeechobee Average (Sites S78, S79 and S80 not included)	0.00	0.01	0.05	
-----				
Oke Nexrad Basin Avg	-NR-	0.00	0.00	
-----				

Okeechobee Lake Elevations	03 OCT 2021	15.59	Difference from 03OCT21
03OCT21 -1 Day =	02 OCT 2021	15.57	-0.02

030CT21	-2 Days =	01 OCT 2021	15.57	-0.02
030CT21	-3 Days =	30 SEP 2021	15.55	-0.04
030CT21	-4 Days =	29 SEP 2021	15.53	-0.06
030CT21	-5 Days =	28 SEP 2021	15.51	-0.08
030CT21	-6 Days =	27 SEP 2021	15.47	-0.12
030CT21	-7 Days =	26 SEP 2021	15.43	-0.16
030CT21	-30 Days =	03 SEP 2021	14.70	-0.89
030CT21	-1 Year =	03 OCT 2020	15.63	0.04
030CT21	-2 Year =	03 OCT 2019	13.49	-2.10

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
030CT21	Today =	03 OCT 2021	8362	MON	4336
030CT21	-1 Day =	02 OCT 2021	8052	SUN	0
030CT21	-2 Days =	01 OCT 2021	8978	SAT	4336
030CT21	-3 Days =	30 SEP 2021	9273	FRI	4336
030CT21	-4 Days =	29 SEP 2021	10029	THU	4336
030CT21	-5 Days =	28 SEP 2021	10339	WED	8672
030CT21	-6 Days =	27 SEP 2021	9255	TUE	8672
030CT21	-7 Days =	26 SEP 2021	8791	MON	8672
030CT21	-8 Days =	25 SEP 2021	8326	SUN	17343
030CT21	-9 Days =	24 SEP 2021	7552	SAT	13008
030CT21	-10 Days =	23 SEP 2021	6778	FRI	13008
030CT21	-11 Days =	22 SEP 2021	6759	THU	17343
030CT21	-12 Days =	21 SEP 2021	5823	WED	10840
030CT21	-13 Days =	20 SEP 2021	5200	TUE	2168

#### S65E

Average Flow over previous 14 days					Avg-Daily Flow
030CT21	Today=	03 OCT 2021	3294	MON	2831
030CT21	-1 Day =	02 OCT 2021	3243	SUN	2870
030CT21	-2 Days =	01 OCT 2021	3163	SAT	2832
030CT21	-3 Days =	30 SEP 2021	3112	FRI	3216
030CT21	-4 Days =	29 SEP 2021	2989	THU	3327
030CT21	-5 Days =	28 SEP 2021	2859	WED	3695
030CT21	-6 Days =	27 SEP 2021	2699	TUE	3774
030CT21	-7 Days =	26 SEP 2021	2532	MON	3763
030CT21	-8 Days =	25 SEP 2021	2366	SUN	3628
030CT21	-9 Days =	24 SEP 2021	2216	SAT	3581
030CT21	-10 Days =	23 SEP 2021	2067	FRI	3014
030CT21	-11 Days =	22 SEP 2021	1965	THU	2993
030CT21	-12 Days =	21 SEP 2021	1865	WED	-NR-
030CT21	-13 Days =	20 SEP 2021	1865	TUE	-NR-

#### S65EX1

Average Flow over previous 14 days					Avg-Daily Flow
030CT21	Today=	03 OCT 2021	4	MON	0
030CT21	-1 Day =	02 OCT 2021	4	SUN	0
030CT21	-2 Days =	01 OCT 2021	4	SAT	0
030CT21	-3 Days =	30 SEP 2021	4	FRI	0
030CT21	-4 Days =	29 SEP 2021	5	THU	0
030CT21	-5 Days =	28 SEP 2021	5	WED	0
030CT21	-6 Days =	27 SEP 2021	5	TUE	0
030CT21	-7 Days =	26 SEP 2021	5	MON	0
030CT21	-8 Days =	25 SEP 2021	5	SUN	0
030CT21	-9 Days =	24 SEP 2021	5	SAT	0
030CT21	-10 Days =	23 SEP 2021	5	FRI	0
030CT21	-11 Days =	22 SEP 2021	5	THU	0
030CT21	-12 Days =	21 SEP 2021	5	WED	0
030CT21	-13 Days =	20 SEP 2021	5	TUE	51

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)
03 OCT 2021	8	190	-NR-	3384
02 OCT 2021	10	193	-NR-	5452
01 OCT 2021	7	148	-NR-	3307
30 SEP 2021	18	406	-NR-	6109
29 SEP 2021	5	745	3972	9384
28 SEP 2021	3	460	3922	9927
27 SEP 2021	8	561	4523	13086
26 SEP 2021	8	547	6763	15260
25 SEP 2021	4	505	8684	20569
24 SEP 2021	3	220	8692	17932
23 SEP 2021	1	630	7553	18955
22 SEP 2021	1	558	7688	21163
21 SEP 2021	7	481	5168	16147
20 SEP 2021	2	653	4419	8413

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)
03 OCT 2021	52	0	0	0	-NR-
02 OCT 2021	70	0	0	0	-NR-
01 OCT 2021	8	0	0	0	-NR-
30 SEP 2021	83	0	0	0	-NR-
29 SEP 2021	140	0	0	0	-NR-
28 SEP 2021	-41	0	0	0	-NR-
27 SEP 2021	-12	0	0	0	-NR-
26 SEP 2021	-66	0	0	0	-NR-
25 SEP 2021	-83	0	0	0	-NR-
24 SEP 2021	-85	0	0	0	-NR-
23 SEP 2021	-237	0	0	0	-NR-
22 SEP 2021	-328	0	0	0	-NR-
21 SEP 2021	-239	0	0	0	-NR-
20 SEP 2021	-204	0	0	0	-NR-

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
03 OCT 2021	5	123	260
02 OCT 2021	4	188	367
01 OCT 2021	4	135	34
30 SEP 2021	6	8	222
29 SEP 2021	5	48	650
28 SEP 2021	6	30	662
27 SEP 2021	1	-108	580
26 SEP 2021	2	-33	769
25 SEP 2021	2	-149	1157
24 SEP 2021	0	94	1158
23 SEP 2021	0	-97	1142
22 SEP 2021	1	-151	1216
21 SEP 2021	0	-9	1279
20 SEP 2021	1	-16	1073

\*\*\* 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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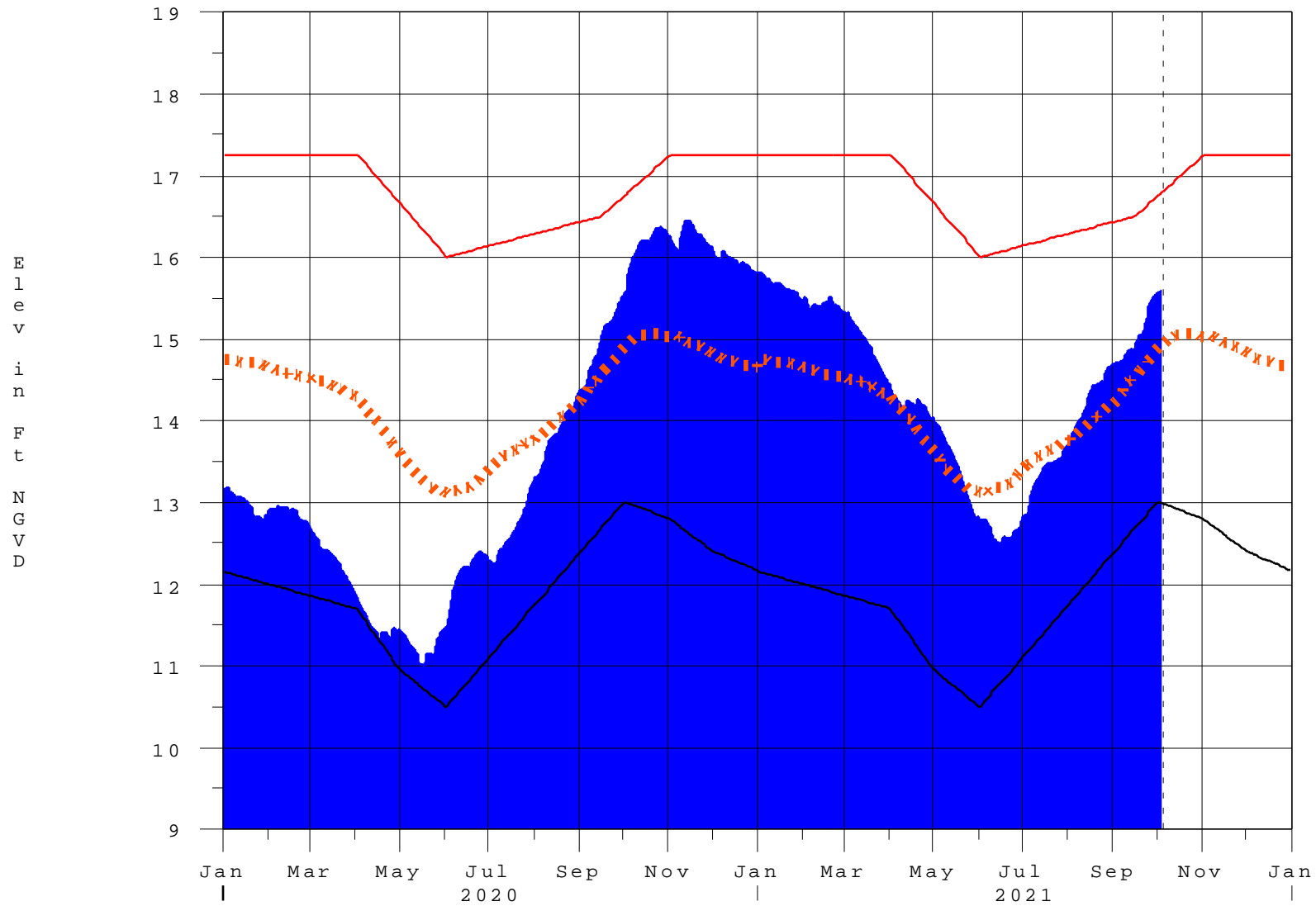
\* On 11 May 1999, Lake Okeechobee Elevation was switched from Instantaneous 2400 value to an average-daily lake average.  
On 14 Mar 2001, due to the isolation of various gages within the standard 10 stations, the average of the interior 4 station gages was used as the Lake Okeechobee Elevation.  
On 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](http://www.sfwmd.gov)

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Report Generated 04OCT2021 @ 23:39 \*\* Preliminary Data - Subject to Revision \*\*

# Lake Okeechobee

04OCT21 15:00:52



- High Lake Management
- Okeechobee Avg Elev
- Average Elev [1965-2007]
- Water Shortage Management



# Classification Tables

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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 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\***

<b>Lake Net Inflow Prediction [million acre-feet]</b>	<b>Equivalent Depth** [feet]</b>	<b>Lake Okeechobee Net Inflow Seasonal Outlook</b>
> 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\*

<b>Lake Net Inflow Prediction [million acre-feet]</b>	<b>Equivalent Depth** [feet]</b>	<b>Lake Okeechobee Net Inflow Multi-Seasonal Outlook</b>
> 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\***

<b>6-15 Day Precipitation Outlook Categories</b>	<b>WSE Decision Tree Categories</b>
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