

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 2/8/2021 (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 La Nina 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 La Nina ENSO Years ³		Sub-sampling of AMO Warm + La Nina ENSO Years ⁴	
	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>
Current (Feb-July)	N/A	N/A	0.73	Dry	0.35	Dry	0.52	Dry
Multi Seasonal (Feb-Oct)	N/A	N/A	2.81	Wet	2.19	Normal	2.13	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:

-1277 cfs 14-day running average for Lake Okeechobee Net Inflow through 2/7/2021.
According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

-0.43 for Palmer Drought Index on 2/6/2021.
According to the classification in Tributary Hydrologic Conditions table, this condition is Normal.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 2/8/2021:

Lake Okeechobee Stage: **15.39 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.25	
Operational Band	High sub-band	16.72	
	Intermediate sub-band	15.94	
	Low sub-band	13.59	← 15.39 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.96	
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 2/8/2021 (ENSO Condition- La Nina):

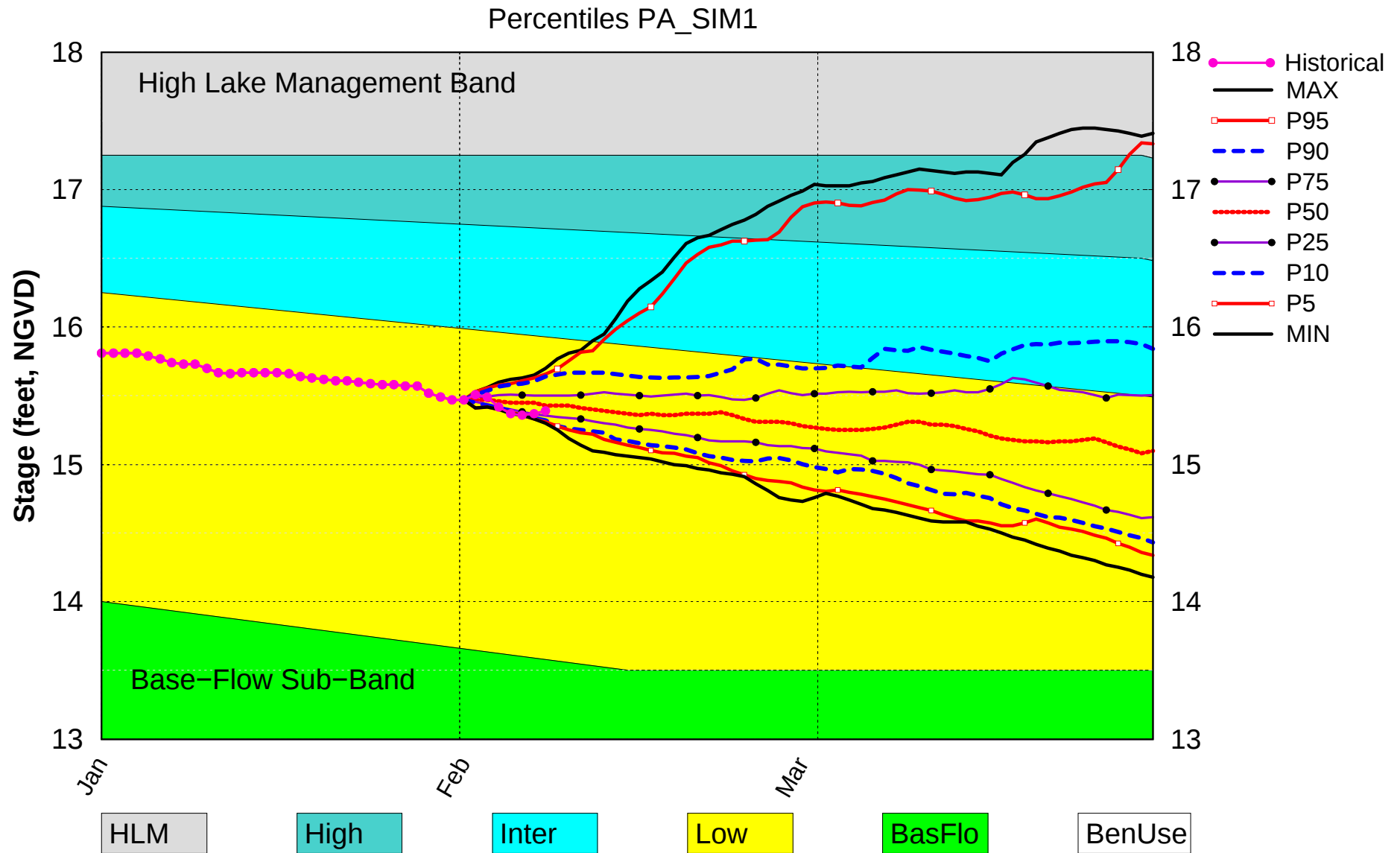
Status for week ending 2/8/2021:

Water Supply Risk Evaluation

Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-band	M
	Palmer Drought Index for LOK Tributary Conditions	-0.43 (Normal to Extremely Wet)	L
	CPC Precipitation Outlook	1 month: Below Normal	M
		3 months: Below Normal	H
	LOK Seasonal Net Inflow Outlook	0.35 ft	M
	ENSO Forecast	Dry	
	LOK Multi-Seasonal Net Inflow Outlook	2.19 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Site 1-7, 1-8T and 1-9)	Above Line 1 (16.93 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (12.67 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (10.53 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.

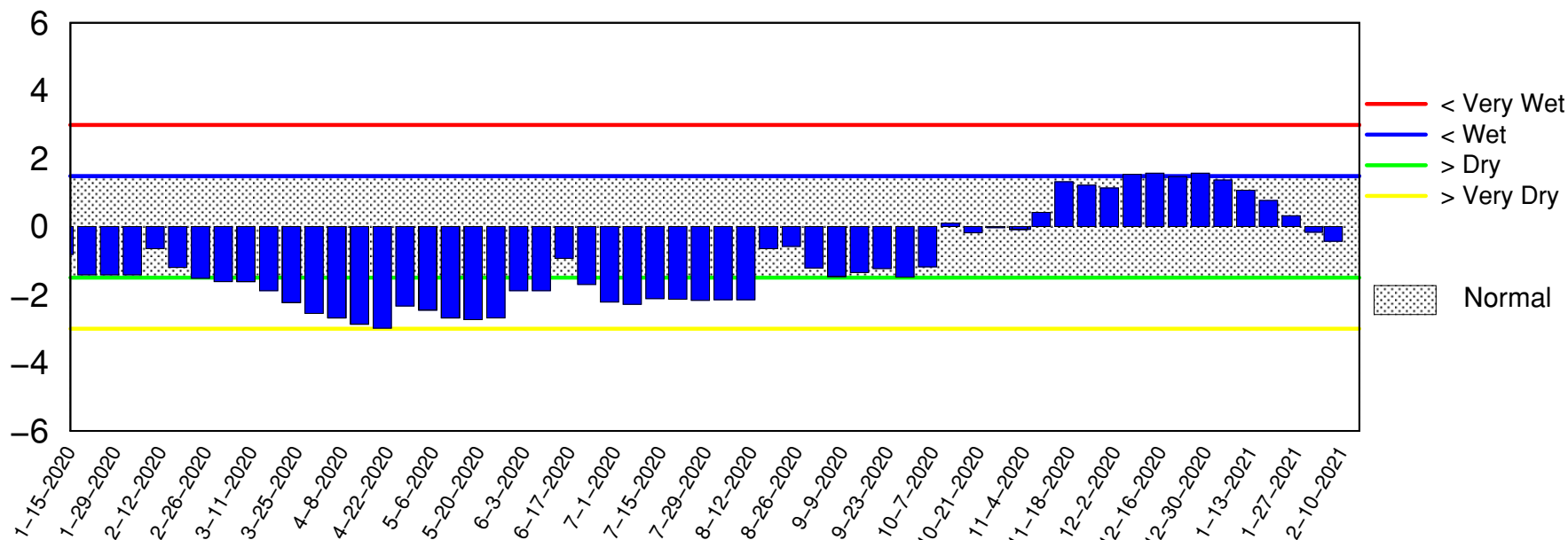
Lake Okeechobee SFWMM Feb 2021 Position Analysis



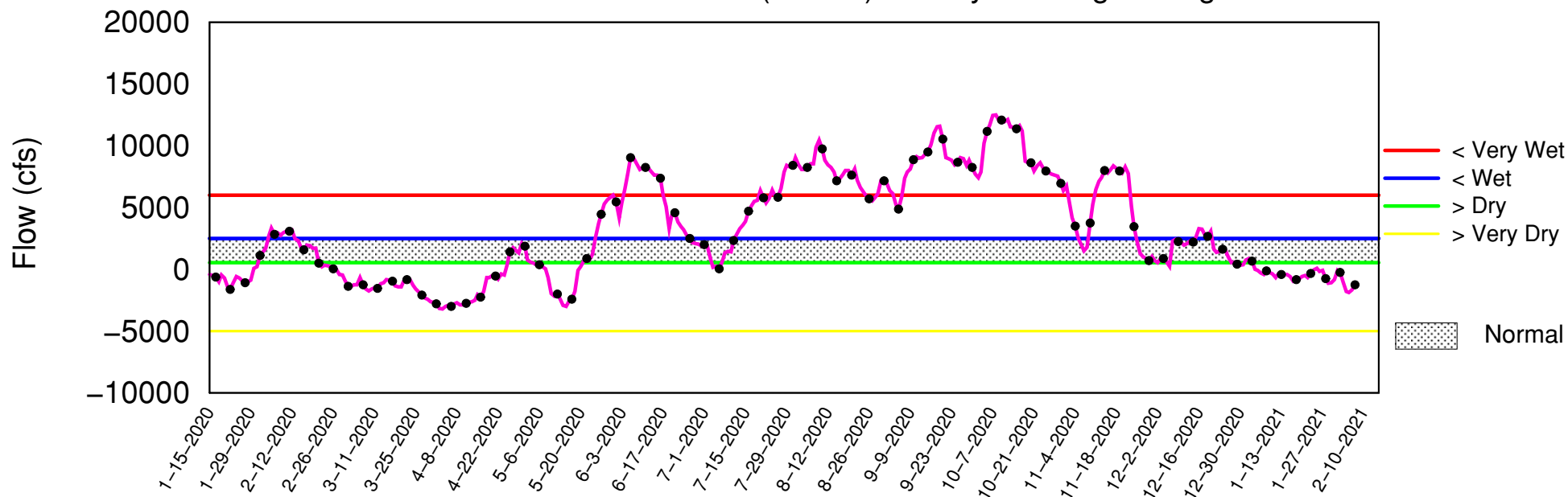
(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of February 8 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

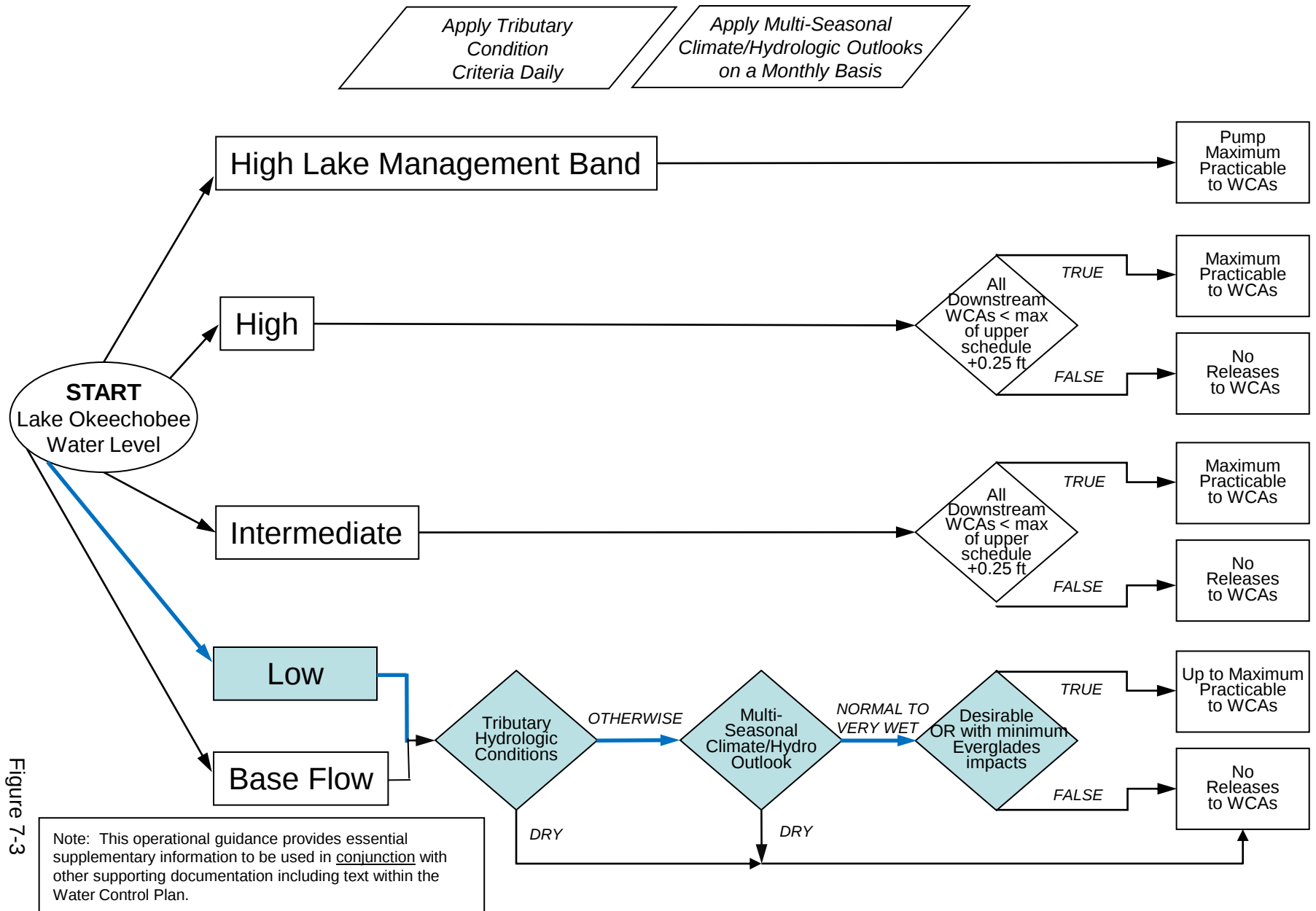
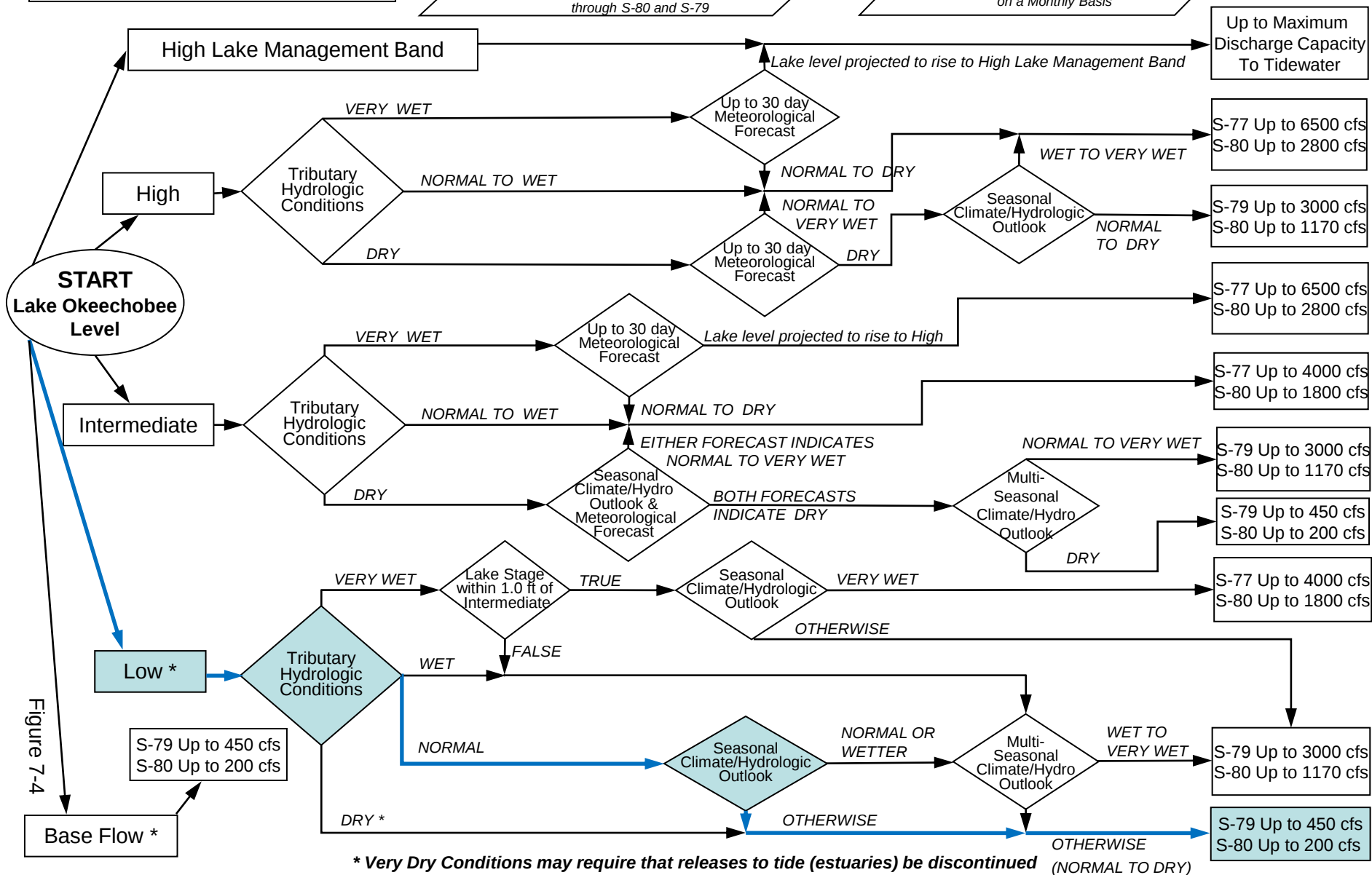


Figure 7-3

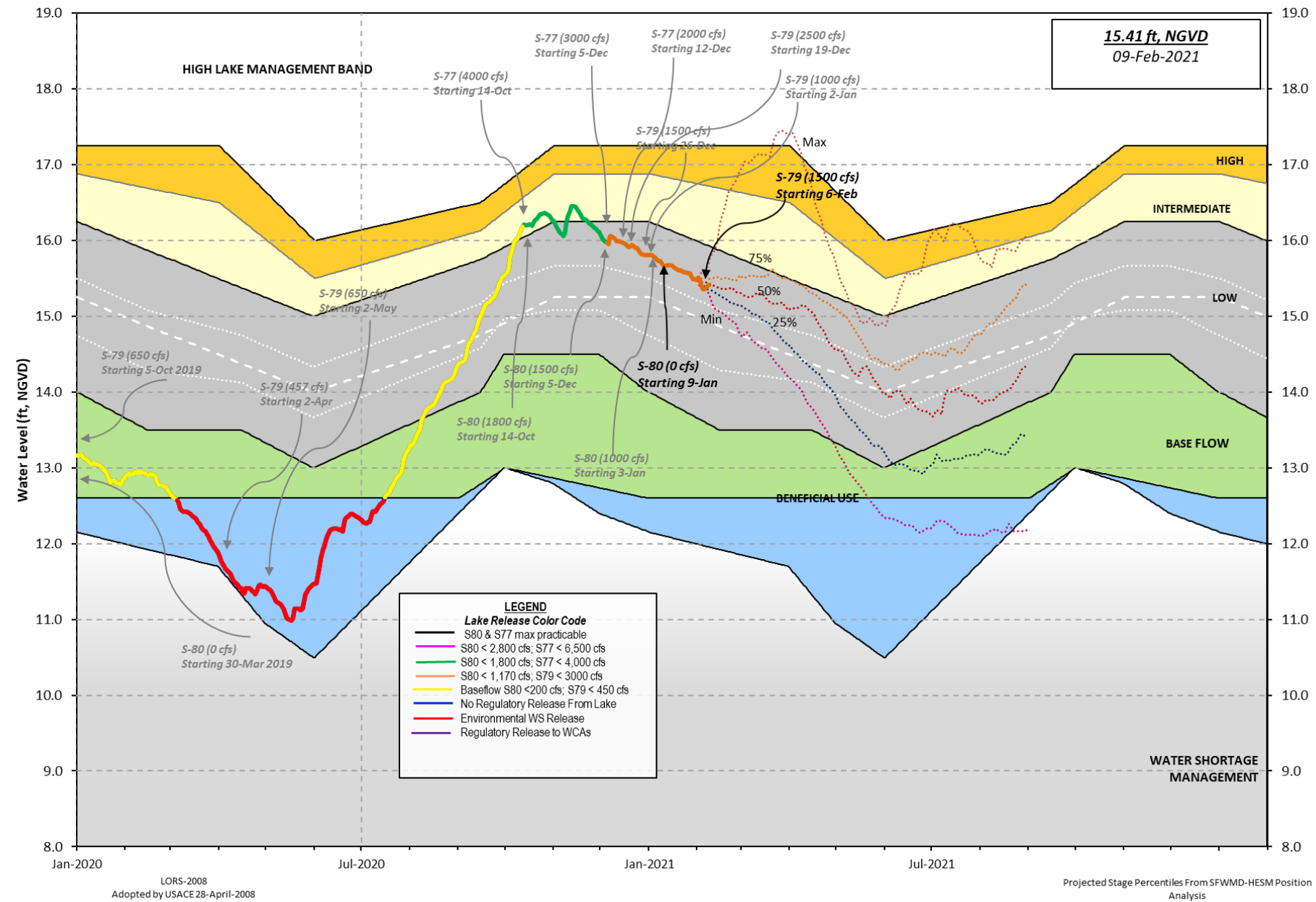
Part D: Establish Allowable Lake Okeechobee Releases to Tide (Estuaries)

*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 07 FEB 2021

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	15.39	12.95	12.73 (Official Elv)
Bottom of High Lake Mngmt=	17.25	Top of Water Short Mngmt=	11.96
Currently in Operational Management Band			

Simulated Average LORS2008 [1965-2000]	13.46
Difference from Average LORS2008	1.93

07FEB (1965-2007) Period of Record Average	14.61
Difference from POR Average	0.78

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ♦ 9.33'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ♦ 7.53'
Bridge Clearance = 49.31'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
15.37	15.41	15.37	15.37	15.35	15.50	15.41	15.33

*Combination Okeechobee Avg-Daily Lake Average = 15.39
(*See Note)

Okeechobee Inflows (cfs):

S65E	956	S65EX1	0	Fisheating Cr	10
S154	0	S191	0	S135 Pumps	0
S84	17	S133 Pumps	0	S2 Pumps	0
S84X	13	S127 Pumps	0	S3 Pumps	0
S71	170	S129 Pumps	0	S4 Pumps	0
S72	3	S131 Pumps	0	C5	0
Total Inflows:	1168				

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	207
S127 Culverts	0	S351	0	S308	2
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	170		
Total Outflows:	379				

****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	0.01
Average Pan Evap x 0.75 Pan Coefficient = 0.00" = 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 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:	13.86	15.36	0	0	0	0	0	0	0	(cfs)	
S193:											
S191:	19.16	15.36	0	0.0	0.0	0.0					
S135 Pumps:	13.55	15.16	0	0	0	0	0			(cfs)	
S135 Culverts:			0	0.1	0.0						
North West Shore											
S65E:	20.94	15.38	956	0.4	0.7	0.4	0.4	0.6	0.4		
S65EX1:	20.94	15.38	0								
S127 Pumps:	13.61	15.25	0	0	0	0	0	0		(cfs)	
S127 Culvert:			0	0.0							
S129 Pumps:	13.08	15.39	0	0	0	0				(cfs)	
S129 Culvert:			0	0.0							
S131 Pumps:	13.12	15.41	0	0	0					(cfs)	
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		28.57	10								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.70	15.46	0	0	0	0				(cfs)	
S169:	15.35	11.74	166	0.0	0.0	0.0					
S310:	15.45		151								
S3 Pumps:	10.42	15.45	0	0	0	0				(cfs)	
S354:	15.45	10.42	0	0.0	0.0						
S2 Pumps:	10.51	-NR-	0	-NR-	-NR-	-NR-	-NR-			(cfs)	
S351:	-NR-	10.51	0	0.0	0.0	0.0					
S352:	15.53	10.55	0	0.0	0.0						
C10A:	-NR-	14.40		8.0	8.0	8.0	0.0	0.0			
L8 Canal PT		14.39	170								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.51	-NR-	0	-NR--NR--NR--NR--NR--NR-
S352:	10.55	15.53	0	-NR--NR--NR--NR-
S354:	10.42	15.45	0	-NR--NR--NR--NR-

Caloosahatchee River (S77, S78, S79)

S47B:	14.20	12.68		1.0	1.5
S47D:	12.74	11.19	66	1.0	

S77:

Spillway and Sector Preferred Flow:

15.26 11.13 202 0.5 0.5 0.5 0.0
Flow Due to Lockages+: 5

S78:

Spillway and Sector Flow:

11.13 2.80 755 2.0 0.0 0.0 1.0
Flow Due to Lockages+: 5

S79:

Spillway and Sector Flow:

2.98 2.08 1300 0.5 1.0 2.0 1.0 0.0 2.0 0.0 0.0
Flow Due to Lockages+: 2
Percent of flow from S77 16%
Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:

15.42 14.19 0 0.0 0.0 0.0 0.0
Flow Due to Lockages+: 2

S153: 19.03 13.94 0 0.0 0.0

S80:

Spillway and Sector Flow:

14.04 0.11 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) ****

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

	1-Day	3-Day	7-Day	Direction	Speed
Daily Precipitation Totals	(inches)	(inches)	(inches)	(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:	0.01	0.03	0.19	21	8
S78:	0.21	0.21	0.23	32	2
S79:	0.30	0.30	0.30	293	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:	0.09	0.09	0.39	69	8
S80:	0.34	0.53	0.63	29	4
Okeechobee Average	0.05	0.01	0.04		

(Sites S78, S79 and S80 not included)

Oke Nexrad Basin Avg -NR- 0.00 0.00

Okeechobee Lake Elevations	07 FEB 2021	15.39	Difference from 07FEB21
07FEB21 -1 Day =	06 FEB 2021	15.37	-0.02
07FEB21 -2 Days =	05 FEB 2021	15.36	-0.03
07FEB21 -3 Days =	04 FEB 2021	15.37	-0.02
07FEB21 -4 Days =	03 FEB 2021	15.42	0.03
07FEB21 -5 Days =	02 FEB 2021	15.49	0.10
07FEB21 -6 Days =	01 FEB 2021	15.51	0.12
07FEB21 -7 Days =	31 JAN 2021	15.47	0.08
07FEB21 -30 Days =	08 JAN 2021	15.73	0.34
07FEB21 -1 Year =	07 FEB 2020	12.95	-2.44
07FEB21 -2 Year =	07 FEB 2019	12.73	-2.66

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
07FEB21 Today =	07 FEB 2021	-1277	MON		4708
07FEB21 -1 Day =	06 FEB 2021	-1663	SUN		2508
07FEB21 -2 Days =	05 FEB 2021	-1856	SAT		-1271
07FEB21 -3 Days =	04 FEB 2021	-1768	FRI		-8432
07FEB21 -4 Days =	03 FEB 2021	-1016	THU		-11806
07FEB21 -5 Days =	02 FEB 2021	-204	WED		-2773
07FEB21 -6 Days =	01 FEB 2021	-54	TUE		10097
07FEB21 -7 Days =	31 JAN 2021	-848	MON		1981
07FEB21 -8 Days =	30 JAN 2021	-1217	SUN		-2703
07FEB21 -9 Days =	29 JAN 2021	-1103	SAT		-4388
07FEB21 -10 Days =	28 JAN 2021	-716	FRI		-8744
07FEB21 -11 Days =	27 JAN 2021	-43	THU		1676
07FEB21 -12 Days =	26 JAN 2021	-113	WED		-168
07FEB21 -13 Days =	25 JAN 2021	131	TUE		1440

S65E					
Average Flow over previous 14 days					Avg-Daily Flow
07FEB21 Today=	07 FEB 2021	998	MON		1080
07FEB21 -1 Day =	06 FEB 2021	925	SUN		1034
07FEB21 -2 Days =	05 FEB 2021	852	SAT		1126
07FEB21 -3 Days =	04 FEB 2021	777	FRI		993
07FEB21 -4 Days =	03 FEB 2021	754	THU		1048
07FEB21 -5 Days =	02 FEB 2021	742	WED		1010
07FEB21 -6 Days =	01 FEB 2021	740	TUE		735
07FEB21 -7 Days =	31 JAN 2021	741	MON		925
07FEB21 -8 Days =	30 JAN 2021	744	SUN		932
07FEB21 -9 Days =	29 JAN 2021	734	SAT		972
07FEB21 -10 Days =	28 JAN 2021	721	FRI		1020
07FEB21 -11 Days =	27 JAN 2021	704	THU		1035
07FEB21 -12 Days =	26 JAN 2021	686	WED		1070
07FEB21 -13 Days =	25 JAN 2021	665	TUE		988

S65EX1					
Average Flow over previous 14 days					Avg-Daily Flow
07FEB21 Today=	07 FEB 2021	26	MON		0
07FEB21 -1 Day =	06 FEB 2021	89	SUN		0
07FEB21 -2 Days =	05 FEB 2021	158	SAT		0

07FEB21	-3 Days =	04 FEB 2021	220	FRI		0
07FEB21	-4 Days =	03 FEB 2021	232	THU		0
07FEB21	-5 Days =	02 FEB 2021	232	WED		0
07FEB21	-6 Days =	01 FEB 2021	232	TUE		365
07FEB21	-7 Days =	31 JAN 2021	206	MON		0
07FEB21	-8 Days =	30 JAN 2021	206	SUN		0
07FEB21	-9 Days =	29 JAN 2021	206	SAT		0
07FEB21	-10 Days =	28 JAN 2021	206	FRI		0
07FEB21	-11 Days =	27 JAN 2021	206	THU		0
07FEB21	-12 Days =	26 JAN 2021	206	WED		0
07FEB21	-13 Days =	25 JAN 2021	206	TUE		0

Lake Okeechobee Outlets Last 14 Days

	S-77	Below S-77	S-78	S-79	
	Discharge	Discharge	Discharge	Discharge	
	(ALL DAY)	(ALL-DAY)	(ALL DAY)	(ALL DAY)	
DATE	(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)	
07 FEB 2021	415	1099	1534	2603	
06 FEB 2021	330	1049	743	1558	
05 FEB 2021	-NR-	1673	919	2100	
04 FEB 2021	2586	2817	2065	1375	
03 FEB 2021	1567	1838	1573	1255	
02 FEB 2021	446	919	1199	1815	
01 FEB 2021	437	817	1200	1949	
31 JAN 2021	-NR-	1016	1247	2283	
30 JAN 2021	-NR-	1108	1085	1750	
29 JAN 2021	1307	1911	859	1977	
28 JAN 2021	1674	1964	1275	2167	
27 JAN 2021	-NR-	1211	1276	2150	
26 JAN 2021	-NR-	1395	1287	2162	
25 JAN 2021	-NR-	1040	1298	2211	

	S-310	S-351	S-352	S-354	L8 Canal Pt
	Discharge	Discharge	Discharge	Discharge	Discharge
	(ALL DAY)	(ALL DAY)	(ALL DAY)	(ALL DAY)	(ALL DAY)
DATE	(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)	(AC-FT)
07 FEB 2021	299	0	0	0	337
06 FEB 2021	439	0	0	0	356
05 FEB 2021	391	0	161	0	325
04 FEB 2021	521	516	331	757	232
03 FEB 2021	512	2062	923	1603	320
02 FEB 2021	477	1288	290	609	472
01 FEB 2021	341	1003	215	351	474
31 JAN 2021	446	1645	515	730	444
30 JAN 2021	493	1166	186	527	478
29 JAN 2021	551	1204	413	770	502
28 JAN 2021	386	1181	659	435	220
27 JAN 2021	173	1136	240	334	-1
26 JAN 2021	167	1385	550	426	-0
25 JAN 2021	211	788	301	179	10

	S-308	Below S-308	S-80
	Discharge	Discharge	Discharge
	(ALL DAY)	(ALL-DAY)	(ALL-DAY)
DATE	(AC-FT)	(AC-FT)	(AC-FT)
07 FEB 2021	5	-333	-NR-
06 FEB 2021	7	-245	-NR-
05 FEB 2021	137	-141	-NR-
04 FEB 2021	340	257	-NR-
03 FEB 2021	221	242	-NR-
02 FEB 2021	3	322	26

01 FEB 2021	331	312	26
31 JAN 2021	12	-230	50
30 JAN 2021	13	131	42
29 JAN 2021	13	27	50
28 JAN 2021	15	-129	48
27 JAN 2021	11	-210	42
26 JAN 2021	8	-104	34
25 JAN 2021	4	34	34

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

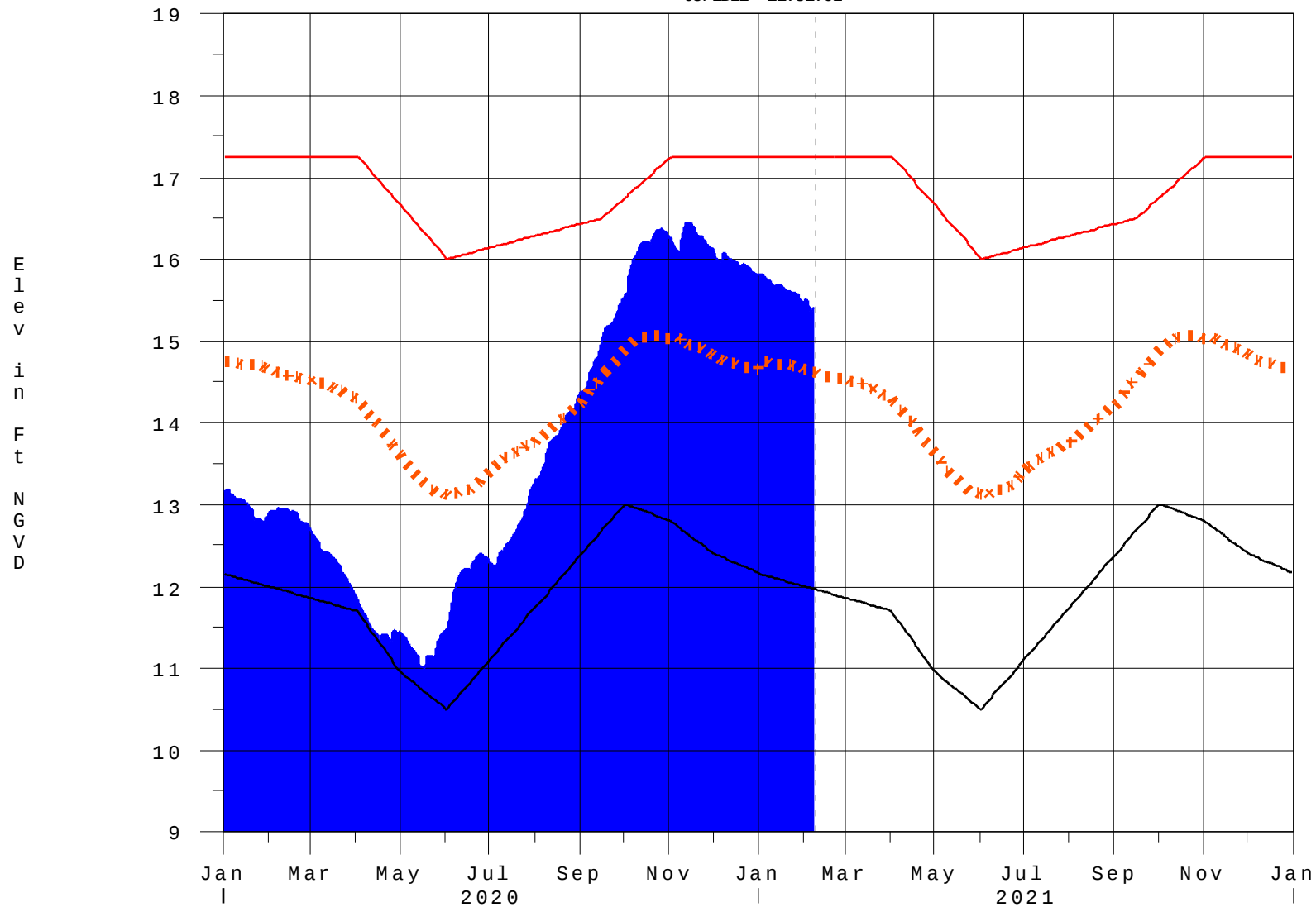
(I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

* 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 08FEB2021 @ 08:15 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

08FEB21 11:31:02



- 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