Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 08/10/2020 (ENSO Neutral Condition)

Lake Okeechobee Net Inflow Outlook:

The Lake Okeechobee Net Inflow Outlook has been computed using 4 methods: Croley's method[1], the SFWMD empirical method[2], a sub-sampling of Neutral years[3] and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with La Nina ENSO years[4]. 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 Neutral ENSO Years[3]		Sub-sampling of AMO Warm + Neutral ENSO Years[4]	
	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (Aug-Jan)	N/A	N/A	2.20	Very Wet	2.23	Very Wet	3.47	Very Wet
Multi Seasonal (Aug-Apr)	N/A	N/A	2.56	Wet	2.22	Normal	3.54	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 ENSO forecast used.

Tributary Hydrologic Conditions Graph:

10437 cfs 14-day running average for Lake Okeechobee Net Inflow through 08/10/2020.
According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

-0.30 for Palmer Drought Index on 08/08/2020.
According to the classification in Tributary Hydrologic Conditions table, this condition is Normal.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 08/10/2020:

Lake Okeechobee Stage: **13.67 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.33	
Operational Band	High sub-band	15.91	
	Intermediate sub-band	15.49	
	Low sub-band	13.65	← 13.67 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.93	
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 08/10/2020 (ENSO Neutral Condition):

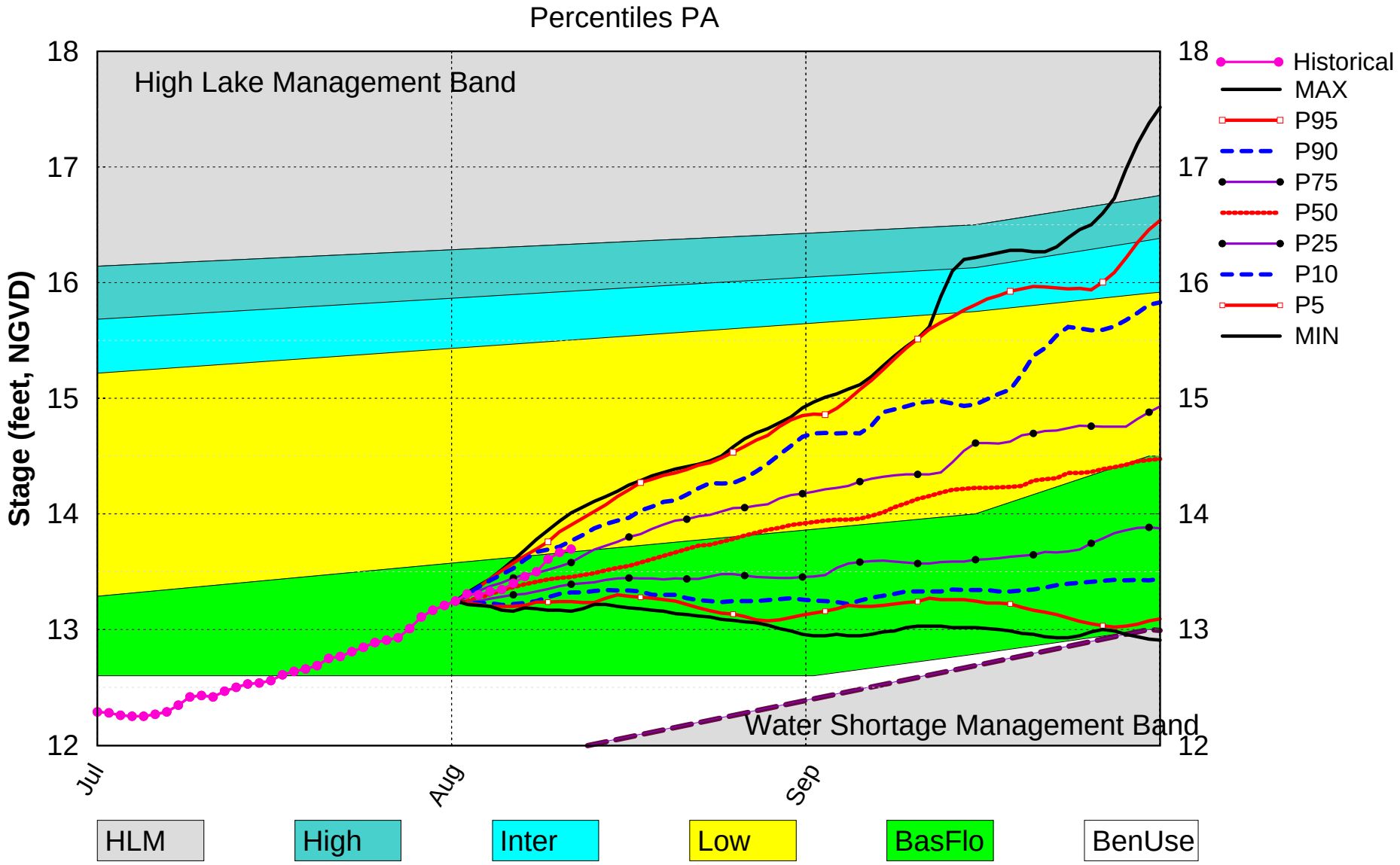
Status for week ending 8/10/2020:

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 Index for LOK Tributary Conditions	-0.30 (Normal to Extremely Wet)	L
	CPC Precipitation Outlook	1 month: Above Normal	L
		3 months: Above Normal	L
	LOK Seasonal Net Inflow Outlook	2.23 ft Normal to Extremely Wet	L
	ENSO Forecast (positive)		
	LOK Multi-Seasonal Net Inflow Outlook	2.22 ft Normal	M
	ENSO Forecast (positive)		
WCAs	WCA 1: 3 Station Average (Site 1-7, 1-8T and 1-9)	Above Line 1 (16.61 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (12.54 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (10.77 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.

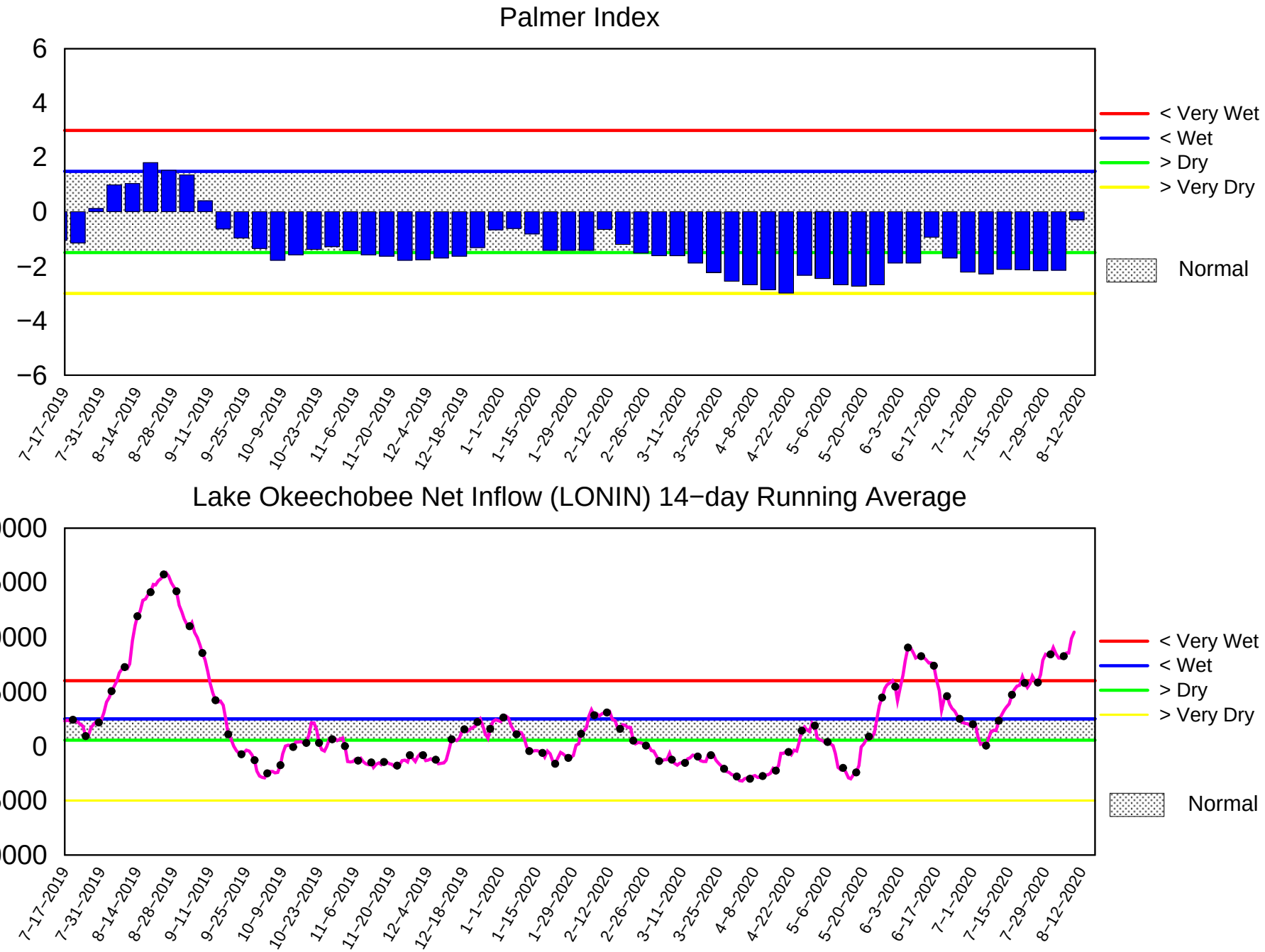
Lake Okeechobee SFWMM Aug 2020 Position Analysis



(See assumptions on the Position Analysis Results website)

Tue Aug 11 07:25:45 2020

Tributary Basin Condition Indicators as of August 10 2020



Mon Aug 10 13:55:33 EDT 2020

2008 LORS

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

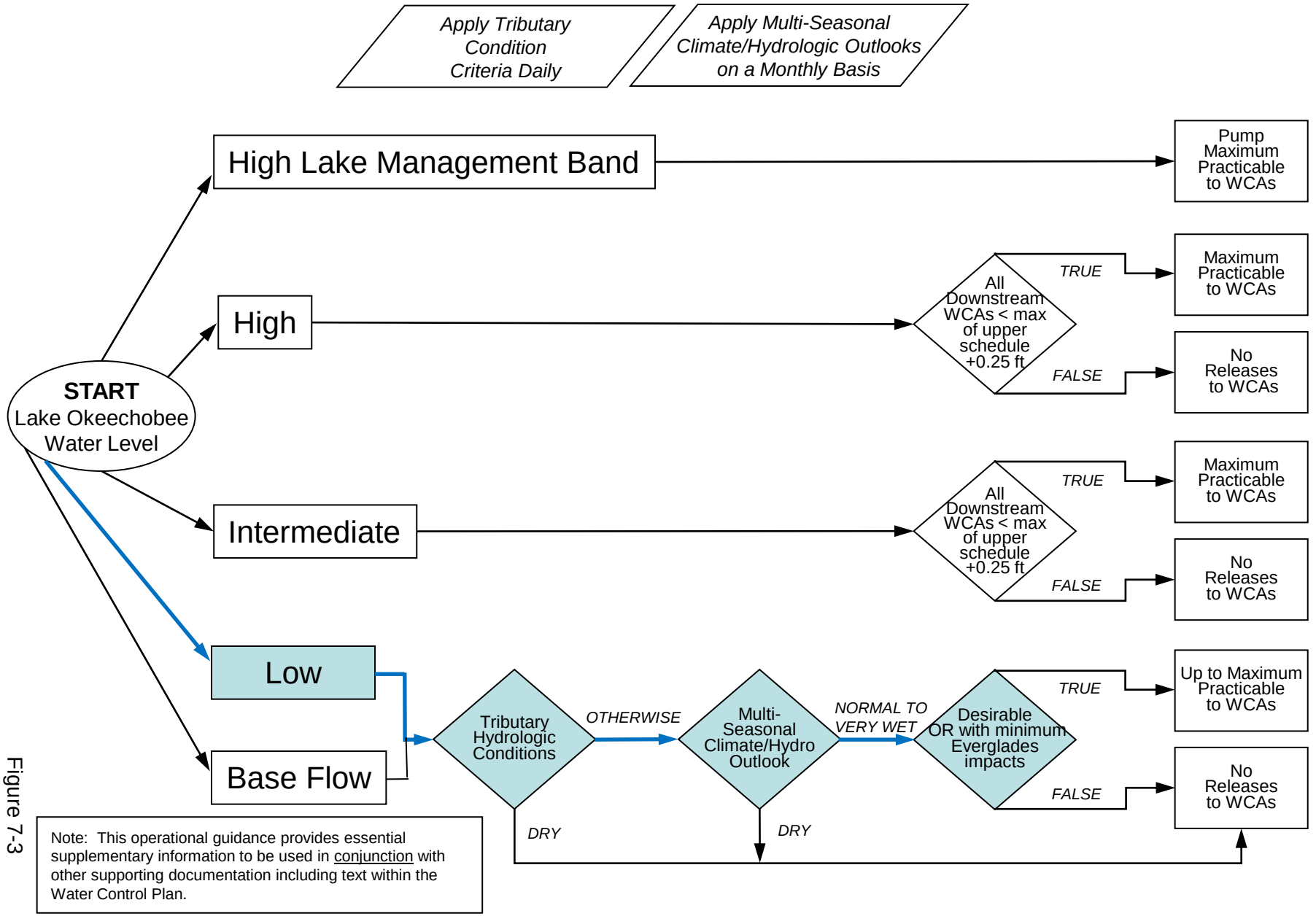


Figure 7-3

2008 LORS

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

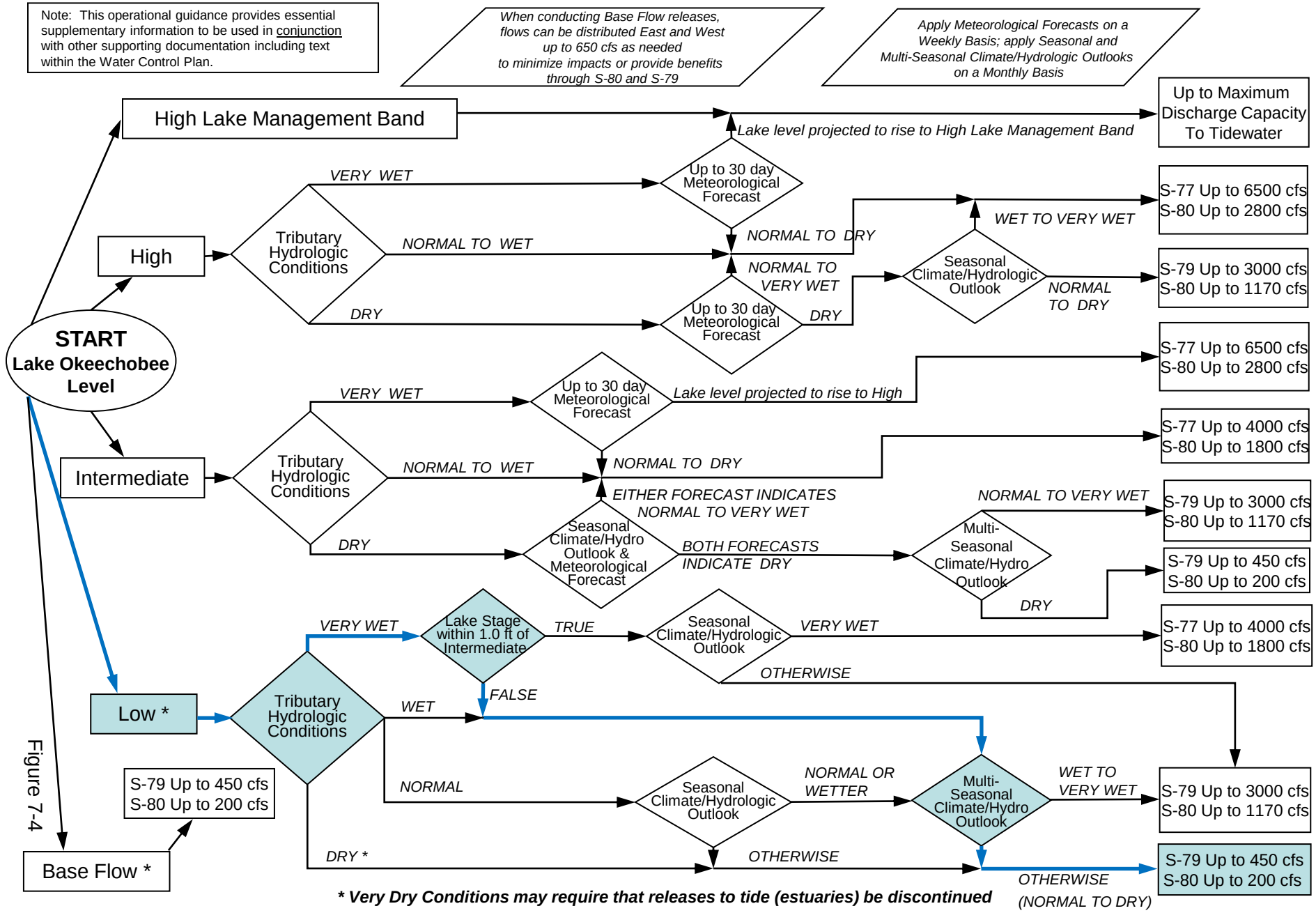
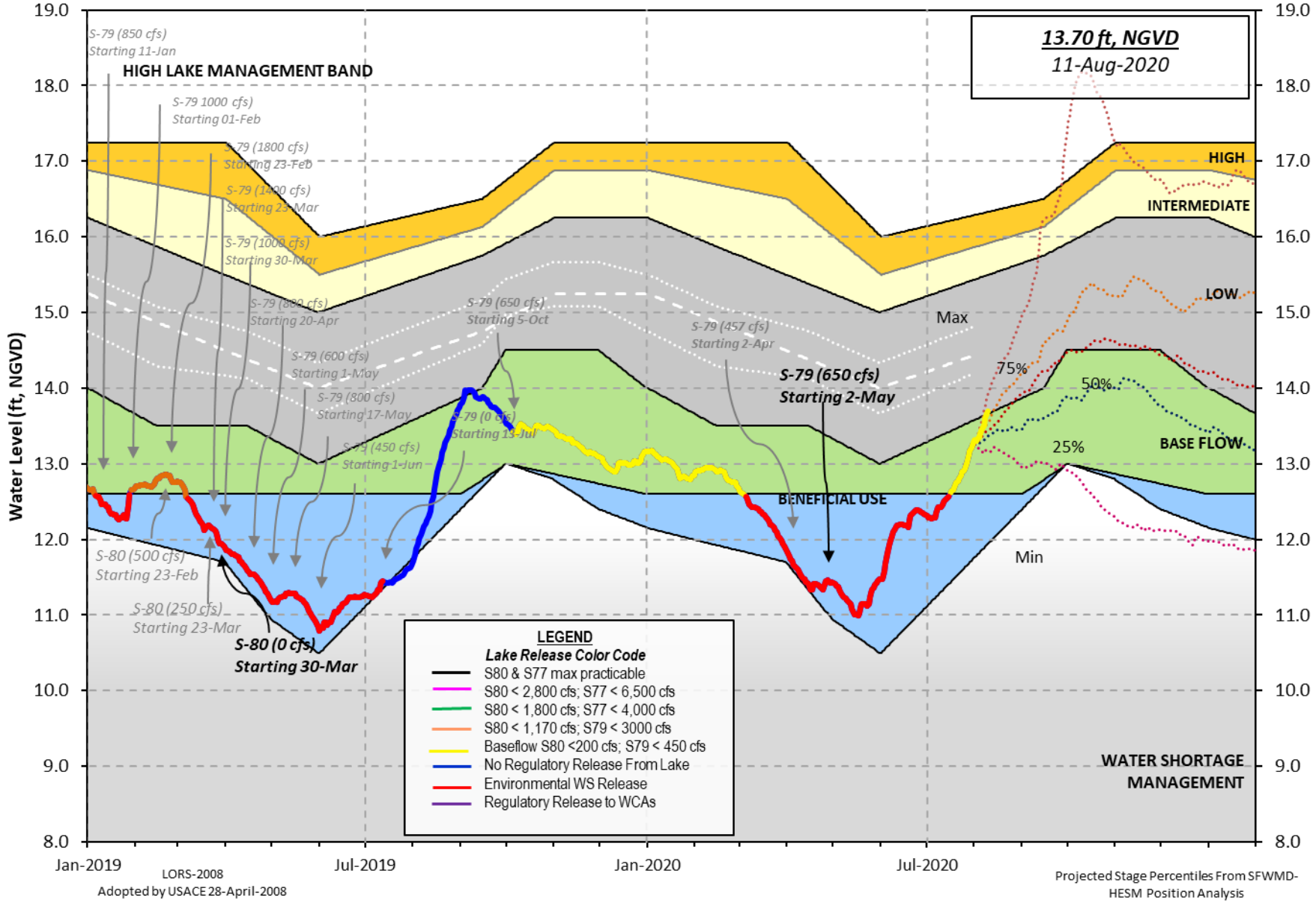


Figure 7-4

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 09 AUG 2020

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	13.67	12.20	14.45 (Official Elv)

Bottom of High Lake Mngmt= 16.33 Top of Water Short Mngmt= 11.93
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 12.85
Difference from Average LORS2008 0.82

09AUG (1965-2007) Period of Record Average 13.90
Difference from POR Average -0.23

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 7.61'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 5.81'
Bridge Clearance = -NR-'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
13.63	13.75	13.68	13.65	13.71	13.77	14.38	13.58

*Combination Okeechobee Avg-Daily Lake Average = 13.67 (*See Note)

Okeechobee Inflows (cfs):

S65E	4130	S65EX1	1886	Fisheating Cr	107
S154	0	S191	463	S135 Pumps	202
S84	1607	S133 Pumps	213	S2 Pumps	0
S84X	486	S127 Pumps	37	S3 Pumps	0
S71	319	S129 Pumps	29	S4 Pumps	0
S72	137	S131 Pumps	17	C5	0

Total Inflows: 9635

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	-NR-
S127 Culverts	0	S351	0	S308	-NR-
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-491		

Total Outflows: No Report Due To Missing S77 or S308 Discharge Data

****S77 structure flow is being used to compute Total Outflow.
****S308 below flow meter is being used to compute Total Outflow.

Okeechobee Pan Evaporation (inches):

S77	-NR-	S308	-NR-

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 12705 cfs or 25200 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:	13.48	13.59	213	28	40	28	28	22	(cfs)		
S193:											
S191:	18.79	13.59	463	0.6	0.5	0.0					
S135 Pumps:	13.57	13.54	202	-NR-	-NR-	-NR-	-NR-		(cfs)		
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	21.13	13.73	4130	1.5	1.5	1.5	1.5	2.0	2.0		
S65EX1:	21.13	13.73	1886								
S127 Pumps:	13.32	13.64	37	0	36	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	12.77	13.70	29	31	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	12.80	13.78	17	19	0				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		30.96	107								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.37	13.67	0	0	0	0			(cfs)		
S169:	13.73	11.39	0	0.0	0.0	0.0					
S310:	13.62		25								
S3 Pumps:	9.28	13.69	0	0	0	0			(cfs)		
S354:	13.69	9.28	0	0.0	0.0						
S2 Pumps:	9.99	-NR-	0	0	0	0	0		(cfs)		
S351:	-NR-	9.99	0	0.0	0.0	0.0					
S352:	13.80	11.07	0	0.0	0.0						
C10A:	-NR-	14.02		8.0	8.0	8.0	0.0	0.0			
L8 Canal PT		13.82	-491								
S351 and S352 Temporary Pumps/S354 Spillway											
S351:	9.99	-NR-	0	-NR--NR--NR--NR--NR--NR--NR-							
S352:	11.07	13.80	0	-NR--NR--NR--NR-							
S354:	9.28	13.69	0	-NR--NR--NR--NR-							
Caloosahatchee River (S77, S78, S79)											
S47B:	13.21	12.65		0.5	0.5						
S47D:	12.69	11.34	0	0.0							

```
  S77:
    Spillway and Sector Preferred Flow:
               13.48     11.22       0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:        -NR-

  S78:
    Spillway and Sector Flow:
               11.23      3.29      92    0.0  0.0  0.0  0.0
    Flow Due to Lockages+:        -NR-

  S79:
    Spillway and Sector Flow:
                3.50      0.97    1171    0.0  0.0  0.0  1.5  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:          13
    Percent of flow from S77         0%
    Chloride            (ppm)      0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
               14.47      -NR-    -244  3.0  3.0  3.0  3.0
    Flow Due to Lockages+:        -NR-

  S153:        18.86     13.40      53    0.0  0.0
  S80:
    Spillway and Sector Flow:
               13.78      0.89       0    0.0  0.0  0.0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:        -NR-
    Percent of flow from S308   NA  %

  Steele Point Top Salinity    (mg/ml) ****
  Steele Point Bottom Salinity (mg/ml) ****

  Speedy Point Top Salinity    (mg/ml) 9486
  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 (Degø)	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:	0.00	0.00	0.84	346	3
S78:	0.00	0.52	1.75	78	2
S79:	0.63	0.84	4.03	37	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:	0.05	2.05	2.07	68	3
S80:	1.25	1.26	3.47	162	1
Okeechobee Average	0.03	0.16	0.22		

(Sites S78, S79 and S80 not included)

Oke Nexrad Basin Avg	-NR-	1.04	1.87

Okeechobee Lake Elevations		09 AUG 2020	13.67	Difference from 09AUG20
09AUG20	-1 Day =	08 AUG 2020	13.61	-0.06
09AUG20	-2 Days =	07 AUG 2020	13.50	-0.17
09AUG20	-3 Days =	06 AUG 2020	13.46	-0.21
09AUG20	-4 Days =	05 AUG 2020	13.40	-0.27
09AUG20	-5 Days =	04 AUG 2020	13.35	-0.32
09AUG20	-6 Days =	03 AUG 2020	13.33	-0.34
09AUG20	-7 Days =	02 AUG 2020	13.30	-0.37
09AUG20	-30 Days =	10 JUL 2020	12.42	-1.25
09AUG20	-1 Year =	09 AUG 2019	12.20	-1.47
09AUG20	-2 Year =	09 AUG 2018	14.45	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
09AUG20	Today =	09 AUG 2020	11084	MON	12705
09AUG20	-1 Day =	08 AUG 2020	10464	SUN	23293
09AUG20	-2 Days =	07 AUG 2020	9083	SAT	8268
09AUG20	-3 Days =	06 AUG 2020	9045	FRI	12403
09AUG20	-4 Days =	05 AUG 2020	8712	THU	10588
09AUG20	-5 Days =	04 AUG 2020	8523	WED	4235
09AUG20	-6 Days =	03 AUG 2020	8507	TUE	6353
09AUG20	-7 Days =	02 AUG 2020	8898	MON	-2118
09AUG20	-8 Days =	01 AUG 2020	9468	SUN	12705
09AUG20	-9 Days =	31 JUL 2020	8849	SAT	8470
09AUG20	-10 Days =	30 JUL 2020	8674	FRI	8470
09AUG20	-11 Days =	29 JUL 2020	8781	THU	12705
09AUG20	-12 Days =	28 JUL 2020	8170	WED	21175
09AUG20	-13 Days =	27 JUL 2020	6803	TUE	15919

S65E

			Average Flow over previous 14 days		Avg-Daily Flow
09AUG20	Today=	09 AUG 2020	4139	MON	4440
09AUG20	-1 Day =	08 AUG 2020	4093	SUN	4437
09AUG20	-2 Days =	07 AUG 2020	4005	SAT	4384
09AUG20	-3 Days =	06 AUG 2020	3906	FRI	4191
09AUG20	-4 Days =	05 AUG 2020	3790	THU	4157
09AUG20	-5 Days =	04 AUG 2020	3676	WED	4085
09AUG20	-6 Days =	03 AUG 2020	3558	TUE	3812
09AUG20	-7 Days =	02 AUG 2020	3449	MON	3851
09AUG20	-8 Days =	01 AUG 2020	3319	SUN	3804
09AUG20	-9 Days =	31 JUL 2020	3186	SAT	4046
09AUG20	-10 Days =	30 JUL 2020	3022	FRI	4202
09AUG20	-11 Days =	29 JUL 2020	2843	THU	4189
09AUG20	-12 Days =	28 JUL 2020	2668	WED	4198
09AUG20	-13 Days =	27 JUL 2020	2458	TUE	4154

S65EX1

			Average Flow over previous 14 days		Avg-Daily Flow
09AUG20	Today=	09 AUG 2020	1760	MON	1886
09AUG20	-1 Day =	08 AUG 2020	1740	SUN	1914
09AUG20	-2 Days =	07 AUG 2020	1706	SAT	1842

09AUG20	-3 Days =	06 AUG 2020	1673	FRI	|	1849
09AUG20	-4 Days =	05 AUG 2020	1625	THU	|	1755
09AUG20	-5 Days =	04 AUG 2020	1553	WED	|	1604
09AUG20	-6 Days =	03 AUG 2020	1490	TUE	|	1759
09AUG20	-7 Days =	02 AUG 2020	1418	MON	|	1794
09AUG20	-8 Days =	01 AUG 2020	1351	SUN	|	1764
09AUG20	-9 Days =	31 JUL 2020	1283	SAT	|	1755
09AUG20	-10 Days =	30 JUL 2020	1210	FRI	|	1751
09AUG20	-11 Days =	29 JUL 2020	1140	THU	|	1656
09AUG20	-12 Days =	28 JUL 2020	1065	WED	|	1711
09AUG20	-13 Days =	27 JUL 2020	1001	TUE	|	1599

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)
09 AUG 2020	-NR-	-298	-NR-	2324
08 AUG 2020	5	-118	321	2780
07 AUG 2020	3	62	303	2782
06 AUG 2020	8	58	312	2843
05 AUG 2020	5	206	433	1499
04 AUG 2020	2	137	558	1476
03 AUG 2020	2	151	307	1167
02 AUG 2020	0	-245	304	1381
01 AUG 2020	8	183	1162	2873
31 JUL 2020	6	592	1584	2426
30 JUL 2020	2	516	1550	4972
29 JUL 2020	4	853	1615	3371
28 JUL 2020	4	891	1976	5331
27 JUL 2020	107	887	1526	3316

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)
09 AUG 2020	50	0	0	0	-974
08 AUG 2020	56	0	0	0	-960
07 AUG 2020	49	0	0	0	-821
06 AUG 2020	54	0	0	0	-731
05 AUG 2020	-42	0	0	0	-480
04 AUG 2020	45	0	0	0	-617
03 AUG 2020	42	0	0	0	-878
02 AUG 2020	-15	0	0	0	-472
01 AUG 2020	-5	0	0	0	-798
31 JUL 2020	-112	0	0	0	-1074
30 JUL 2020	-187	0	0	0	-1112
29 JUL 2020	-143	0	0	0	-1106
28 JUL 2020	104	0	0	0	-571
27 JUL 2020	20	0	0	0	-94

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
09 AUG 2020	-NR-	-484	-NR-
08 AUG 2020	-NR-	-770	-NR-
07 AUG 2020	5335	-1139	-NR-
06 AUG 2020	1091	-1742	38
05 AUG 2020	-1	105	29
04 AUG 2020	-0	-112	43

03 AUG 2020	0	-28	102
02 AUG 2020	0	37	-NR-
01 AUG 2020	-1	14	640
31 JUL 2020	2799	-225	128
30 JUL 2020	4603	-507	37
29 JUL 2020	4940	-745	33
28 JUL 2020	4163	-1060	36
27 JUL 2020	3828	-590	14

*** 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

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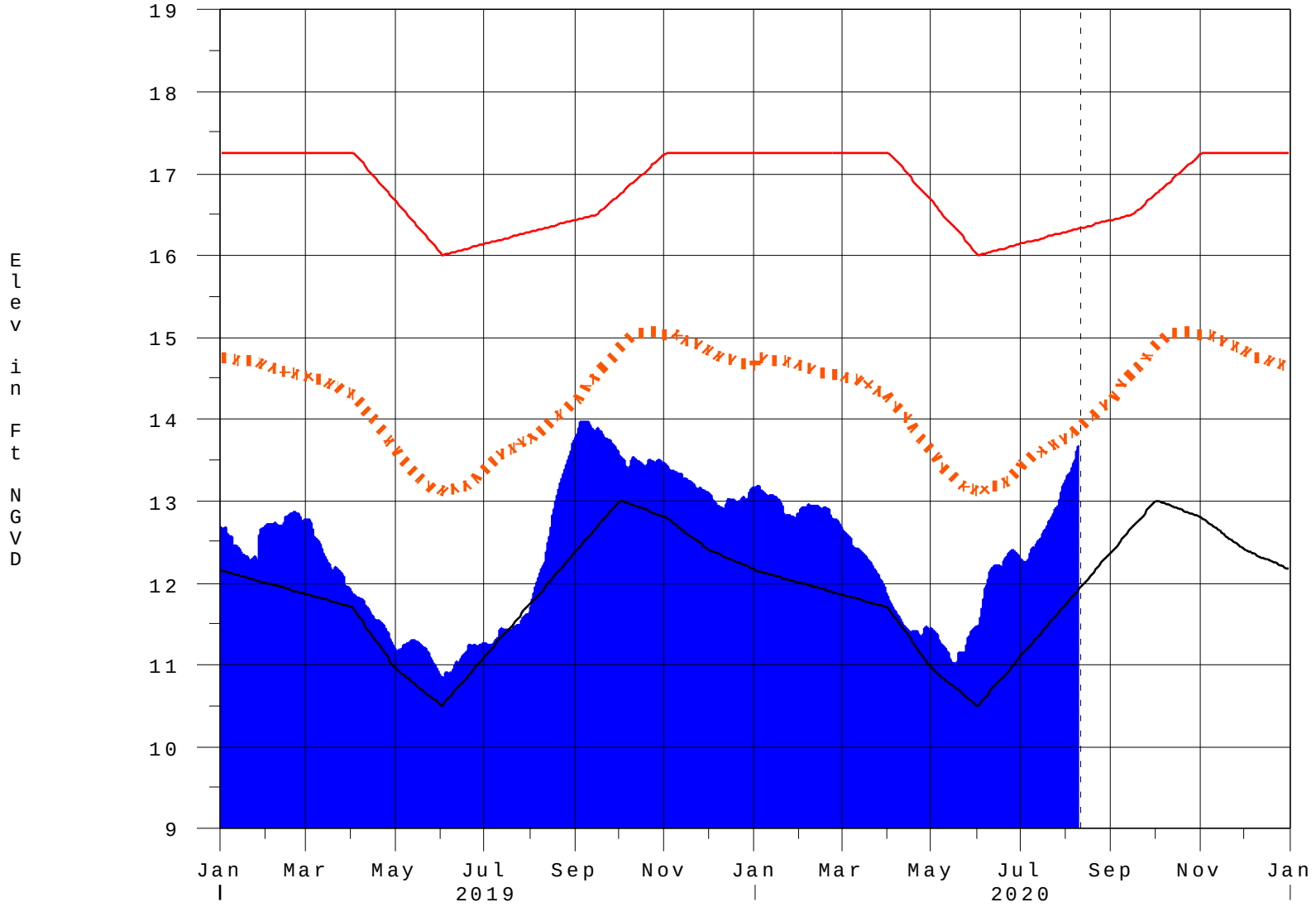
Report Generated 10AUG2020 @ 07:45 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

10AUG20 13:45:27



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 >= 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