Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 9/13/2021 (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[1], the SFWMD empirical method[2], a sub-sampling of ENSO Neutral years[3] and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with ENSO Neutral 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 La Nina Years[3]		Sub-sampling of AMO Warm + La Nina Years [4]	
	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (Sep-Feb)	N/A	N/A	1.47	Normal	1.15	Normal	1.07	Normal
Multi Seasonal (Sep-Apr)	N/A	N/A	1.65	Normal	0.99	Dry	0.82	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:

2788 cfs 14-day running average for Lake Okeechobee Net Inflow through 9/12/2021.
According to the classification in Tributary Hydrologic Conditions table, this condition is Wet.

-2.09 for Palmer Drought Index on 9/11/2021.
According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 9/13/2021:

Lake Okeechobee Stage: **14.85 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.49	
Operational Band	High sub-band	16.11	
	Intermediate sub-band	15.73	
	Low sub-band	13.97	← 14.85 ft
Base Flow sub-band		12.75	
Beneficial Use sub-band		12.63	
Water Shortage Management Band			

Part C of LORS2008: Discharge to WCAs

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 9/13/2021 (ENSO Condition- La Nina Watch):

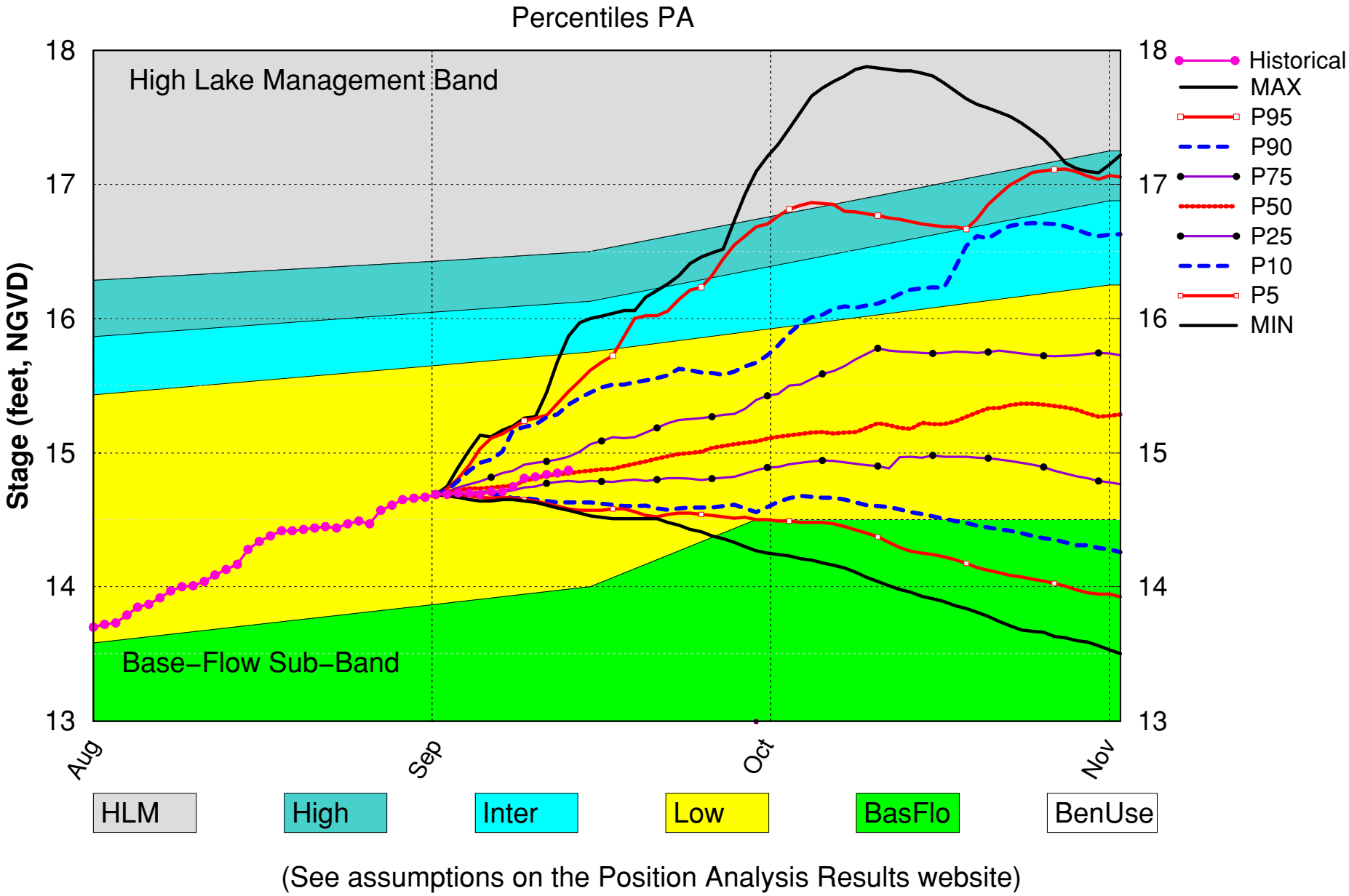
Status for week ending 9/13/2021:

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	-2.09 (9/11/2021) (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Normal	L
		3 months: Normal	L
	LOK Seasonal Net Inflow Outlook	1.15 ft	L
	ENSO Forecast	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	0.99 ft	H
	ENSO Forecast	Dry	
WCAs	WCA 1: 3 Station Average (Site 1-7, 1-8T and 1-9)	Above Line 1 (16.98 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (13.01 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (9.91 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.

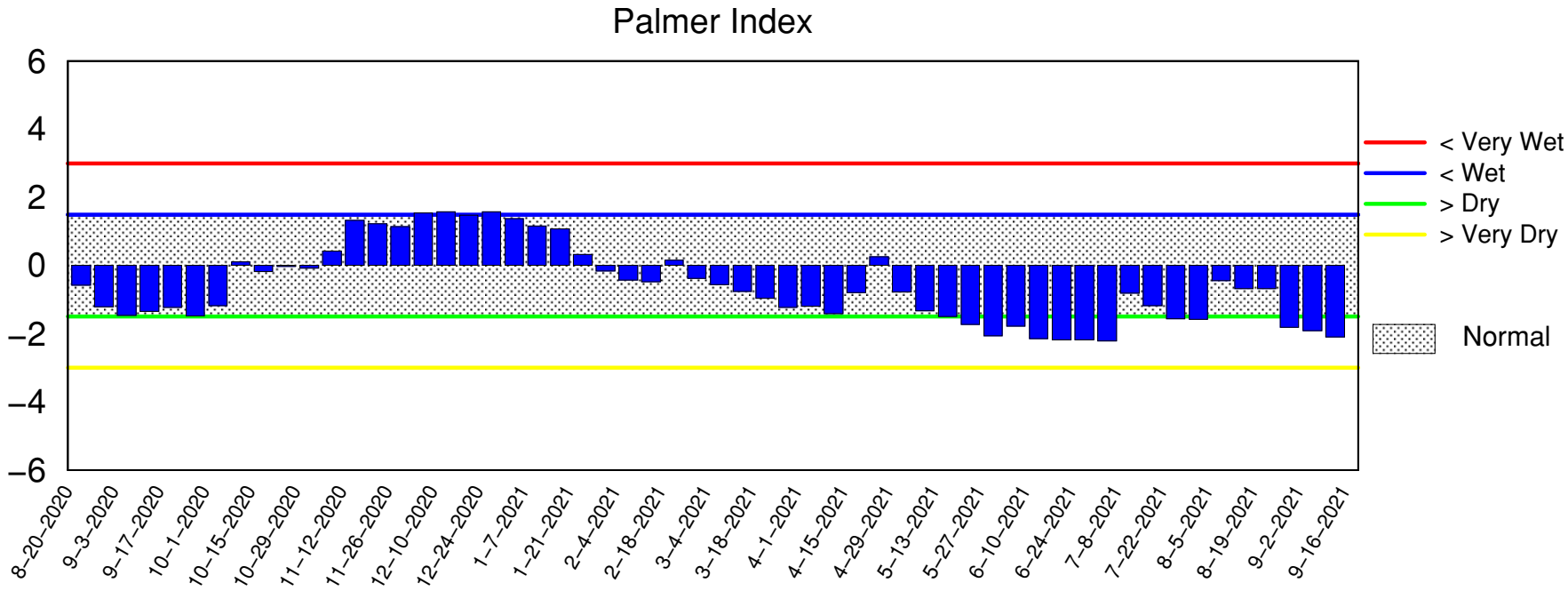
Lake Okeechobee SFWMM Sep 2021 Position Analysis

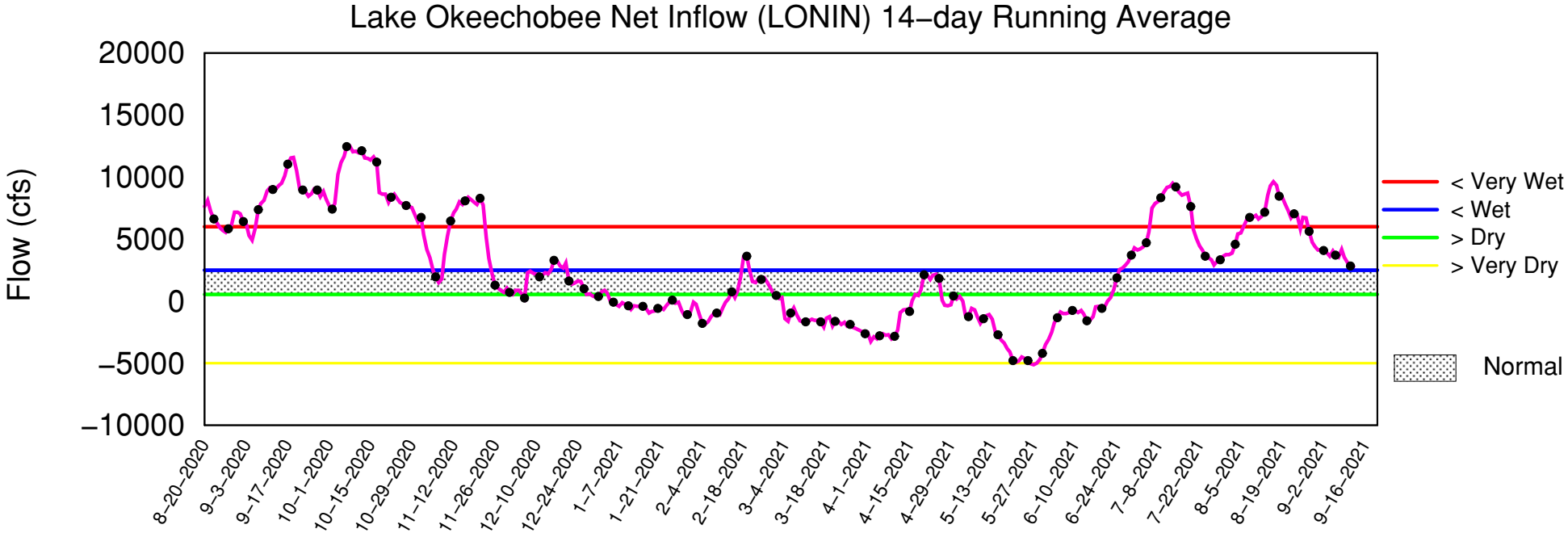


(See assumptions on the Position Analysis Results website)

Mon Sep 13 12:45:25 EDT 2021

Tributary Basin Condition Indicators as of September 13 2021





Mon Sep 13 12:45:12 EDT 2021

2008 LORS

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

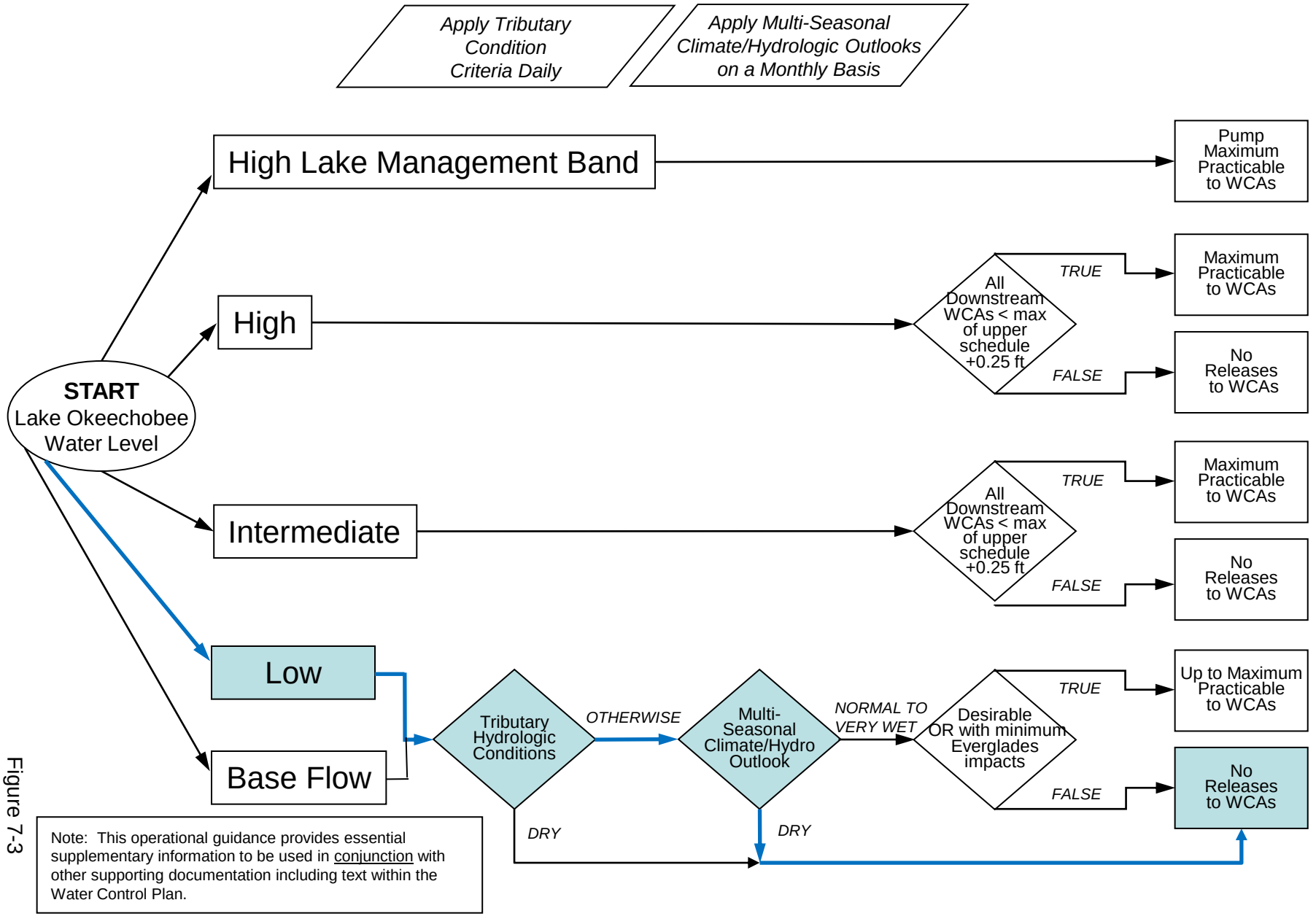


Figure 7-3

2008 LORS

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

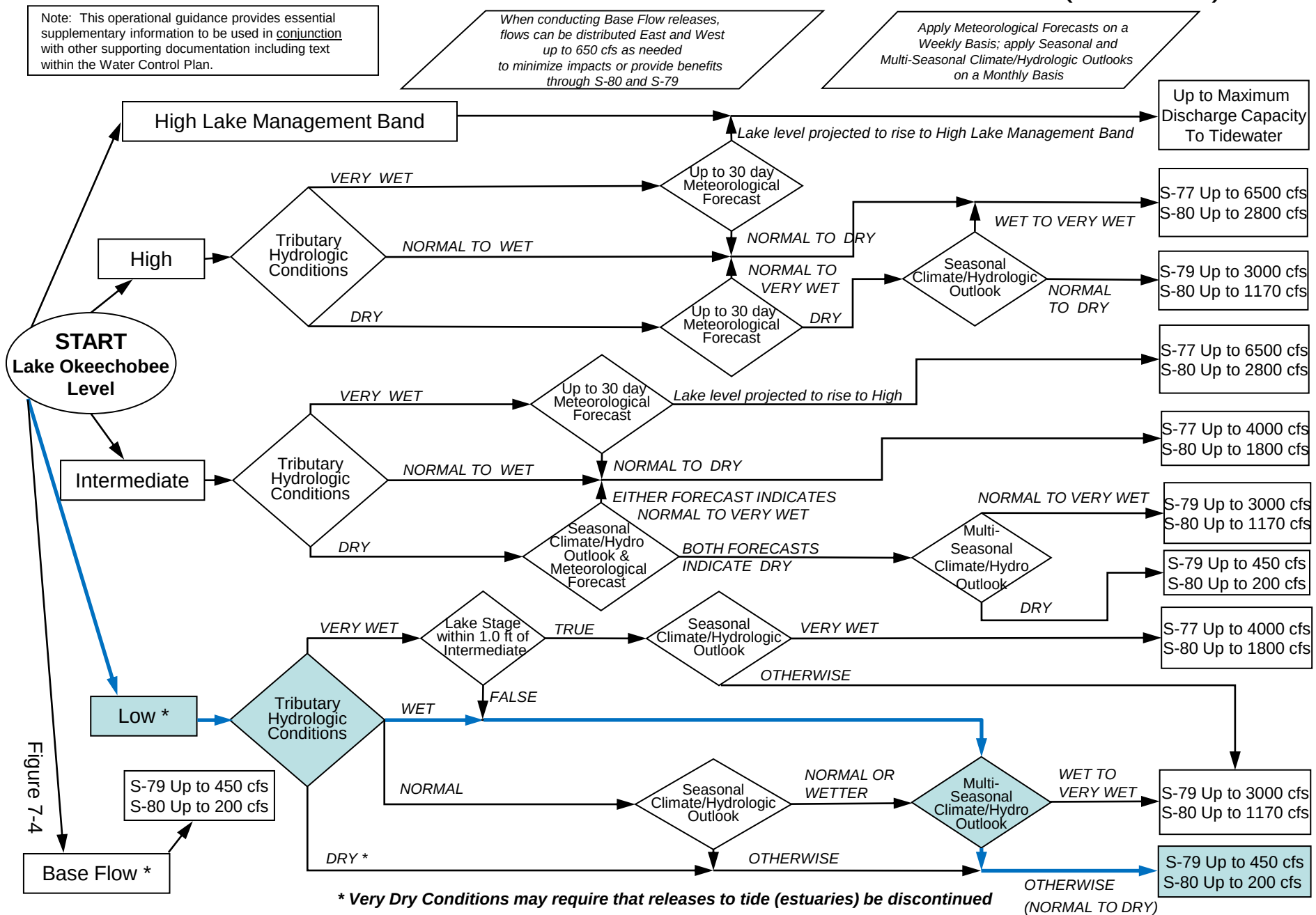
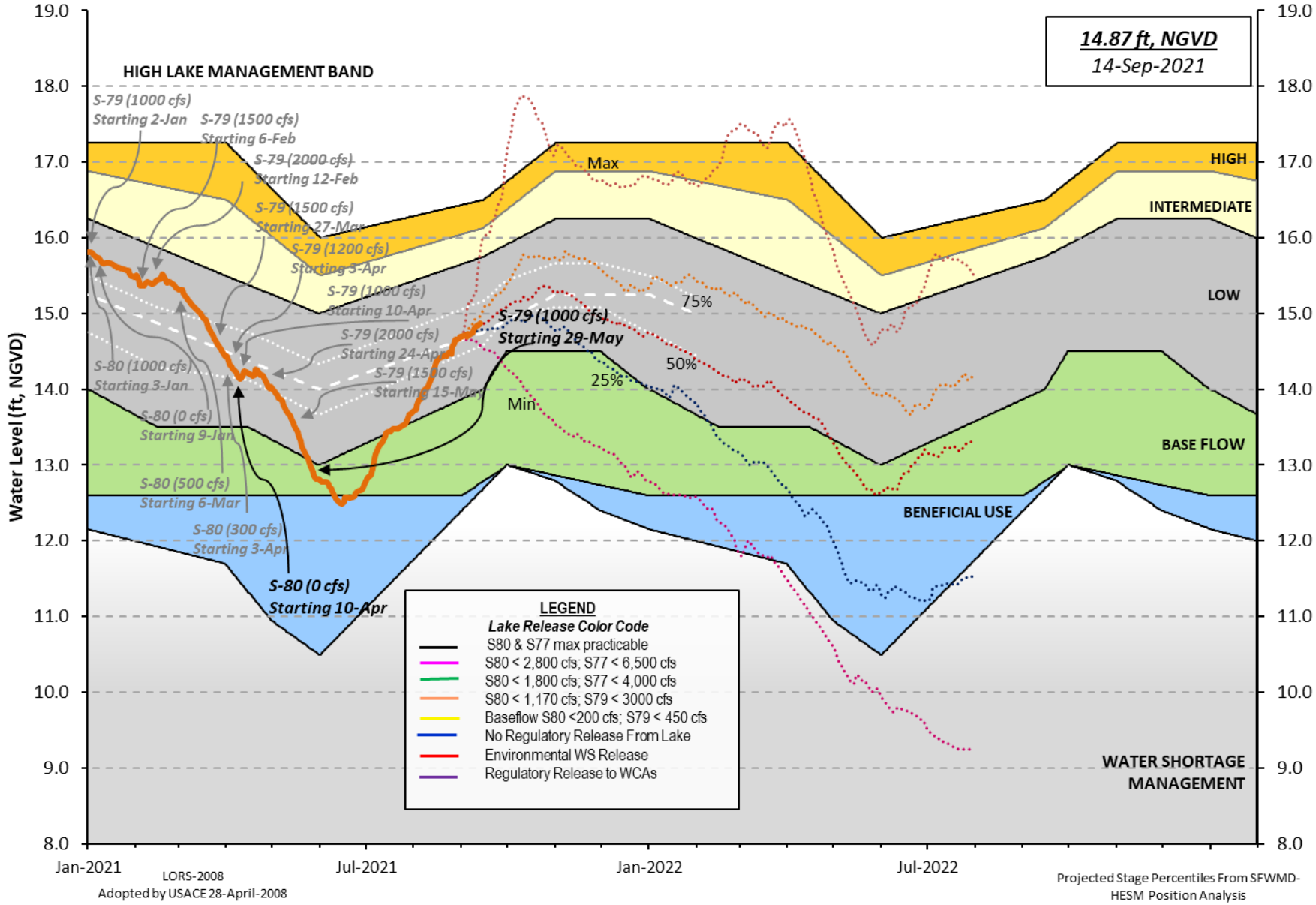


Figure 7-4

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 14 SEP 2021

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	14.91	14.95	13.86 (Official Elv)

Bottom of High Lake Mngmt= 16.50 Top of Water Short Mngmt= 12.67
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 13.48
Difference from Average LORS2008 1.43

14SEP (1965-2007) Period of Record Average 14.54
Difference from POR Average 0.37

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ◆ 8.85'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ◆ 7.05'
Bridge Clearance = 49.00'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
14.87	14.92	14.43	14.88	14.91	15.00	14.88	14.85

*Combination Okeechobee Avg-Daily Lake Average = 14.91 (*See Note)

Okeechobee Inflows (cfs):

S65E	1601	S65EX1	0	Fisheating Cr	153
S154	106	S191	0	S135 Pumps	137
S84	794	S133 Pumps	95	S2 Pumps	0
S84X	254	S127 Pumps	0	S3 Pumps	0
S71	122	S129 Pumps	23	S4 Pumps	0
S72	152	S131 Pumps	11	C5	0
Total Inflows:	3448				

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	3
S127 Culverts	0	S351	0	S308	1
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	-NR-		
Total Outflows:	4				

****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	0.23	S308	0.18

Average Pan Evap x 0.75 Pan Coefficient = 0.15" = 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 8621 cfs or 17100 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:	13.37	14.79	95	48	37	18	0	0				(cfs)
S193:												
S191:	19.38	14.79	0	0.0	0.0	0.0						
S135 Pumps:	13.38	14.73	137	19	37	37	44					(cfs)
S135 Culverts:			0	0.0	0.0							
North West Shore												
S65E:	21.06	14.83	1601	0.5	0.5	1.1	0.5	1.2	0.5			
S65EX1:	21.06	14.83	0									
S127 Pumps:	13.37	14.78	0	0	0	0	0	0				(cfs)
S127 Culvert:			0	0.0								
S129 Pumps:	12.85	14.88	23	0	25	0						(cfs)
S129 Culvert:			0	0.0								
S131 Pumps:	12.89	14.85	11	12	0							(cfs)
S131 Culvert:			0									
Fisheating Creek												
nr Palmdale		31.45	153									
nr Lakeport												
C5:		-NR-	0	-NR-	-NR-	-NR-						
South Shore												
S4 Pumps:	12.31	14.94	0	0	0	0						(cfs)
S169:		-NR-	-NR-	-NR-	-NR-	-NR-						
S310:	14.92		-80									
S3 Pumps:	10.73	14.98	0	0	0	0						(cfs)
S354:	14.98	10.73	0	0.0	0.0							
S2 Pumps:	9.94	-NR-	0	0	0	0	0					(cfs)
S351:	-NR-	9.94	0	0.0	0.0	0.0						
S352:	14.99	10.71	0	0.0	0.0							
C10A:	-NR-	14.80		8.0	8.0	8.0	0.0	0.0				
L8 Canal PT			-NR-									

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.94	-NR-	0	-NR--NR--NR--NR--NR--NR-
S352:	10.71	14.99	0	-NR--NR--NR--NR-
S354:	10.73	14.98	0	-NR--NR--NR--NR-

Caloosahatchee River (S77, S78, S79)								
S47B:	14.98	12.87		0.0	0.0			
S47D:	12.87	10.97	0	0.0				
S77:								
Spillway and Sector Preferred Flow:								
	14.77	10.84	0	0.0	0.0	0.0	0.0	
Flow Due to Lockages+:			3					
S78:								

```
    Spillway and Sector Flow:
              10.86      2.79    1123    1.5  0.0  0.0  2.0
    Flow Due to Lockages+:           5

  S79:
    Spillway and Sector Flow:
               3.04      1.63    2443    0.0  0.0  3.0  3.0  3.0  2.0  0.0  0.0
    Flow Due to Lockages+:           2
    Percent of flow from S77         0%
    Chloride            (ppm)      0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
              14.93     14.50       0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:           1

  S153:        18.67     14.12     200    0.0  0.5
  S80:
    Spillway and Sector Flow:
              14.38      0.72     236    0.0  0.0  0.0  0.6  0.0  0.0  0.0
    Flow Due to Lockages+:           6
    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:	0.55	1.10	2.22	49	3
S78:	0.10	0.81	1.26	31	1
S79:	1.89	2.23	2.46	29	8
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	0.00	1.02	338	2
S80:	0.19	0.22	1.03	256	1
Okeechobee Average (Sites S78, S79 and S80 not included)	0.27	0.08	0.25		
Oke Nexrad Basin Avg	-NR-	0.00	0.00		

```
Okeechobee Lake Elevations  14 SEP 2021          14.91 Difference from 14SEP21
   14SEP21  -1 Day  =       13 SEP 2021          14.87            -0.04
```

14SEP21	-2 Days =	12 SEP 2021	14.86	-0.05
14SEP21	-3 Days =	11 SEP 2021	14.85	-0.06
14SEP21	-4 Days =	10 SEP 2021	14.82	-0.09
14SEP21	-5 Days =	09 SEP 2021	14.81	-0.10
14SEP21	-6 Days =	08 SEP 2021	14.75	-0.16
14SEP21	-7 Days =	07 SEP 2021	14.73	-0.18
14SEP21	-30 Days =	15 AUG 2021	14.34	-0.57
14SEP21	-1 Year =	14 SEP 2020	14.95	0.04
14SEP21	-2 Year =	14 SEP 2019	13.86	-1.05

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
14SEP21	Today =	14 SEP 2021	3364	WED	8621
14SEP21	-1 Day =	13 SEP 2021	3050	TUE	2168
14SEP21	-2 Days =	12 SEP 2021	3047	MON	2168
14SEP21	-3 Days =	11 SEP 2021	3043	SUN	6504
14SEP21	-4 Days =	10 SEP 2021	3184	SAT	2168
14SEP21	-5 Days =	09 SEP 2021	3634	FRI	12755
14SEP21	-6 Days =	08 SEP 2021	4246	THU	4235
14SEP21	-7 Days =	07 SEP 2021	3636	WED	2118
14SEP21	-8 Days =	06 SEP 2021	3813	TUE	-2118
14SEP21	-9 Days =	05 SEP 2021	4447	MON	8470
14SEP21	-10 Days =	04 SEP 2021	3700	SUN	-2118
14SEP21	-11 Days =	03 SEP 2021	4014	SAT	0
14SEP21	-12 Days =	02 SEP 2021	4173	FRI	2118
14SEP21	-13 Days =	01 SEP 2021	4184	THU	0

S65E

		Average Flow over previous 14 days			Avg-Daily Flow
14SEP21	Today=	14 SEP 2021	1862	WED	1778
14SEP21	-1 Day =	13 SEP 2021	1889	TUE	1767
14SEP21	-2 Days =	12 SEP 2021	1922	MON	1776
14SEP21	-3 Days =	11 SEP 2021	1959	SUN	1825
14SEP21	-4 Days =	10 SEP 2021	1992	SAT	1795
14SEP21	-5 Days =	09 SEP 2021	2029	FRI	1785
14SEP21	-6 Days =	08 SEP 2021	2065	THU	1799
14SEP21	-7 Days =	07 SEP 2021	2100	WED	1857
14SEP21	-8 Days =	06 SEP 2021	2132	TUE	1862
14SEP21	-9 Days =	05 SEP 2021	2165	MON	1889
14SEP21	-10 Days =	04 SEP 2021	2199	SUN	1849
14SEP21	-11 Days =	03 SEP 2021	2237	SAT	1989
14SEP21	-12 Days =	02 SEP 2021	2268	FRI	2023
14SEP21	-13 Days =	01 SEP 2021	2299	THU	2070

S65EX1

		Average Flow over previous 14 days			Avg-Daily Flow
14SEP21	Today=	14 SEP 2021	0	WED	0
14SEP21	-1 Day =	13 SEP 2021	0	TUE	0
14SEP21	-2 Days =	12 SEP 2021	0	MON	0
14SEP21	-3 Days =	11 SEP 2021	0	SUN	0
14SEP21	-4 Days =	10 SEP 2021	0	SAT	0
14SEP21	-5 Days =	09 SEP 2021	0	FRI	0
14SEP21	-6 Days =	08 SEP 2021	0	THU	0
14SEP21	-7 Days =	07 SEP 2021	0	WED	0
14SEP21	-8 Days =	06 SEP 2021	0	TUE	0
14SEP21	-9 Days =	05 SEP 2021	0	MON	0
14SEP21	-10 Days =	04 SEP 2021	0	SUN	0
14SEP21	-11 Days =	03 SEP 2021	0	SAT	0
14SEP21	-12 Days =	02 SEP 2021	0	FRI	0
14SEP21	-13 Days =	01 SEP 2021	0	THU	0

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)
14 SEP 2021	6	614	2237	4876
13 SEP 2021	7	632	2287	4455
12 SEP 2021	4	858	2306	5450
11 SEP 2021	10	745	2061	4580
10 SEP 2021	5	737	1653	5205
09 SEP 2021	9	505	1407	5066
08 SEP 2021	2	407	1077	3312
07 SEP 2021	4	38	946	3109
06 SEP 2021	12	171	945	3804
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

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)
14 SEP 2021	-158	0	0	0	-NR-
13 SEP 2021	-59	0	0	0	-NR-
12 SEP 2021	-55	0	0	0	-NR-
11 SEP 2021	-34	0	0	0	-NR-
10 SEP 2021	-116	0	0	0	-NR-
09 SEP 2021	-17	0	0	0	-NR-
08 SEP 2021	-74	0	0	0	-NR-
07 SEP 2021	-23	0	0	0	-NR-
06 SEP 2021	-13	0	0	0	-NR-
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-

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
14 SEP 2021	1	-175	480
13 SEP 2021	2	-144	760
12 SEP 2021	0	136	1140
11 SEP 2021	0	292	626
10 SEP 2021	1	75	408
09 SEP 2021	1	-267	400
08 SEP 2021	0	-119	480
07 SEP 2021	0	7	472
06 SEP 2021	1	77	404
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

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

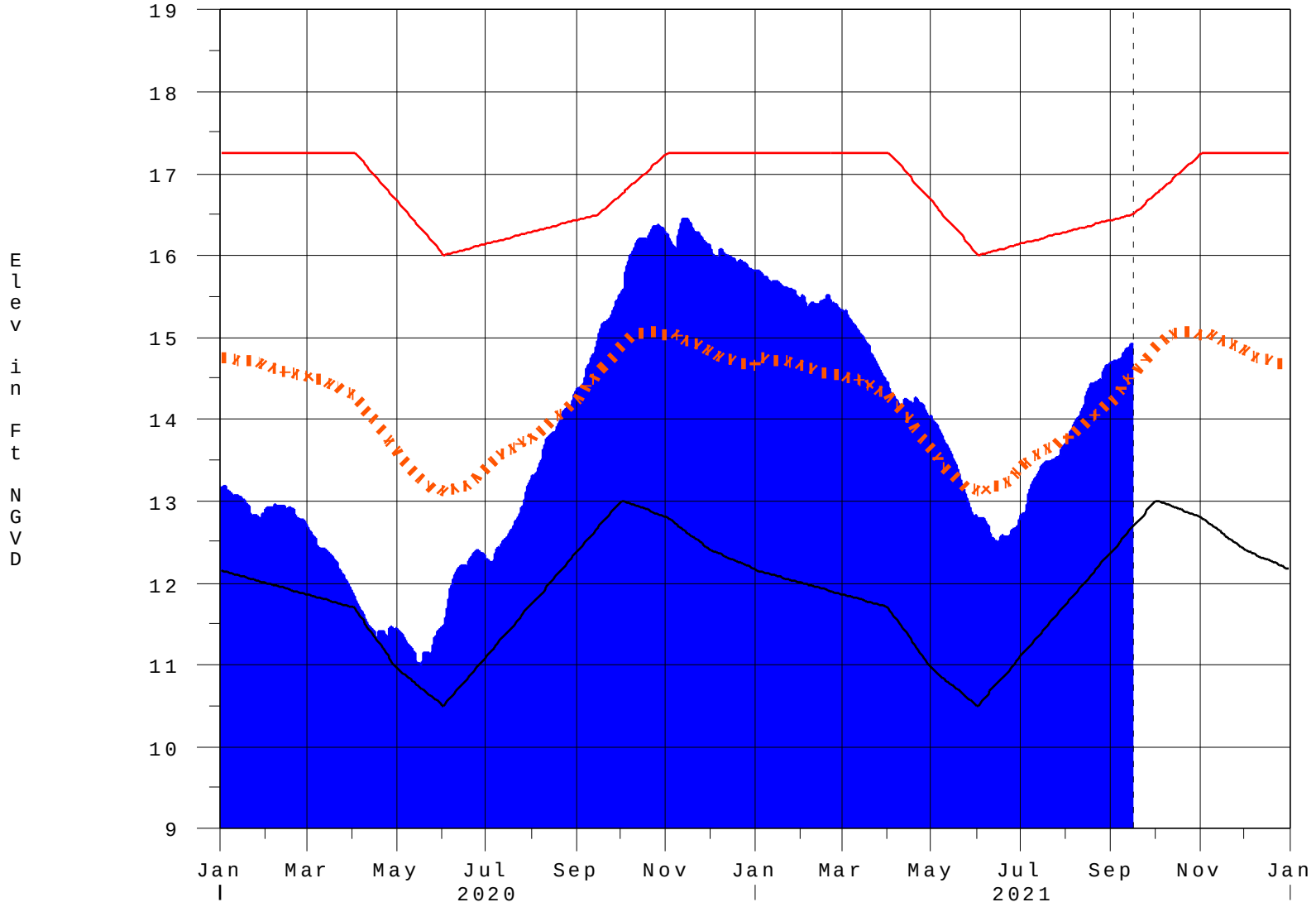
(I) - Flows preceeded by "I" signify an instantaneous
flow computed from the single value reported for the day

* 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

Report Generated 15SEP2021 @ 23:43 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

16SEP21 12:31:27



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 >= 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