

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 09/28/2020 (ENSO Condition: La Niña)

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 Neutral years³ and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with La Nina ENSO 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 Neutral ENSO Years ³		Sub-sampling of AMO Warm + Neutral ENSO 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	2.01	Very Wet	1.74	Wet	1.73	Wet
Multi Seasonal (Sep-Apr)	N/A	N/A	2.20	Normal	1.59	Normal	1.48	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:

8938 cfs 14-day running average for Lake Okeechobee Net Inflow through 09/28/2020. According to the classification in Tributary Hydrologic Conditions table, this condition is Very Wet.

-1.48 for Palmer Drought Index on 09/26/2020.

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 09/28/2020:

Lake Okeechobee Stage: **15.43 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.69	
Operational Band	High sub-band	16.32	
	Intermediate sub-band	15.88	
	Low sub-band	14.40	← 15.43 ft
Base Flow sub-band		12.95	
Beneficial Use sub-band		12.94	
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 3000 cfs at S-79 and up to 1170 cfs at S-80.

LORS2008 Implementation on 09/28/2020 (ENSO Condition- La Nina):

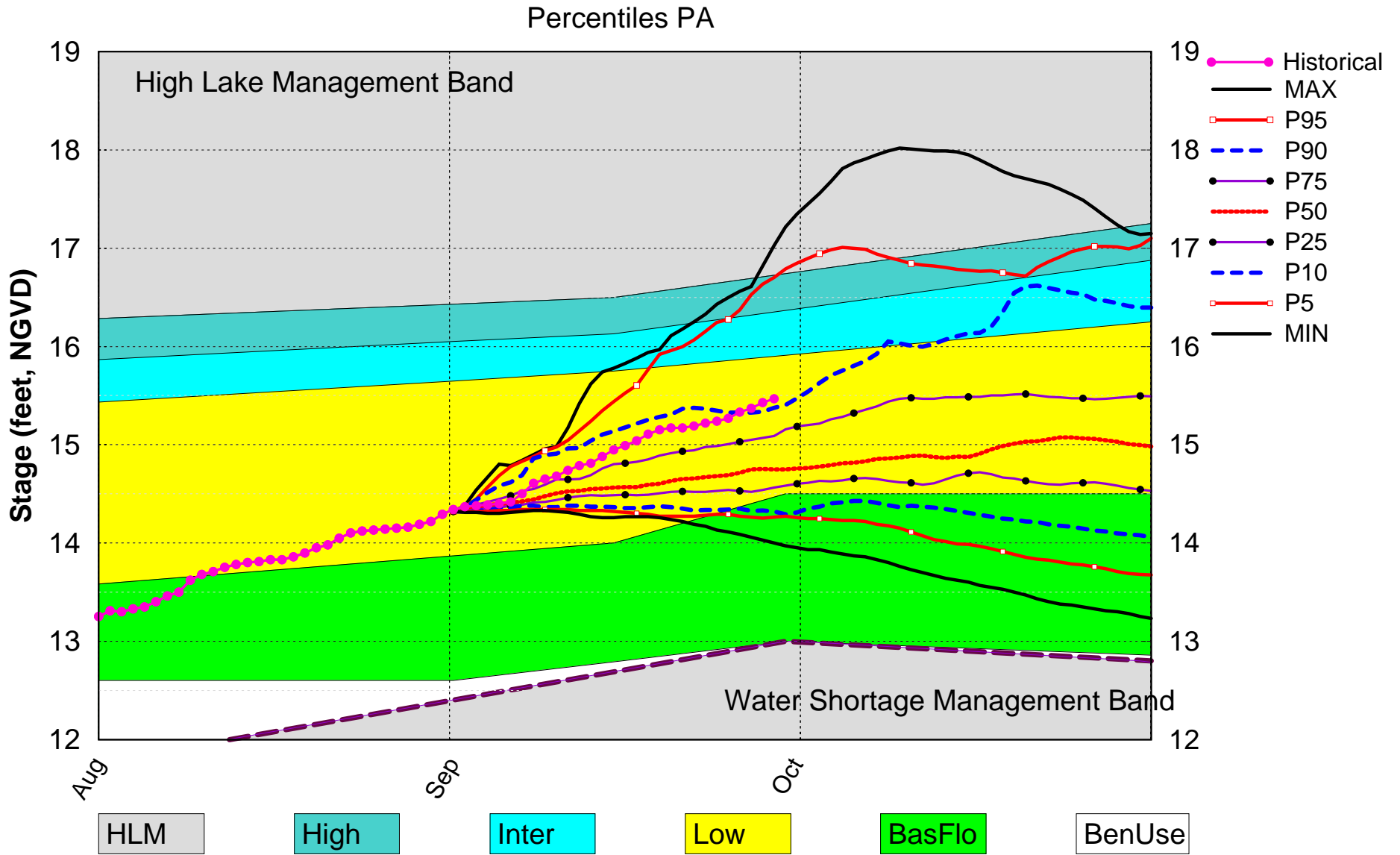
Status for week ending 9/28/2020:

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	-1.48 (Dry)	M
	CPC Precipitation Outlook	1 month: Above Normal	L
		3 months: Normal	L
	LOK Seasonal Net Inflow Outlook	1.74 ft	L
	ENSO Forecast (positive)	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	1.59 ft	M
	ENSO Forecast (positive)	Normal	
WCAs	WCA 1: 3 Station Average (Site 1-7, 1-8T and 1-9)	Above Line 1 (17.59 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (13.42 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (10.74 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.

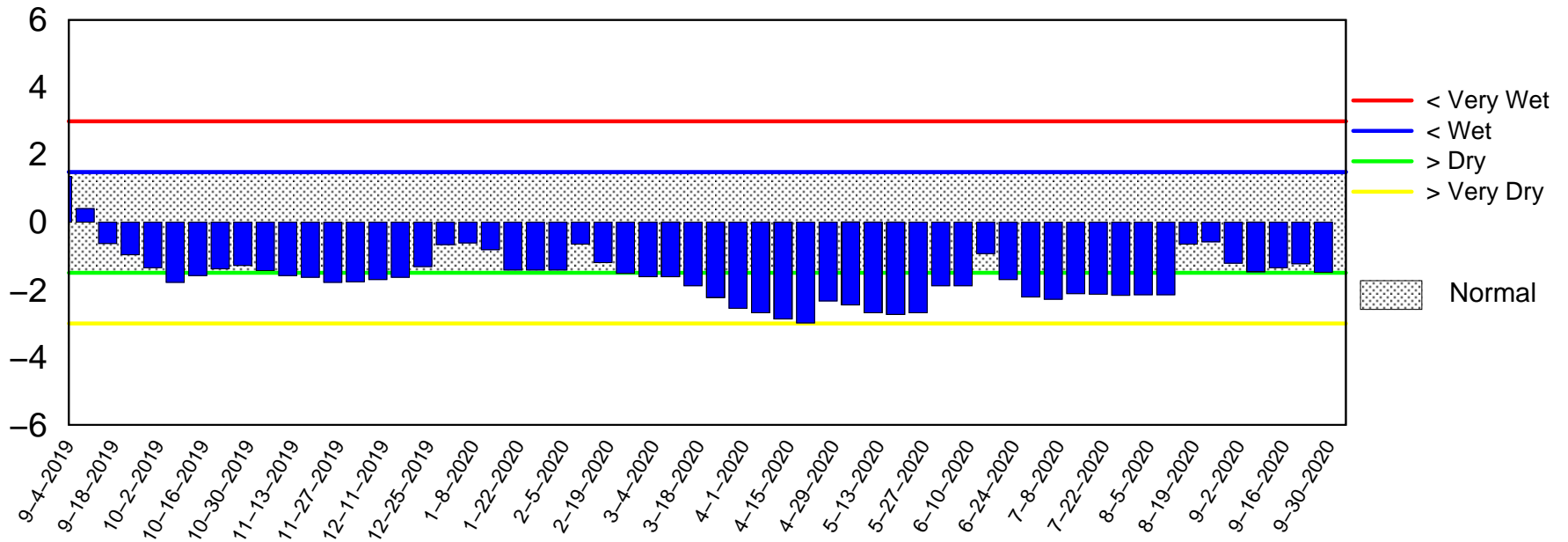
Lake Okeechobee SFWMM Sep 2020 Position Analysis



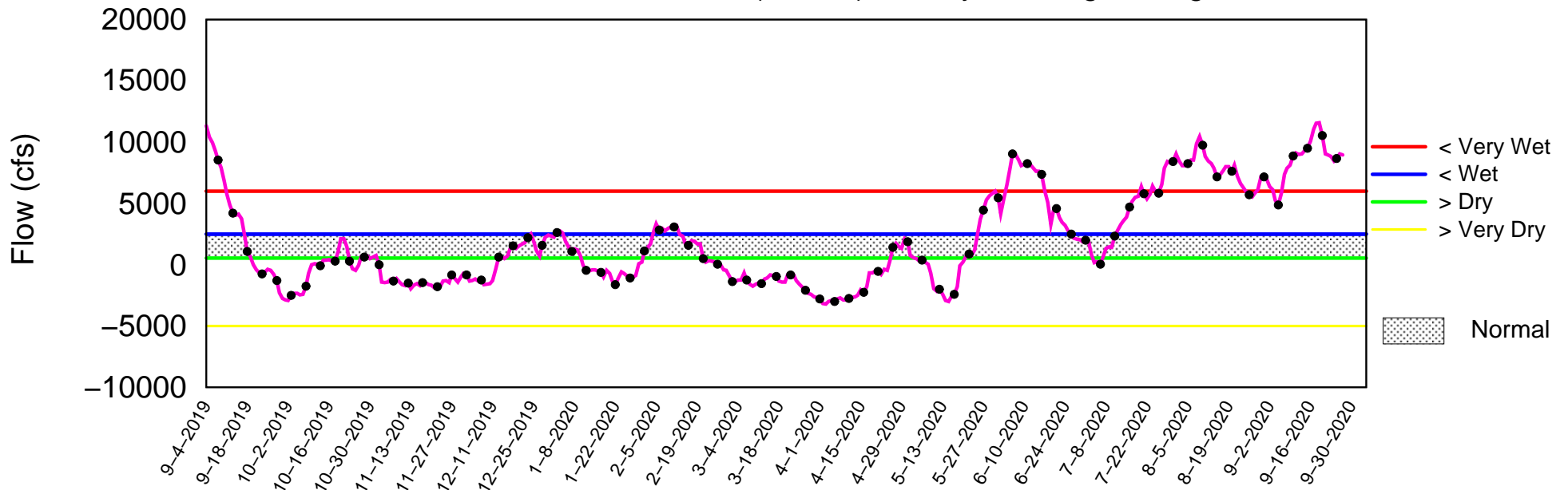
(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of September 28 2020

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

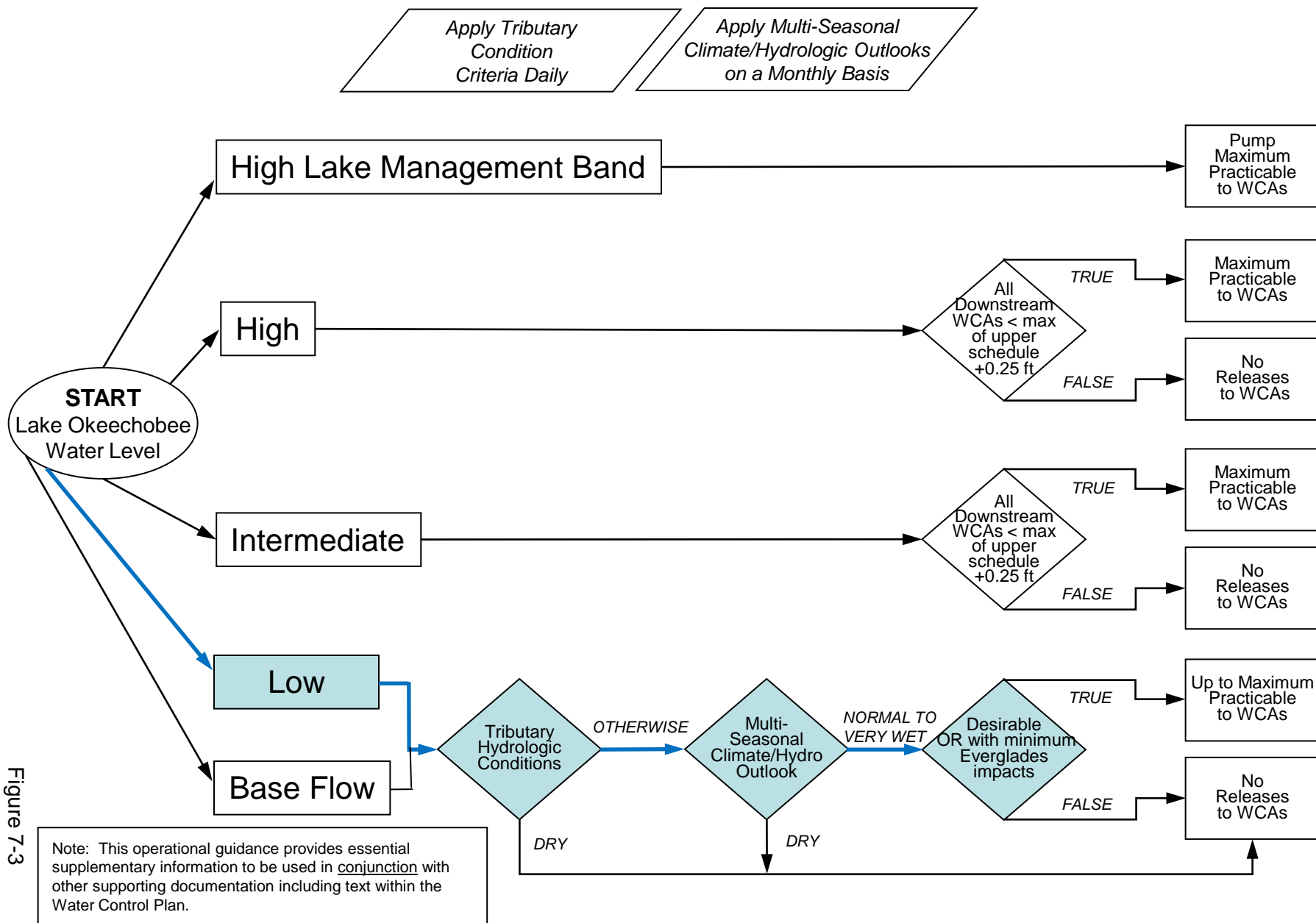


Figure 7-3

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

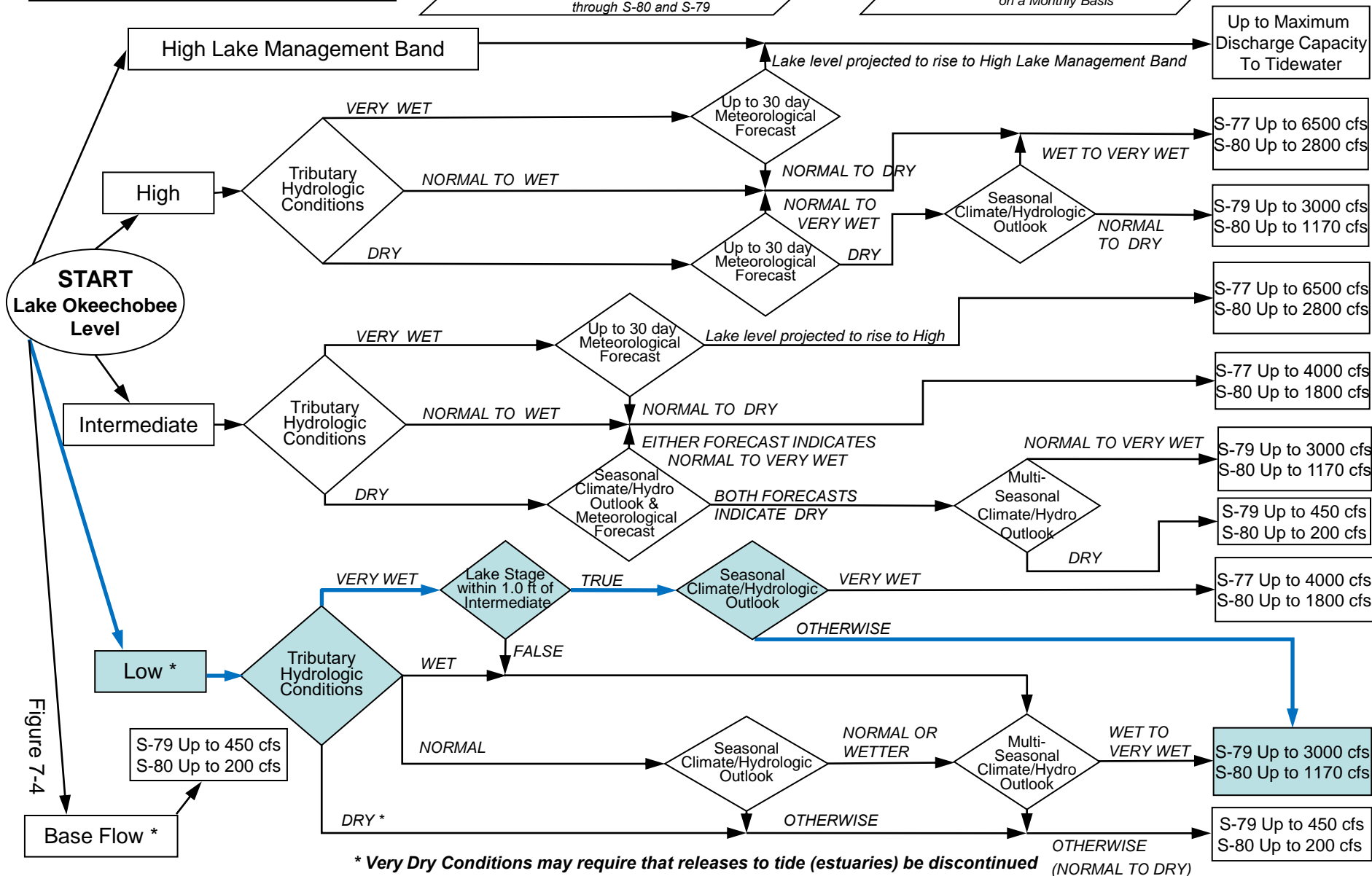
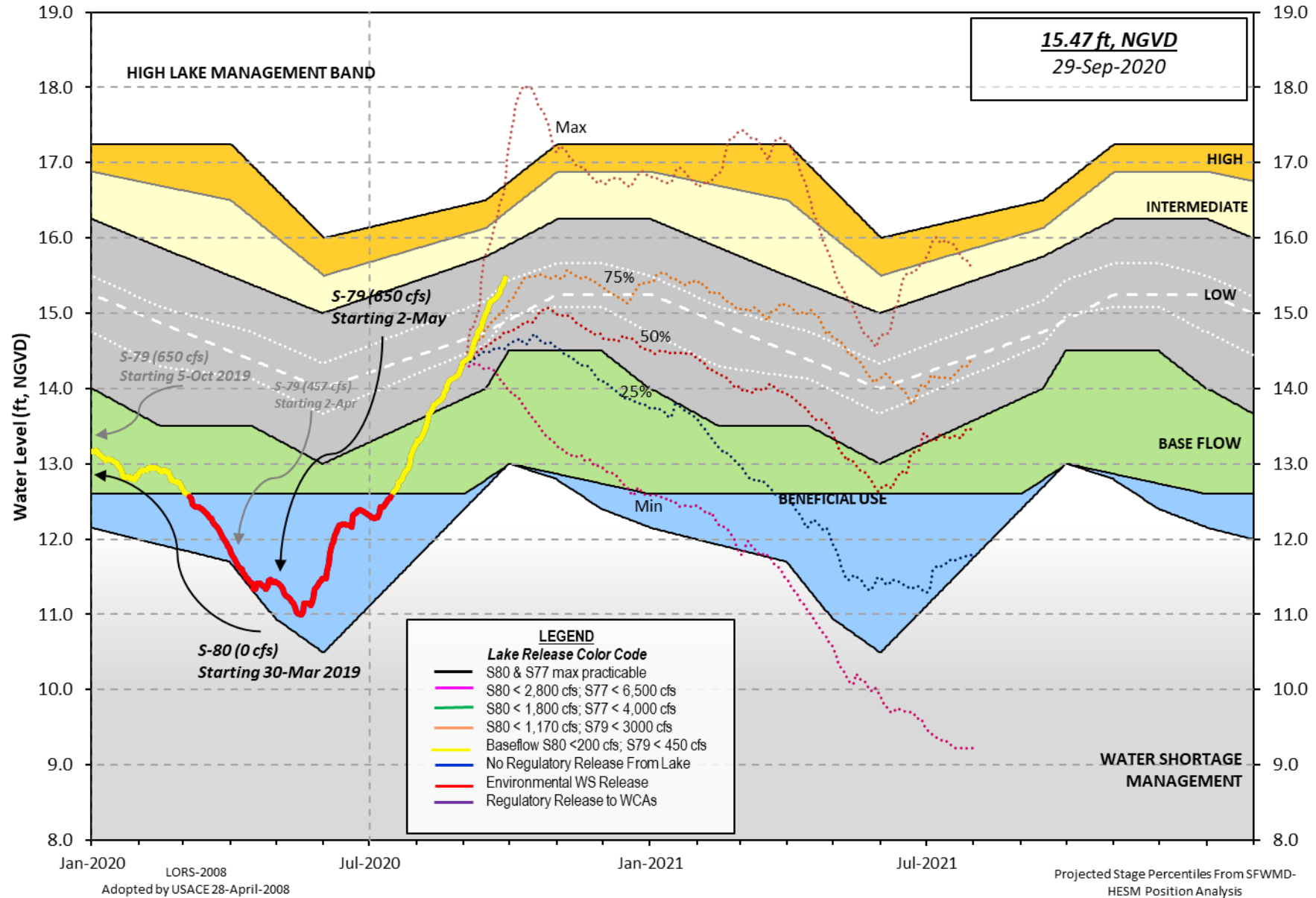


Figure 7-4

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 27 SEP 2020

Okeechobee Lake Regulation	Elevation	Last Year	2YRS Ago
	(ft-NGVD)	(ft-NGVD)	(ft-NGVD)
*Okeechobee Lake Elevation	15.43	13.66	14.63 (Official Elv)
Bottom of High Lake Mngmt=	16.69	Top of Water Short Mngmt=	12.94
Currently in Operational Management Band			

Simulated Average LORS2008 [1965-2000]	13.73
Difference from Average LORS2008	1.70

27SEP (1965-2007) Period of Record Average	14.83
Difference from POR Average	0.60

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 9.37'
 ++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 7.57'
 Bridge Clearance = 49.25'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.41	15.48	15.44	15.40	15.45	15.52	16.63	15.36

*Combination Okeechobee Avg-Daily Lake Average = 15.43
 (*See Note)

Okeechobee Inflows (cfs):

S65E	4009	S65EX1	952	Fisheating Cr	845
S154	175	S191	934	S135 Pumps	172
S84	1414	S133 Pumps	396	S2 Pumps	0
S84X	393	S127 Pumps	0	S3 Pumps	0
S71	554	S129 Pumps	0	S4 Pumps	0
S72	130	S131 Pumps	0	C5	0
Total Inflows:	9976				

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	2
S127 Culverts	0	S351	474	S308	6
S129 Culverts	0	S352	387		
S131 Culverts	0	L8 Canal Pt	-NR-		
Total Outflows:	869				

****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	0.23
Average Pan Evap x 0.75 Pan Coefficient = 0.09" = 0.01'			

Lake Average Precipitation using NEXRAD: = 0.16" = 0.01'

Evaporation - Precipitation: = -0.07" = -0.01'
 Evaporation - Precipitation using Lake Area of 730 square miles
 is equal to 1448 cfs into the lake.
 Lake Okeechobee (Change in Storage) Flow is 13008 cfs or 25800 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:	13.25	15.33	396	51	119	113	39	61	(cfs)		
S193:											
S191:	18.52	15.35	934	1.0	0.4	1.0					
S135 Pumps:	13.32	15.28	172	55	43	37	43		(cfs)		
S135 Culverts:			0	0.1	0.0						
North West Shore											
S65E:	21.14	15.34	4009	2.0	1.4	1.9	1.5	2.0	2.0		
S65EX1:	21.14	15.34	952								
S127 Pumps:	13.55	15.39	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.16	15.47	0	0	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	12.94	15.50	0	0	0				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		32.81	845								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	12.34	15.49	0	0	0	0			(cfs)		
S169:	14.95	12.39	245	0.0	0.0	0.0					
S310:	15.44		167								
S3 Pumps:	9.91	15.49	0	0	0	0			(cfs)		
S354:	15.49	9.91	0	0.0	0.0						
S2 Pumps:	9.73	-NR-	0	-NR-	-NR-	-NR-	-NR-		(cfs)		
S351:	-NR-	9.73	474	0.5	0.5	0.5					
S352:	15.54	9.82	387	0.6	0.6						
C10A:	-NR-	15.55		8.0	8.0	8.0	0.0	0.0			
L8 Canal PT			-NR-								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	9.73	-NR-	474	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-
S352:	9.82	15.54	387	-NR-	-NR-	-NR-	-NR-			
S354:	9.91	15.49	0	-NR-	-NR-	-NR-	-NR-			

Caloosahatchee River (S77, S78, S79)

S47B:	14.32	10.71		0.0	0.0
S47D:	10.74	10.92	0	0.0	

S77:

Spillway and Sector Preferred Flow:
 15.39 10.81 0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 2

S78:

Spillway and Sector Flow:
 10.87 2.72 783 1.5 0.0 0.0 0.5
 Flow Due to Lockages+: 12

S79:

Spillway and Sector Flow:
 3.06 1.82 2512 3.0 3.0 3.0 3.0 3.0 0.0 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:
 16.67 14.25 0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 6

S153: 18.76 14.03 136 0.0 0.2

S80:

Spillway and Sector Flow:
 14.27 1.65 151 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 20
 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 (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:	51.73	52.52	52.62	88	6
S78:	35.44	35.44	35.51	60	7
S79:	14.06	14.06	14.06	5	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:	16.53	16.53	18.51	163	3
S80:	0.24	0.30	0.51	78	1
Okeechobee Average	34.13	5.31	5.47		

(Sites S78, S79 and S80 not included)

Oke Nexrad Basin Avg 0.16 0.78 1.05

Okeechobee Lake Elevations	27 SEP 2020	15.43	Difference from 27SEP20
27SEP20 -1 Day =	26 SEP 2020	15.37	-0.06
27SEP20 -2 Days =	25 SEP 2020	15.33	-0.10
27SEP20 -3 Days =	24 SEP 2020	15.27	-0.16
27SEP20 -4 Days =	23 SEP 2020	15.24	-0.19
27SEP20 -5 Days =	22 SEP 2020	15.22	-0.21
27SEP20 -6 Days =	21 SEP 2020	15.19	-0.24
27SEP20 -7 Days =	20 SEP 2020	15.17	-0.26
27SEP20 -30 Days =	28 AUG 2020	14.19	-1.24
27SEP20 -1 Year =	27 SEP 2019	13.66	-1.77
27SEP20 -2 Year =	27 SEP 2018	14.63	-0.80

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
27SEP20 Today =	27 SEP 2020	8486	MON	-NR-
27SEP20 -1 Day =	26 SEP 2020	9001	SUN	-NR-
27SEP20 -2 Days =	25 SEP 2020	8664	SAT	13764
27SEP20 -3 Days =	24 SEP 2020	8437	FRI	7246
27SEP20 -4 Days =	23 SEP 2020	8827	THU	4923
27SEP20 -5 Days =	22 SEP 2020	8929	WED	6964
27SEP20 -6 Days =	21 SEP 2020	9037	TUE	4896
27SEP20 -7 Days =	20 SEP 2020	10351	MON	611
27SEP20 -8 Days =	19 SEP 2020	11546	SUN	4899
27SEP20 -9 Days =	18 SEP 2020	11509	SAT	9174
27SEP20 -10 Days =	17 SEP 2020	11009	FRI	15175
27SEP20 -11 Days =	16 SEP 2020	10079	THU	10789
27SEP20 -12 Days =	15 SEP 2020	9463	WED	8470
27SEP20 -13 Days =	14 SEP 2020	9330	TUE	14923

S65E				
Average Flow over previous 14 days				Avg-Daily Flow
27SEP20 Today=	27 SEP 2020	3720	MON	4244
27SEP20 -1 Day =	26 SEP 2020	3606	SUN	4278
27SEP20 -2 Days =	25 SEP 2020	3512	SAT	4162
27SEP20 -3 Days =	24 SEP 2020	3395	FRI	4452
27SEP20 -4 Days =	23 SEP 2020	3252	THU	4622
27SEP20 -5 Days =	22 SEP 2020	3108	WED	4306
27SEP20 -6 Days =	21 SEP 2020	3006	TUE	3868
27SEP20 -7 Days =	20 SEP 2020	2935	MON	3344
27SEP20 -8 Days =	19 SEP 2020	2905	SUN	3313
27SEP20 -9 Days =	18 SEP 2020	2877	SAT	3335
27SEP20 -10 Days =	17 SEP 2020	2860	FRI	3260
27SEP20 -11 Days =	16 SEP 2020	2850	THU	3310
27SEP20 -12 Days =	15 SEP 2020	2835	WED	2869
27SEP20 -13 Days =	14 SEP 2020	2862	TUE	2712

S65EX1				
Average Flow over previous 14 days				Avg-Daily Flow
27SEP20 Today=	27 SEP 2020	970	MON	952
27SEP20 -1 Day =	26 SEP 2020	978	SUN	958
27SEP20 -2 Days =	25 SEP 2020	985	SAT	963

27SEP20	-3 Days =	24 SEP 2020	994	FRI		944
27SEP20	-4 Days =	23 SEP 2020	1006	THU		962
27SEP20	-5 Days =	22 SEP 2020	1024	WED		971
27SEP20	-6 Days =	21 SEP 2020	1028	TUE		976
27SEP20	-7 Days =	20 SEP 2020	1036	MON		977
27SEP20	-8 Days =	19 SEP 2020	1062	SUN		973
27SEP20	-9 Days =	18 SEP 2020	1088	SAT		963
27SEP20	-10 Days =	17 SEP 2020	1129	FRI		972
27SEP20	-11 Days =	16 SEP 2020	1169	THU		964
27SEP20	-12 Days =	15 SEP 2020	1210	WED		978
27SEP20	-13 Days =	14 SEP 2020	1246	TUE		1020

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)
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-
20 SEP 2020	7	946	2054	7771
19 SEP 2020	10	884	2182	7808
18 SEP 2020	5	948	2427	6973
17 SEP 2020	6	943	2682	8979
16 SEP 2020	4	807	2393	10389
15 SEP 2020	8	720	2018	10562
14 SEP 2020	3	594	1754	11742

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)
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
20 SEP 2020	-NR-	1108	102	0	-214
19 SEP 2020	-440	1085	32	0	-244
18 SEP 2020	-373	728	268	0	-228
17 SEP 2020	-269	0	0	0	-314
16 SEP 2020	-270	0	0	0	-331
15 SEP 2020	-177	0	0	0	-526
14 SEP 2020	-183	0	0	0	-643

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
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-
20 SEP 2020	3	16	-NR-
19 SEP 2020	7	38	-NR-
18 SEP 2020	4	-90	-NR-
17 SEP 2020	4	-116	730
16 SEP 2020	2	-149	781
15 SEP 2020	5	-70	1199
14 SEP 2020	4	-NR-	2310

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

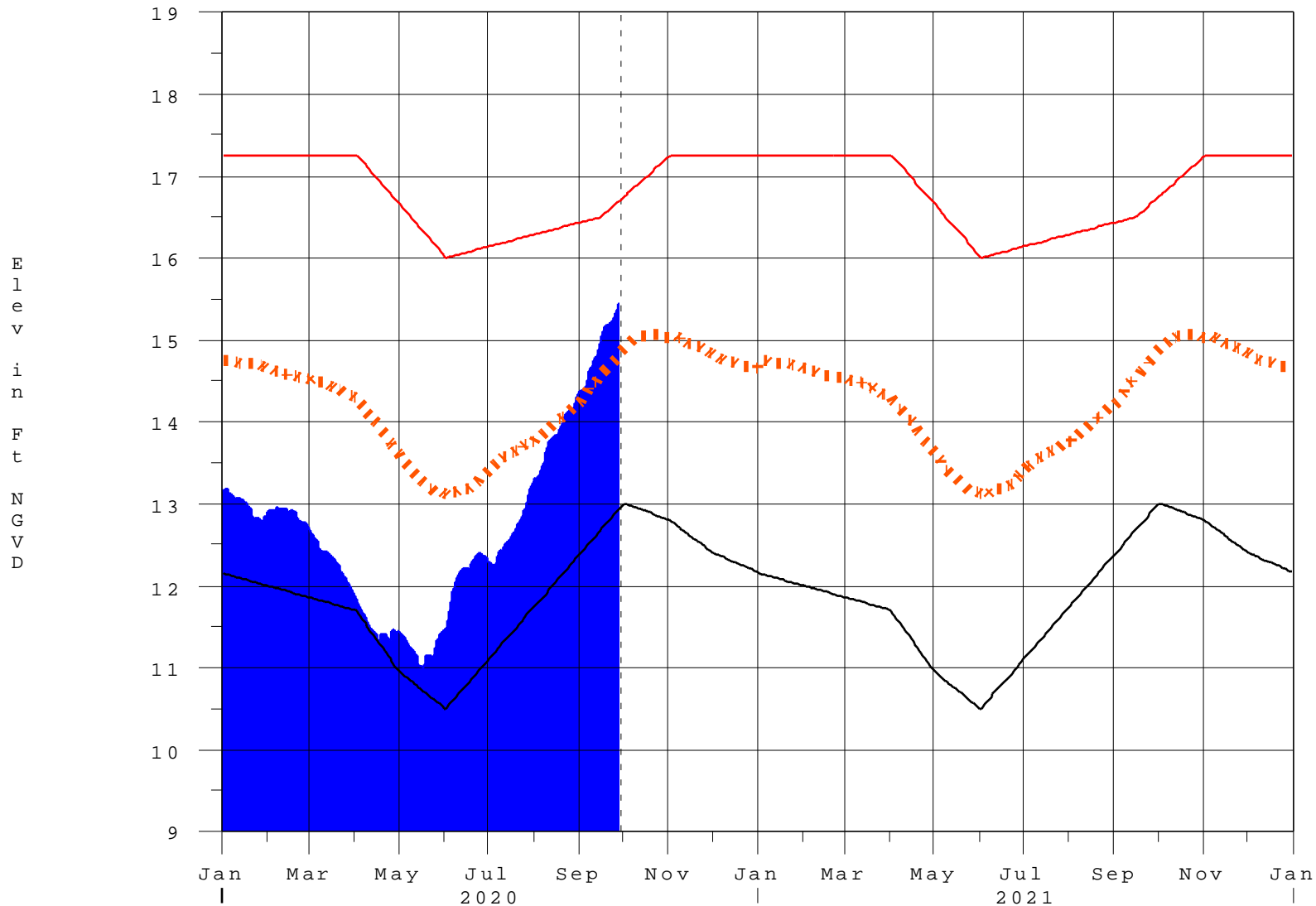
(I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

* 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 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 28SEP2020 @ 16:40 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

28SEP20 21:45:49



- 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 \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