Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 10/05/2020 (ENSO Condition: La Niña)

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 La Nina 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 La Nina ENSO Years[3]		Sub-sampling of AMO Warm + La Nina ENSO Years[4]	
	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (Oct-Mar)	N/A	N/A	1.17	Normal	0.76	Normal	0.62	Dry
Multi Seasonal (Oct-Apr)	N/A	N/A	1.25	Normal	0.64	Dry	0.52	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:

10205 cfs 14-day running average for Lake Okeechobee Net Inflow through 10/05/2020.
According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

-1.17 for Palmer Drought Index on 10/03/2020.
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 10/05/2020:

Lake Okeechobee Stage: **15.79 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.80	
Operational Band	High sub-band	16.43	
	Intermediate sub-band	15.95	
	Low sub-band	14.50	← 15.79 ft
Base Flow sub-band		12.99	
Beneficial Use sub-band		12.98	
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 10/05/2020 (ENSO Condition- La Nina):

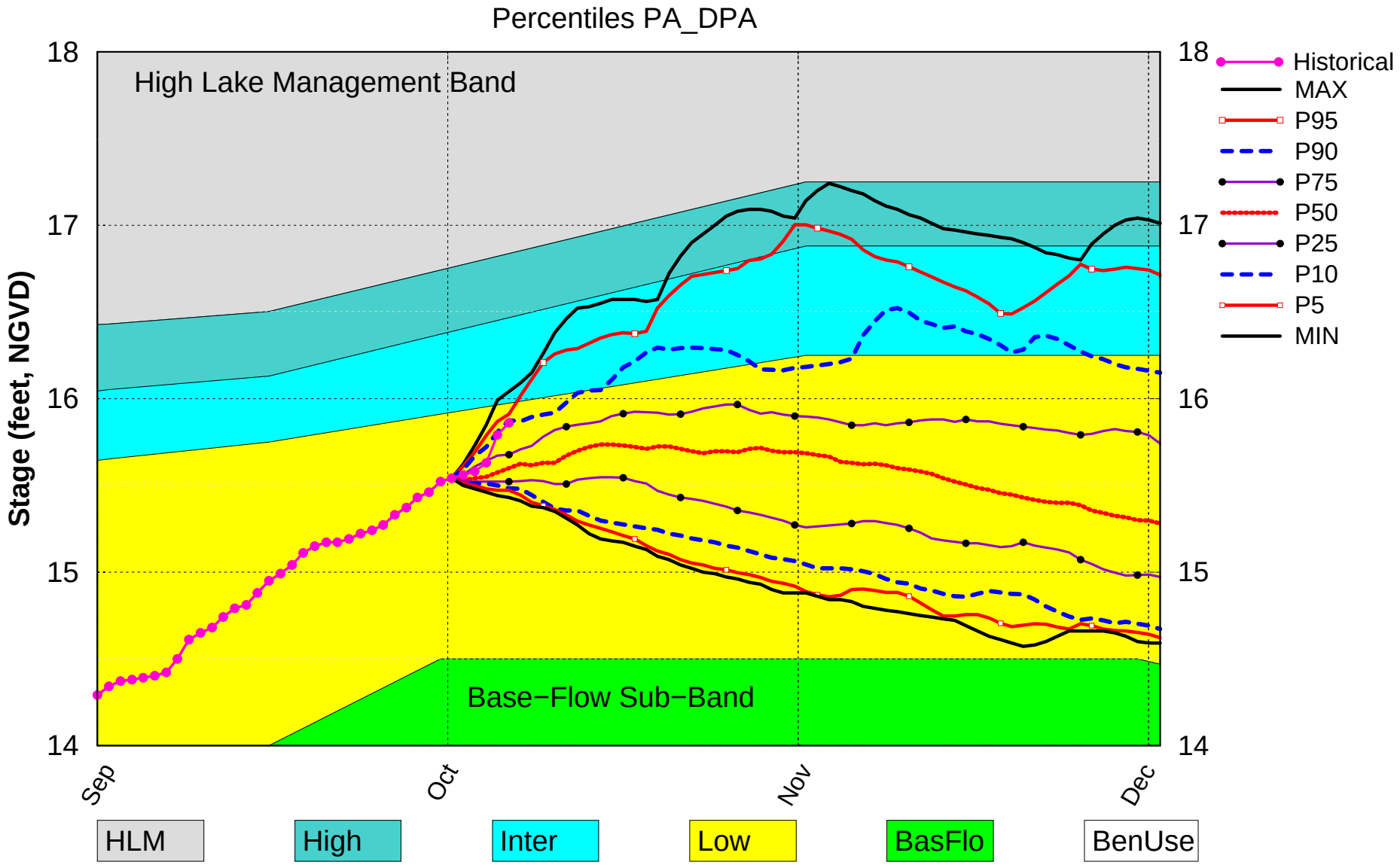
Status for week ending 10/5/2020:

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 Drought Index for LOK Tributary Conditions	-1.17 (Dry)	M
	CPC Precipitation Outlook	1 month: Above Normal	L
		3 months: Normal	L
	LOK Seasonal Net Inflow Outlook	0.76 ft	M
	ENSO Forecast (positive)	Dry	
	LOK Multi-Seasonal Net Inflow Outlook	0.64 ft	H
	ENSO Forecast (positive)	Dry	
WCAs	WCA 1: 3 Station Average (Site 1-7, 1-8T and 1-9)	Above Line 1 (17.51 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (13.59 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (10.89 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.

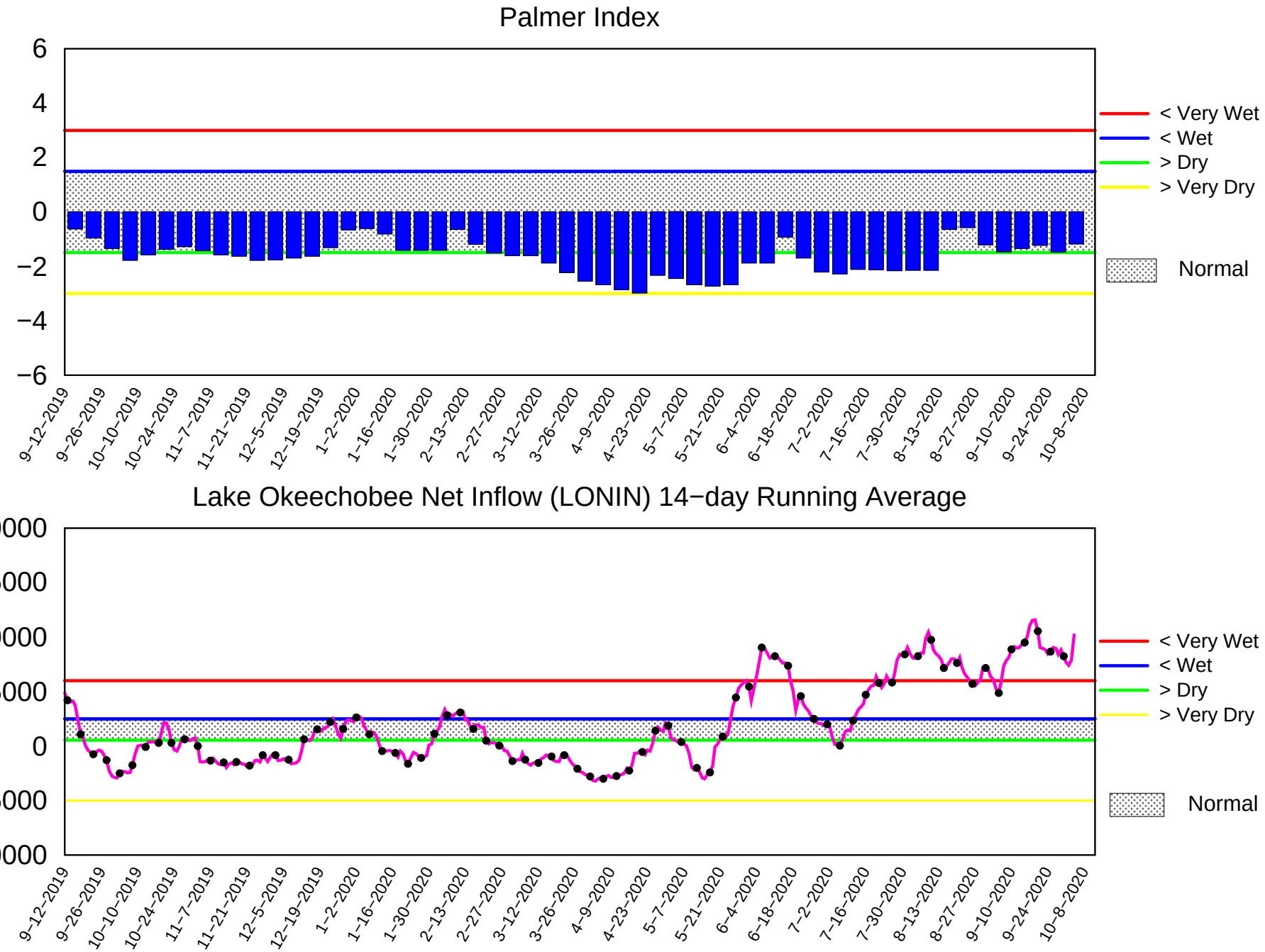
Lake Okeechobee SFWMM Oct 2020 Position Analysis



(See assumptions on the Position Analysis Results website)

Tue Oct 6 07:56:42 2020

Tributary Basin Condition Indicators as of October 5 2020



Mon Oct 05 21:58:59 EDT 2020

2008 LORS

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

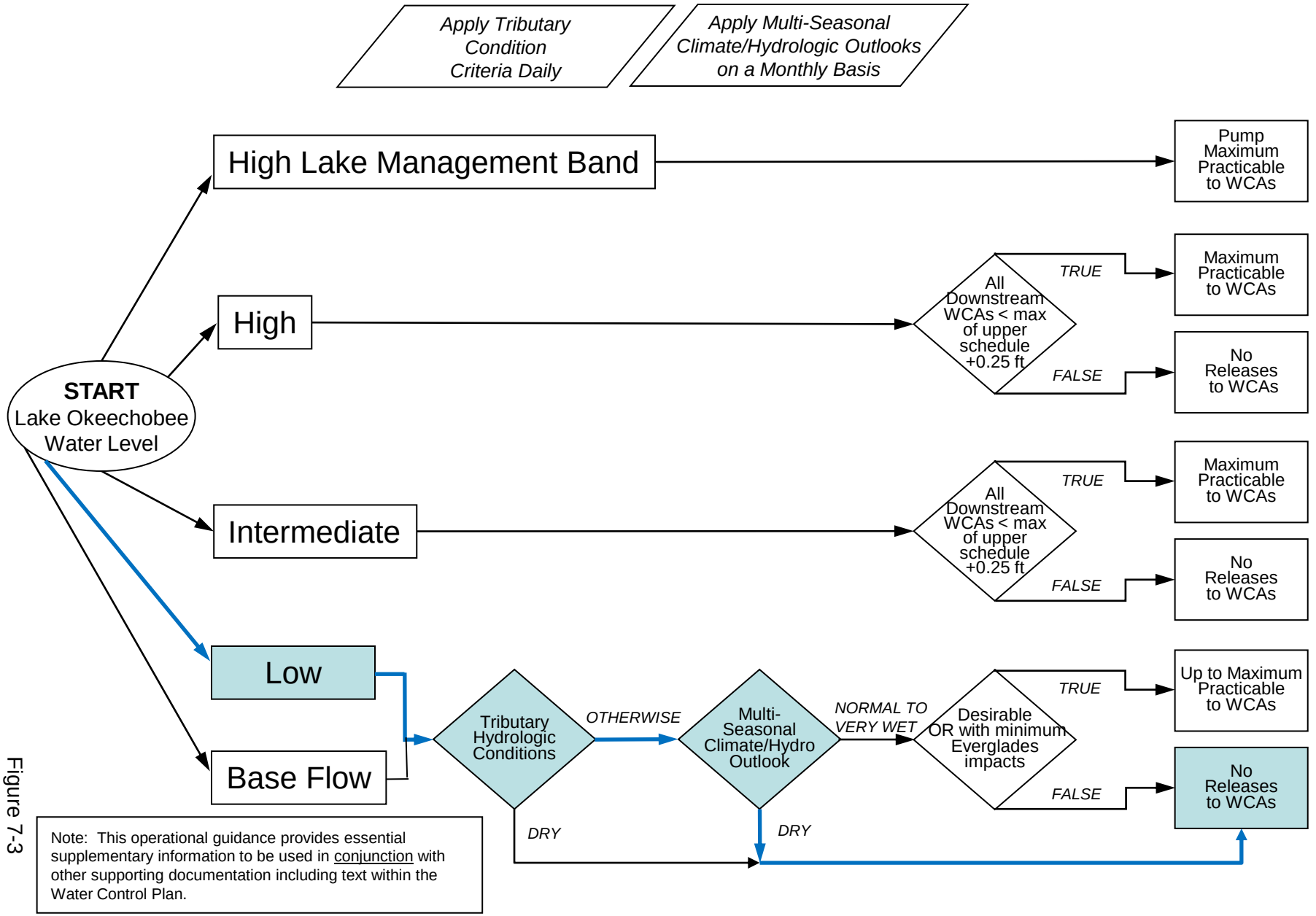


Figure 7-3

2008 LORS

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

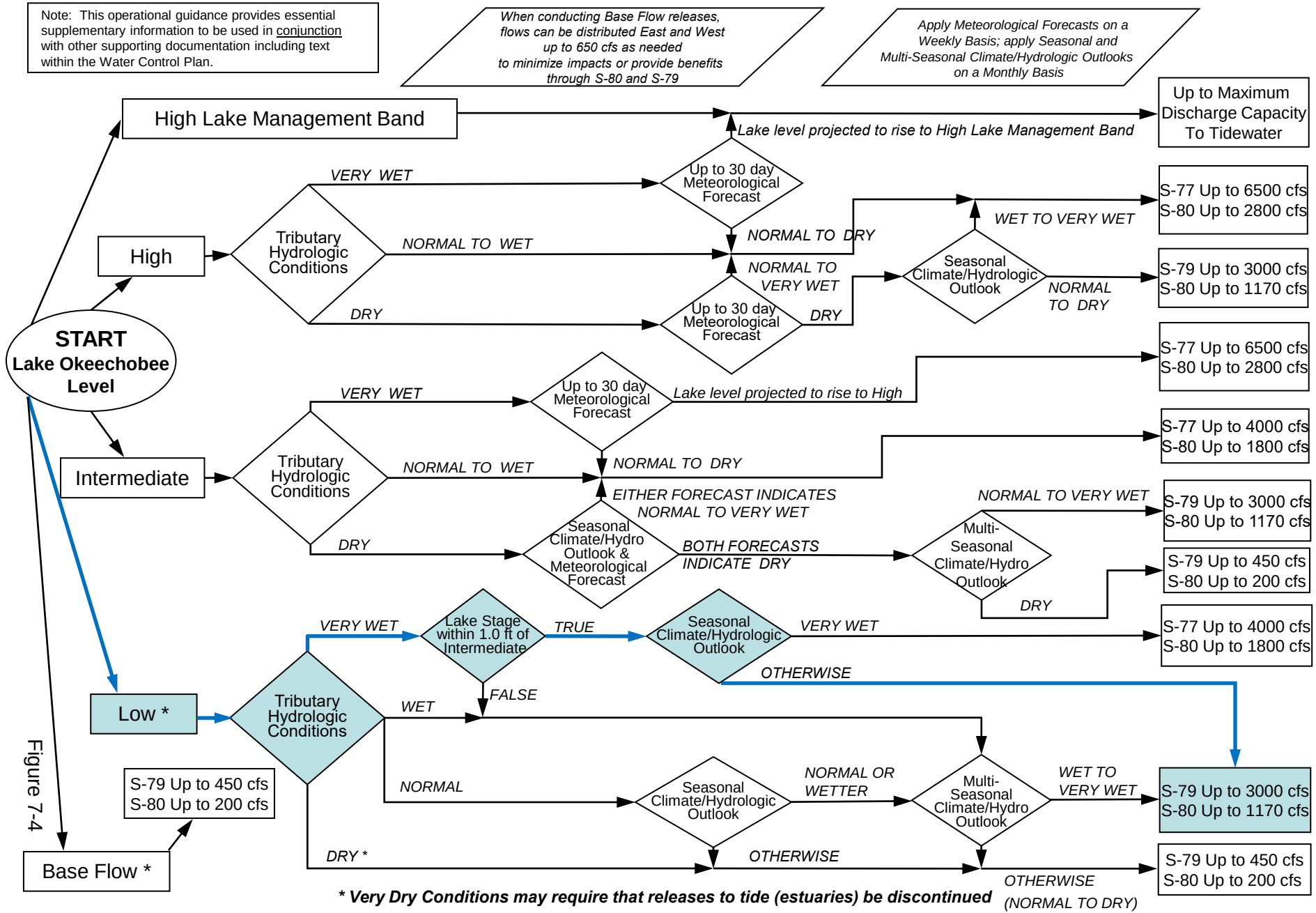
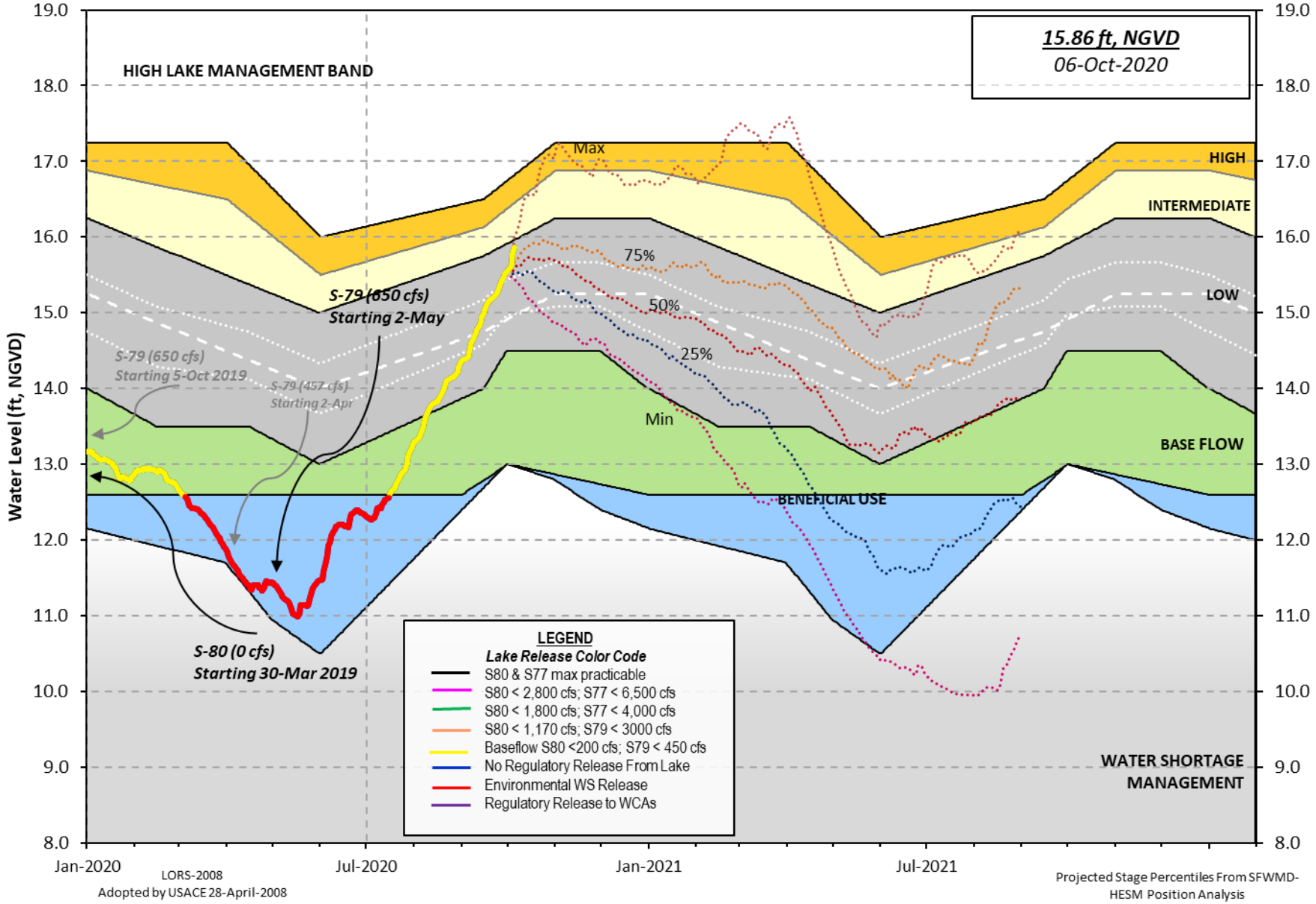


Figure 7-4

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 04 OCT 2020

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	15.79	13.46	14.37 (Official Elv)

Bottom of High Lake Mngmt= 16.80 Top of Water Short Mngmt= 12.98
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 13.84
Difference from Average LORS2008 1.95

04OCT (1965-2007) Period of Record Average 14.96
Difference from POR Average 0.83

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 9.73'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 7.93'
Bridge Clearance = 49.05'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.68	15.85	15.83	15.77	15.90	15.88	17.31	15.62

*Combination Okeechobee Avg-Daily Lake Average = 15.79 (*See Note)

Okeechobee Inflows (cfs):

S65E	5001	S65EX1	924	Fisheating Cr	1360
S154	151	S191	2773	S135 Pumps	543
S84	2099	S133 Pumps	710	S2 Pumps	0
S84X	483	S127 Pumps	72	S3 Pumps	0
S71	1183	S129 Pumps	86	S4 Pumps	0
S72	572	S131 Pumps	126	C5	0

Total Inflows: 16084

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	0
S127 Culverts	0	S351	498	S308	2
S129 Culverts	0	S352	263		
S131 Culverts	0	L8 Canal Pt	-63		

Total Outflows: 700

****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	0.00	S308	0.02

Average Pan Evap x 0.75 Pan Coefficient = 0.01" = 0.00'

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 34687 cfs or 68800 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:	13.40	15.60	710	146	147	147	145	148				(cfs)
S193:												
S191:	18.94	15.56	2773	3.0	3.0	3.0						
S135 Pumps:	13.61	15.53	543	133	133	133	133					(cfs)
S135 Culverts:			0	0.0	0.0							
North West Shore												
S65E:	21.05	15.55	5001	2.5	1.9	2.4	2.0	2.5	2.5			
S65EX1:	21.05	15.55	924									
S127 Pumps:	13.40	15.66	72	0	12	0	40	18				(cfs)
S127 Culvert:			0	0.0								
S129 Pumps:	12.99	15.83	86	0	49	30						(cfs)
S129 Culvert:			0	0.0								
S131 Pumps:	12.81	15.91	126	136	0							(cfs)
S131 Culvert:			0									
Fisheating Creek												
nr Palmdale		33.34	1360									
nr Lakeport												
C5:		-NR-	0	-NR-	-NR-	-NR-						
South Shore												
S4 Pumps:	12.96	15.98	0	0	0	0						(cfs)
S169:	15.41	13.00	112	1.0	1.0	1.0						
S310:	15.95		1									
S3 Pumps:	9.90	15.96	0	0	0	0						(cfs)
S354:	15.96	9.90	0	0.0	0.0							
S2 Pumps:	9.57	-NR-	0	-NR-	-NR-	-NR-	-NR-					(cfs)
S351:	-NR-	9.57	498	0.5	0.5	0.5						
S352:	15.91	10.43	263	0.4	0.4							
C10A:	-NR-	15.77		8.0	8.0	8.0	0.0	0.0				
L8 Canal PT		15.80	-63									

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.57	-NR-	498	-NR--NR--NR--NR--NR--NR-
S352:	10.43	15.91	263	-NR--NR--NR--NR-
S354:	9.90	15.96	0	-NR--NR--NR--NR-

Caloosahatchee River (S77, S78, S79)				
S47B:	14.12	12.91		3.0 3.0
S47D:	12.30	11.35	336	3.0

```
  S77:
    Spillway and Sector Preferred Flow:
               15.78     11.18       0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:           0

  S78:
    Spillway and Sector Flow:
               11.18      3.05    1896    2.0  2.5  2.5  0.0
    Flow Due to Lockages+:           1

  S79:
    Spillway and Sector Flow:
                3.15      1.52    5330    2.6  3.0  3.0  3.0  3.0  3.0  3.0  3.0
    Flow Due to Lockages+:           5
    Percent of flow from S77         0%
    Chloride            (ppm)      0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
               17.41     14.45       0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:           2

  S153:        18.61     14.31     342    0.5  0.5
  S80:
    Spillway and Sector Flow:
               14.54      2.53     487    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) 3936
  Speedy Point Bottom Salinity (mg/ml) 4016

 + 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:	0.02	1.28	1.71	37	6
S78:	0.00	1.65	1.87	63	1
S79:	0.18	1.03	3.06	357	7
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:	0.17	1.61	2.66	85	1
S80:	0.32	1.85	4.60	57	3
Okeechobee Average	0.10	0.22	0.34		

(Sites S78, S79 and S80 not included)

Oke Nexrad Basin Avg	-NR-	1.64	2.01

Okeechobee Lake Elevations				Difference from 04OCT20
04OCT20	-1 Day =	03 OCT 2020	15.63	-0.16
04OCT20	-2 Days =	02 OCT 2020	15.58	-0.21
04OCT20	-3 Days =	01 OCT 2020	15.56	-0.23
04OCT20	-4 Days =	30 SEP 2020	15.53	-0.26
04OCT20	-5 Days =	29 SEP 2020	15.52	-0.27
04OCT20	-6 Days =	28 SEP 2020	15.46	-0.33
04OCT20	-7 Days =	27 SEP 2020	15.43	-0.36
04OCT20	-30 Days =	04 SEP 2020	14.40	-1.39
04OCT20	-1 Year =	04 OCT 2019	13.46	-2.33
04OCT20	-2 Year =	04 OCT 2018	14.37	-1.42

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
04OCT20	Today =	04 OCT 2020	10808	MON	35448
04OCT20	-1 Day =	03 OCT 2020	6937	SUN	11615
04OCT20	-2 Days =	02 OCT 2020	6191	SAT	5121
04OCT20	-3 Days =	01 OCT 2020	6641	FRI	7294
04OCT20	-4 Days =	30 SEP 2020	7517	THU	-NR-
04OCT20	-5 Days =	29 SEP 2020	7844	WED	-NR-
04OCT20	-6 Days =	28 SEP 2020	7901	TUE	-NR-
04OCT20	-7 Days =	27 SEP 2020	8486	MON	-NR-
04OCT20	-8 Days =	26 SEP 2020	9001	SUN	-NR-
04OCT20	-9 Days =	25 SEP 2020	8664	SAT	13764
04OCT20	-10 Days =	24 SEP 2020	8437	FRI	7246
04OCT20	-11 Days =	23 SEP 2020	8827	THU	4923
04OCT20	-12 Days =	22 SEP 2020	8929	WED	6964
04OCT20	-13 Days =	21 SEP 2020	9037	TUE	4896

S65E

			Average Flow over previous 14 days		Avg-Daily Flow
04OCT20	Today=	04 OCT 2020	4322	MON	5210
04OCT20	-1 Day =	03 OCT 2020	4189	SUN	4132
04OCT20	-2 Days =	02 OCT 2020	4130	SAT	3726
04OCT20	-3 Days =	01 OCT 2020	4102	FRI	4293
04OCT20	-4 Days =	30 SEP 2020	4028	THU	4414
04OCT20	-5 Days =	29 SEP 2020	3950	WED	4356
04OCT20	-6 Days =	28 SEP 2020	3843	TUE	4430
04OCT20	-7 Days =	27 SEP 2020	3721	MON	4242
04OCT20	-8 Days =	26 SEP 2020	3608	SUN	4275
04OCT20	-9 Days =	25 SEP 2020	3513	SAT	4176
04OCT20	-10 Days =	24 SEP 2020	3395	FRI	4446
04OCT20	-11 Days =	23 SEP 2020	3252	THU	4634
04OCT20	-12 Days =	22 SEP 2020	3108	WED	4304
04OCT20	-13 Days =	21 SEP 2020	3006	TUE	3868

S65EX1

			Average Flow over previous 14 days		Avg-Daily Flow
04OCT20	Today=	04 OCT 2020	950	MON	924
04OCT20	-1 Day =	03 OCT 2020	954	SUN	928
04OCT20	-2 Days =	02 OCT 2020	957	SAT	944

04OCT20	-3 Days =	01 OCT 2020	958	FRI	937
04OCT20	-4 Days =	30 SEP 2020	961	THU	954
04OCT20	-5 Days =	29 SEP 2020	961	WED	942
04OCT20	-6 Days =	28 SEP 2020	964	TUE	943
04OCT20	-7 Days =	27 SEP 2020	970	MON	952
04OCT20	-8 Days =	26 SEP 2020	978	SUN	958
04OCT20	-9 Days =	25 SEP 2020	985	SAT	963
04OCT20	-10 Days =	24 SEP 2020	994	FRI	944
04OCT20	-11 Days =	23 SEP 2020	1006	THU	962
04OCT20	-12 Days =	22 SEP 2020	1024	WED	971
04OCT20	-13 Days =	21 SEP 2020	1028	TUE	976

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)
04 OCT 2020	0	495	3812	10827
03 OCT 2020	0	-116	1049	5254
02 OCT 2020	0	350	569	4766
01 OCT 2020	-NR-	552	1661	7332
30 SEP 2020	0	544	2463	8560
29 SEP 2020	4	807	1855	8945
28 SEP 2020	6	1008	1238	4825
27 SEP 2020	5	795	1586	5045
26 SEP 2020	7	499	448	4231
25 SEP 2020	11	262	311	5008
24 SEP 2020	5	144	666	6611
23 SEP 2020	6	656	1777	8536
22 SEP 2020	5	691	1736	10814
21 SEP 2020	1	821	1774	-NR-

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)
04 OCT 2020	3	988	521	0	-125
03 OCT 2020	-0	957	580	0	-65
02 OCT 2020	120	967	591	0	-90
01 OCT 2020	362	969	597	0	-82
30 SEP 2020	369	973	670	0	-NR-
29 SEP 2020	354	933	764	0	-NR-
28 SEP 2020	375	944	790	466	-NR-
27 SEP 2020	331	939	767	0	-NR-
26 SEP 2020	145	921	578	0	-NR-
25 SEP 2020	43	923	577	0	-347
24 SEP 2020	27	925	546	0	-337
23 SEP 2020	-46	932	231	0	-327
22 SEP 2020	0	913	0	0	-398
21 SEP 2020	-NR-	983	128	0	-518

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
04 OCT 2020	3	4	905
03 OCT 2020	1	79	922
02 OCT 2020	3	-108	954
01 OCT 2020	0	119	-NR-
30 SEP 2020	3	127	466
29 SEP 2020	2	-273	1175

28 SEP 2020	7	-302	1204
27 SEP 2020	12	126	339
26 SEP 2020	6	-93	970
25 SEP 2020	11	-113	-NR-
24 SEP 2020	8	-54	315
23 SEP 2020	6	77	866
22 SEP 2020	5	65	944
21 SEP 2020	1	-132	-NR-

*** 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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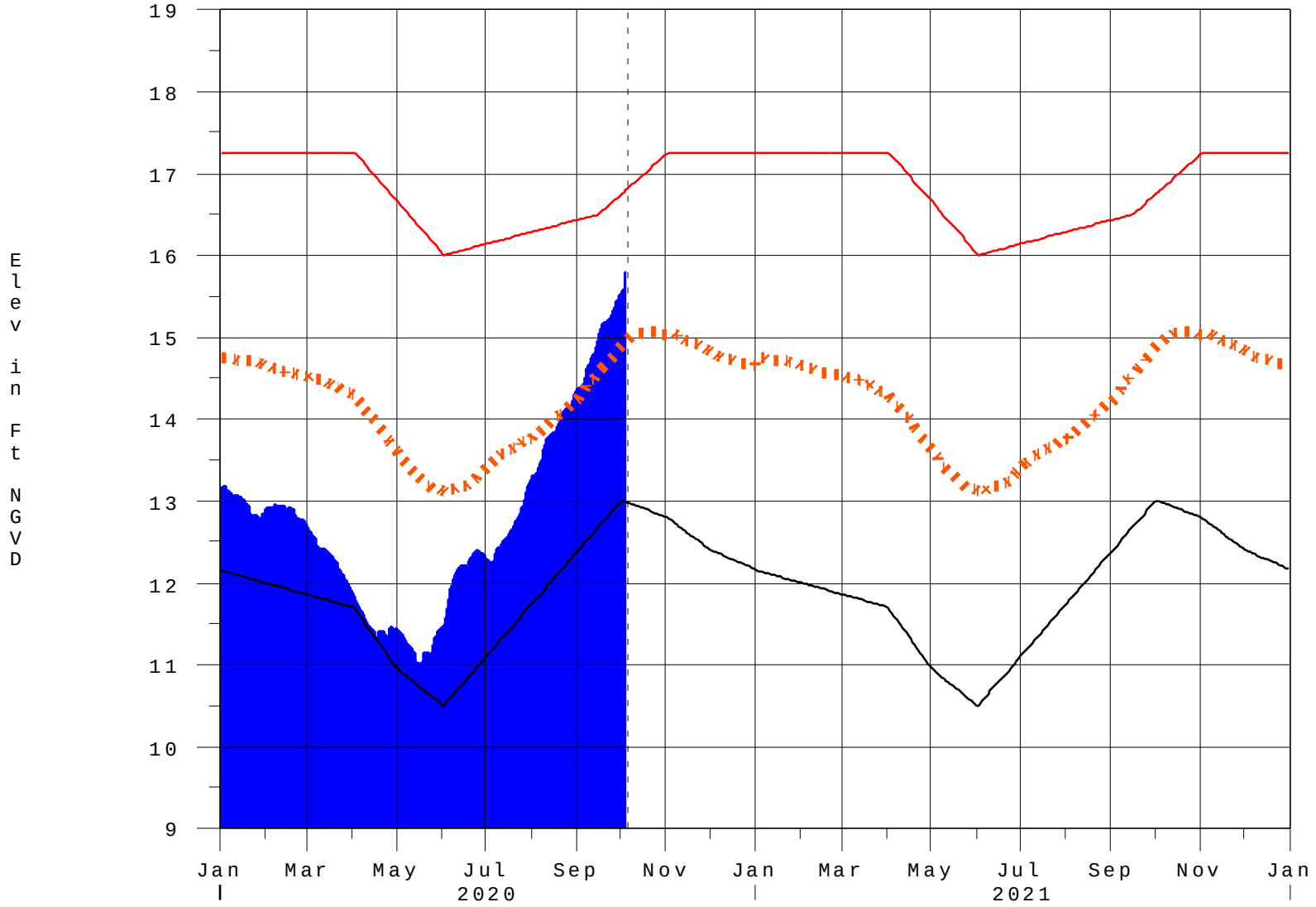
Report Generated 05OCT2020 @ 07:48 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

05OCT20 21:31:33



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