Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 03/07/2022 (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 (Mar-Aug)	N/A	N/A	1.28	Normal	0.84	Normal	0.93	Normal
Multi Seasonal (Mar-Oct)	N/A	N/A	2.73	Wet	2.21	Normal	2.18	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:

-2828 cfs 14-day running average for Lake Okeechobee Net Inflow through 03/07/2022.
According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

-2.61 for Palmer Drought Index on 03/07/2022.
According to the classification in Tributary Hydrologic Conditions table, this condition is Extremely Dry.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 03/07/2022:

Lake Okeechobee Stage: **14.32 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.25	
Operational Band	High sub-band	16.61	
	Intermediate sub-band	15.71	
	Low sub-band	13.50	← 14.32 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		11.83	
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 03/07/2022 (ENSO Condition- La Nina Watch):

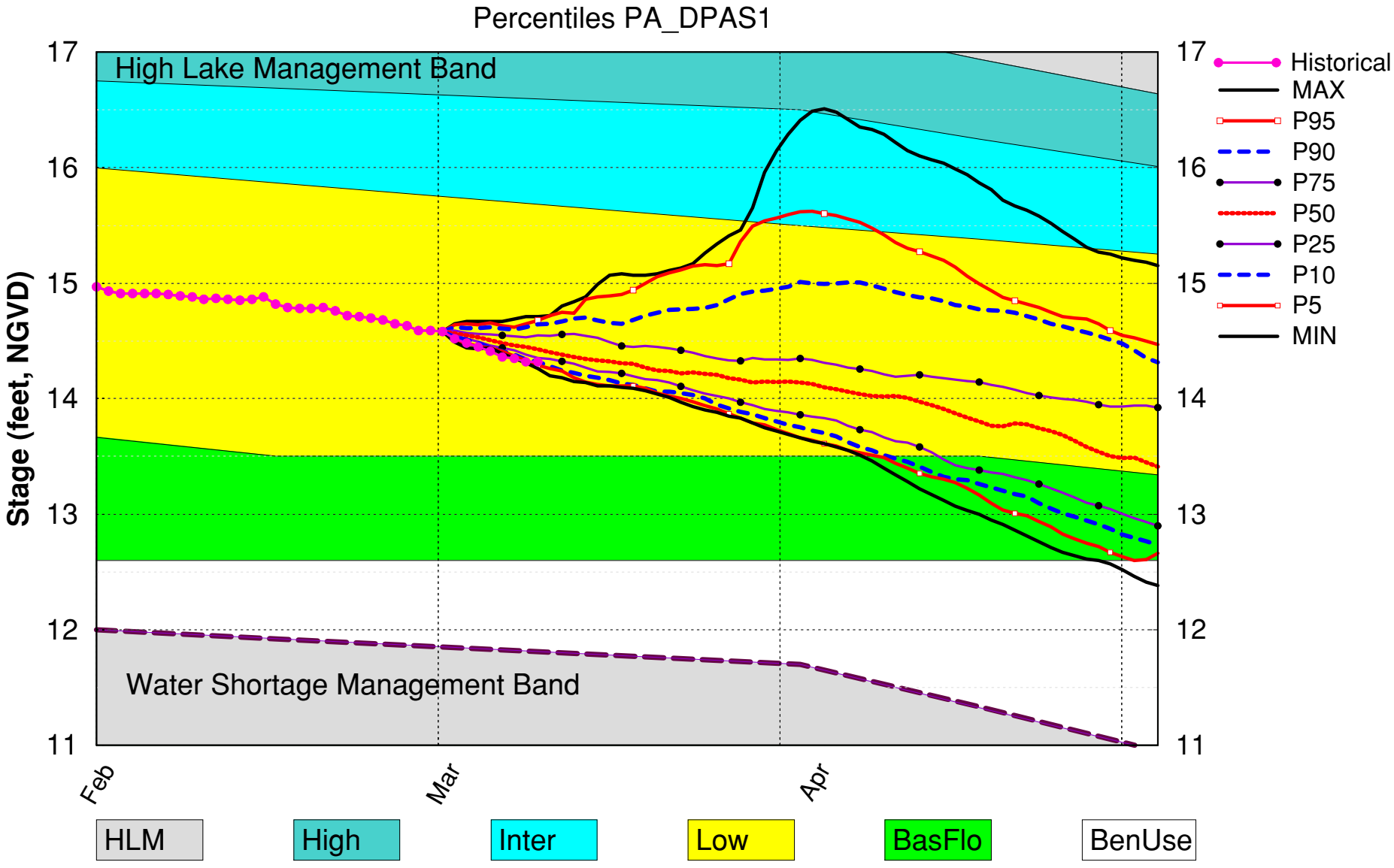
Status for week ending 03/07/2022:

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	-2.61 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Below Normal	H
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	0.84 ft	L
	ENSO Forecast	Normal	
	LOK Multi-Seasonal Net Inflow Outlook	2.21 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-7, 1-8T and 1-9)	Above Line 1 (16.64 ft)	L
	WCA 2A: Site 2-17	Above Line 1 (12.23 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (9.18 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

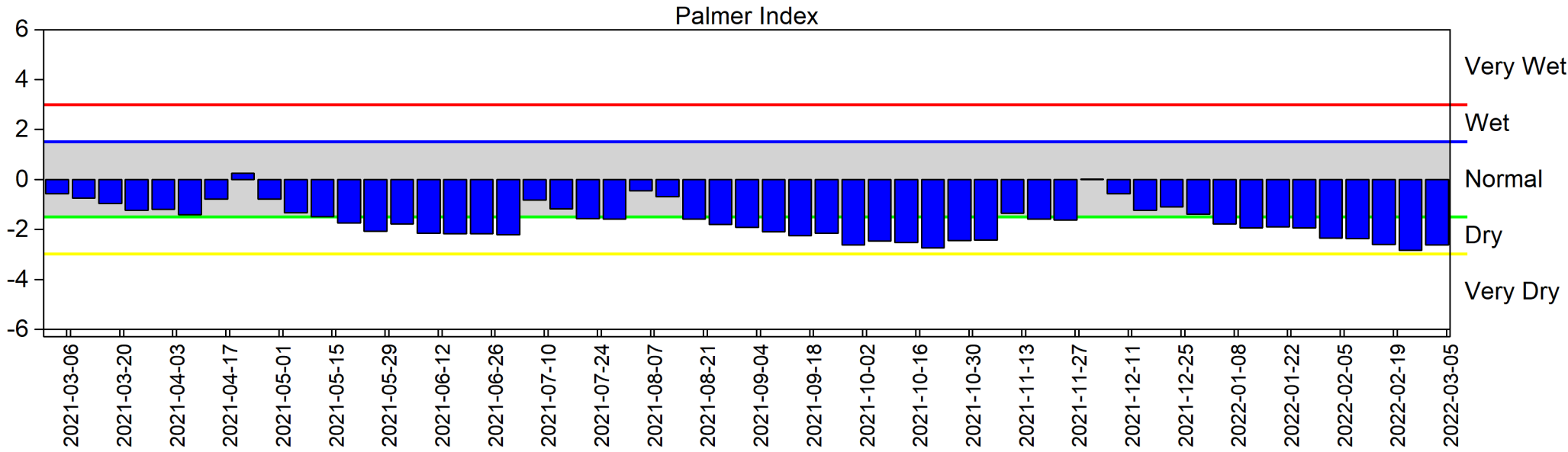
Note: The water supply risk classification based on the Palmer index, as well as the LOK seasonal and multi-seasonal net inflow outlooks use slightly different classification intervals than those used by the 2008-LORS.

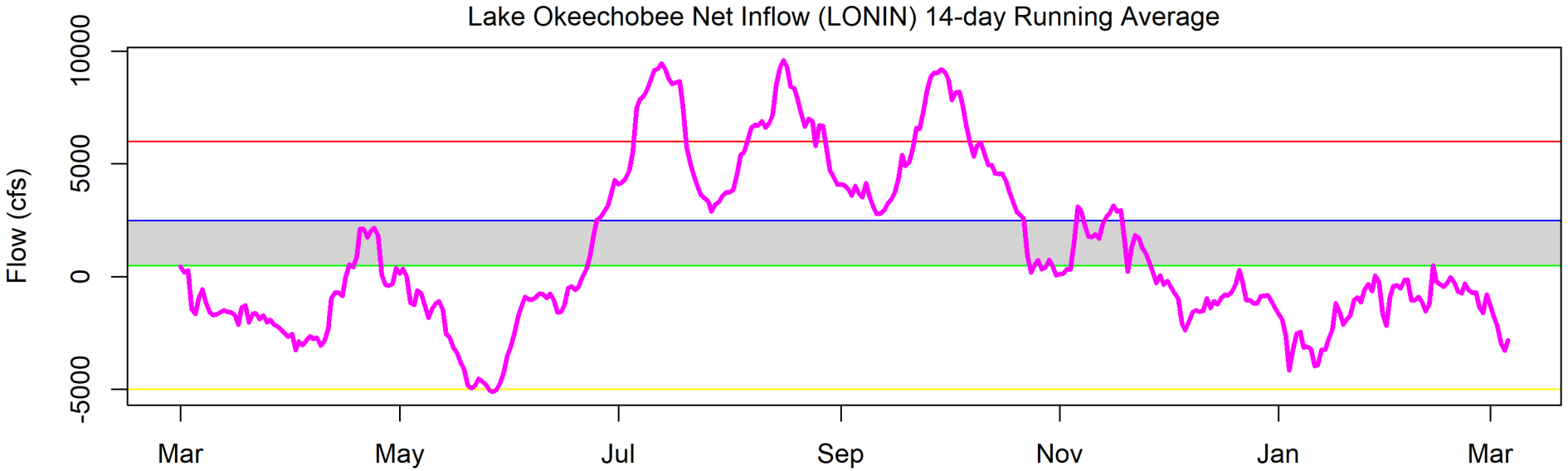
Lake Okeechobee SFWMM Mar 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

Tue Mar 8 20:08:40 2022


Palmer Index
6
4
2
0
-2
-4
-6
Very Wet
Wet
Normal
Dry
Very Dry
2021-03-06
2021-03-20
2021-04-03
2021-04-17
2021-05-01
2021-05-15
2021-05-29
2021-06-12
2021-06-26
2021-07-10
2021-07-24
2021-08-07
2021-08-21
2021-09-04
2021-09-18
2021-10-02
2021-10-16
2021-10-30
2021-11-13
2021-11-27
2021-12-11
2021-12-25
2022-01-08
2022-01-22
2022-02-05
2022-02-19
2022-03-05


Lake Okeechobee Net Inflow (LONIN) 14-day Running Average
Flow (cfs)
10000
5000
0
-5000
Mar
May
Jul
Sep
Nov
Jan
Mar

2008 LORS

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

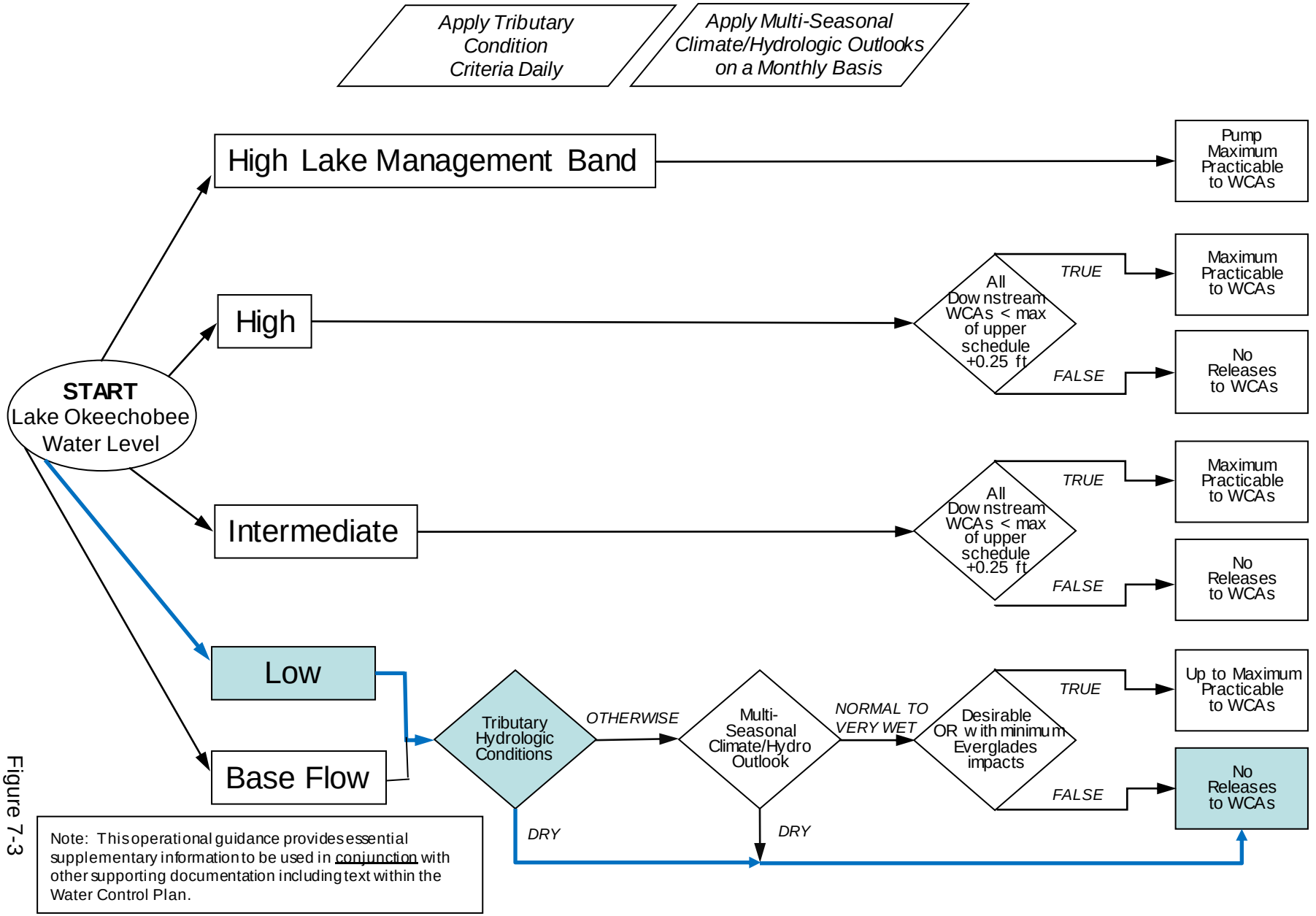
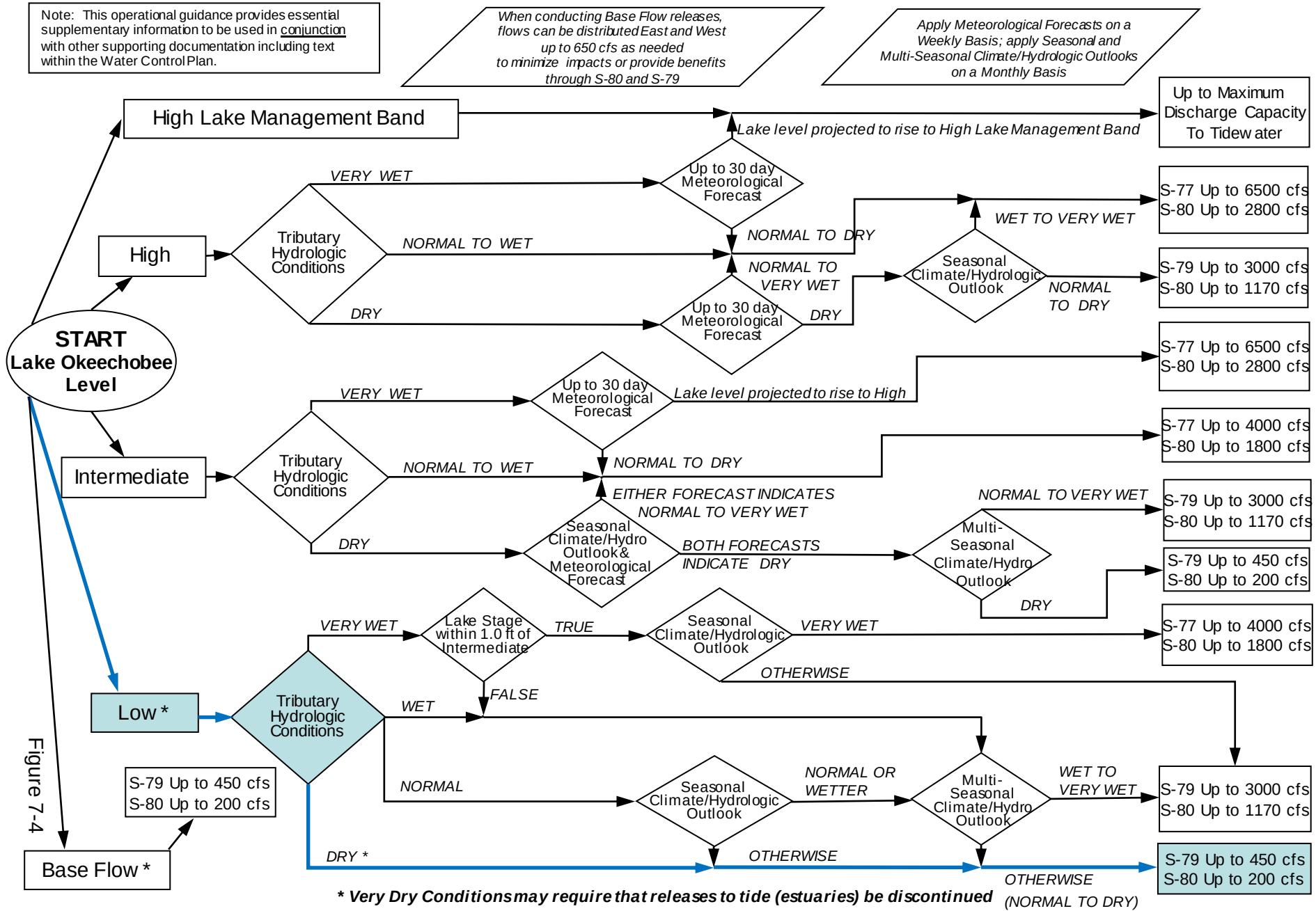


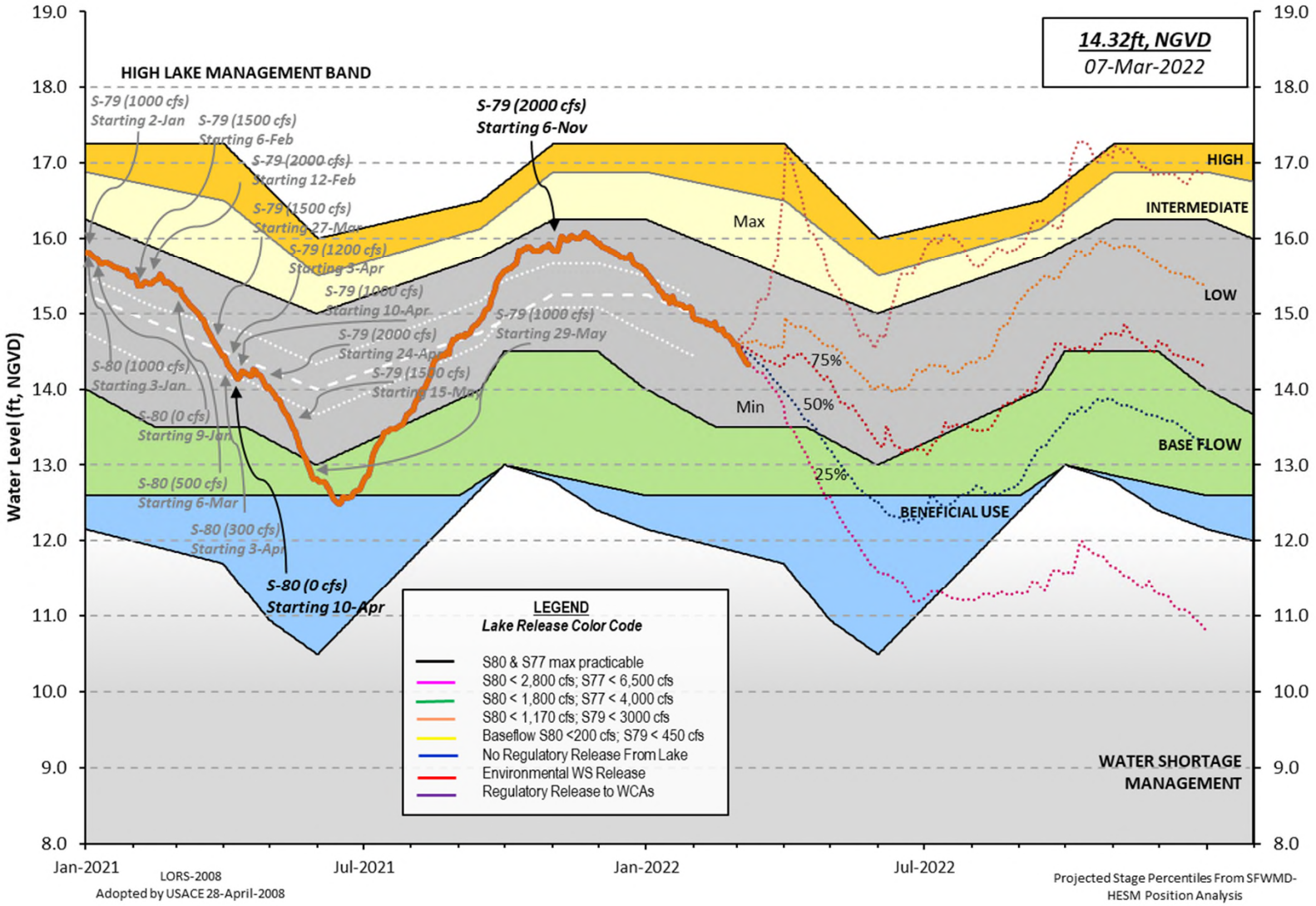
Figure 7-3

2008 LORS

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



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 06 MAR 2022

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	14.35	15.21	12.54 (Official Elv)

Bottom of High Lake Mngmt= 17.25 Top of Water Short Mngmt= 11.83
Currently in Operational Management Band

Simulated Average LORS2008 [1965-2000] 13.27
Difference from Average LORS2008 1.08

06MAR (1965-2007) Period of Record Average 14.49
Difference from POR Average -0.14

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 8.29'
++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 6.49'
Bridge Clearance = 49.33'

---

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

L001	L005	L006	LZ40	S4	S352	S308	S133
14.31	14.43	14.33	14.33	-NR-	14.39	14.29	14.30

*Combination Okeechobee Avg-Daily Lake Average = 14.35 (*See Note)

Okeechobee Inflows (cfs):

S65E	265	S65EX1	0	Fisheating Cr	0
S154	0	S191	0	S135 Pumps	0
S84	0	S133 Pumps	0	S2 Pumps	0
S84X	0	S127 Pumps	0	S3 Pumps	0
S71	0	S129 Pumps	0	S4 Pumps	0
S72	0	S131 Pumps	0	C5	0

Total Inflows: 265

Okeechobee Outflows (cfs):

S135 Culverts	-NR-	S354	267	S77	2050
S127 Culverts	0	S351	697	S308	346
S129 Culverts	0	S352	69		
S131 Culverts	0	L8 Canal Pt	-NR-		

Total Outflows: 3429

****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 0.22 S308 0.28
  Average Pan Evap x 0.75 Pan Coefficient = 0.19" = 0.02'

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 -2118 cfs or -4200 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:	13.60	14.30	0	0	0	0	0	0	(cfs)		
S193:											
S191:	18.40	14.30	0	0.0	0.0	0.0					
S135 Pumps:	13.25	14.18	0	0	0	0	0		(cfs)		
S135 Culverts:			-NR-	-NR-	-NR-						
North West Shore											
S65E:	21.00	14.20	265	0.2	0.0	0.0	0.5	0.1	0.0		
S65EX1:	21.00	14.20	0								
S127 Pumps:	13.30	14.35	0	0	0	0	0	0	(cfs)		
S127 Culvert:			0	0.0							
S129 Pumps:	13.07	14.43	0	0	0	0			(cfs)		
S129 Culvert:			0	0.0							
S131 Pumps:	13.09	14.59	0	0	0				(cfs)		
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		27.86	0								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.42	-NR-	0	0	0	0			(cfs)		
S169:	14.31	14.34	-NR-	-NR-	-NR-	-NR-					
S310:	14.27		88								

```
  S3 Pumps:    10.44     14.30       0      0    0    0            (cfs)
  S354:        14.30     10.44     267    0.3  0.6
  S2 Pumps:    10.51      -NR-       0   -NR- -NR- -NR- -NR-       (cfs)
  S351:         -NR-     10.51     697    0.8  0.6  0.8
  S352:        14.34     10.32      69    0.0  0.3
  C10A:         -NR-     13.80            8.0   8.0   8.0   0.0   0.0
  L8 Canal PT            13.84    -NR-
```

S351 and S352 Temporary Pumps/S354 Spillway

```
  S351:        10.51      -NR-     697  -NR--NR--NR--NR--NR--NR-
  S352:        10.32     14.34      69  -NR--NR--NR--NR-
  S354:        10.44     14.30     267  -NR--NR--NR--NR-
```

```
Caloosahatchee River (S77, S78, S79)
  S47B:        13.34     12.56            1.9  1.9
  S47D:        12.43     11.15       0    0.0
  S77:
    Spillway and Sector Preferred Flow:
                14.17     11.05    2049  3.0  3.0  3.0  0.0
    Flow Due to Lockages+:           1

  S78:
    Spillway and Sector Flow:
                11.03      2.97    1701    1.0  0.0  2.5  1.5
    Flow Due to Lockages+:        -NR-

  S79:
    Spillway and Sector Flow:
                 3.12      0.76    2020    0.0  0.0  1.5  2.0  2.0  1.5  0.0
0.0
    Flow Due to Lockages+:           8
    Percent of flow from S77       101%
    Chloride            (ppm)      0


St. Lucie Canal (S308, S80)
  S308:
    Spillway and Sector Preferred Flow:
                14.30     14.17     346  0.0  3.0  3.0  0.0
    Flow Due to Lockages+:           0

  S153:        18.90     13.97       0    0.0  0.0
  S80:
    Spillway and Sector Flow:
                14.21      0.87       0    0.0  0.0  0.0  0.0  0.0  0.0  0.0
    Flow Due to Lockages+:           0
    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

---

Daily Precipitation Totals	1-Day (inches)	3-Day (inches)	7-Day (inches)	Wind Direction (Degø)	Wind 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:	4.19	4.19	4.19	114	6
S78:	2.14	2.14	2.14	96	6
S79:	6.93	6.93	6.93	25	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:	2.81	2.81	2.81	87	5
S80:	4.07	4.07	4.09	165	6
Okeechobee Average (Sites S78, S79 and S80 not included)	3.50	0.54	0.54		
Oke Nexrad Basin Avg	-NR-	0.00	0.00		

Okeechobee Lake Elevations 06 MAR 2022 14.35 Difference from 06MAR22

06MAR22 -1 Day =	05 MAR 2022	14.36	0.01
06MAR22 -2 Days =	04 MAR 2022	14.41	0.06
06MAR22 -3 Days =	03 MAR 2022	14.45	0.10
06MAR22 -4 Days =	02 MAR 2022	14.48	0.13
06MAR22 -5 Days =	01 MAR 2022	14.52	0.17
06MAR22 -6 Days =	28 FEB 2022	14.58	0.23
06MAR22 -7 Days =	27 FEB 2022	14.59	0.24
06MAR22 -30 Days =	04 FEB 2022	14.91	0.56
06MAR22 -1 Year =	06 MAR 2021	15.21	0.86
06MAR22 -2 Year =	06 MAR 2020	12.54	-1.81

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

06MAR22	Today =	06 MAR 2022	-1631	MON	1558
06MAR22	-1 Day =	05 MAR 2022	-2139	SUN	-6974
06MAR22	-2 Days =	04 MAR 2022	-1870	SAT	-4552
06MAR22	-3 Days =	03 MAR 2022	-1171	FRI	-2485
06MAR22	-4 Days =	02 MAR 2022	-814	THU	-4567
06MAR22	-5 Days =	01 MAR 2022	-445	WED	-8975
06MAR22	-6 Days =	28 FEB 2022	-64	TUE	1403
06MAR22	-7 Days =	27 FEB 2022	-966	MON	3014
06MAR22	-8 Days =	26 FEB 2022	-799	SUN	-4781
06MAR22	-9 Days =	25 FEB 2022	-238	SAT	952
06MAR22	-10 Days =	24 FEB 2022	-335	FRI	-941
06MAR22	-11 Days =	23 FEB 2022	-319	THU	443
06MAR22	-12 Days =	22 FEB 2022	-93	WED	1523
06MAR22	-13 Days =	21 FEB 2022	-406	TUE	1553

S65E

		Average Flow over previous 14 days			Avg-Daily Flow
06MAR22	Today=	06 MAR 2022	738	MON	309
06MAR22	-1 Day =	05 MAR 2022	799	SUN	399
06MAR22	-2 Days =	04 MAR 2022	854	SAT	438
06MAR22	-3 Days =	03 MAR 2022	909	FRI	510
06MAR22	-4 Days =	02 MAR 2022	959	THU	562
06MAR22	-5 Days =	01 MAR 2022	1008	WED	582
06MAR22	-6 Days =	28 FEB 2022	1055	TUE	642
06MAR22	-7 Days =	27 FEB 2022	1098	MON	680
06MAR22	-8 Days =	26 FEB 2022	1141	SUN	841
06MAR22	-9 Days =	25 FEB 2022	1169	SAT	906
06MAR22	-10 Days =	24 FEB 2022	1194	FRI	1079
06MAR22	-11 Days =	23 FEB 2022	1206	THU	1088
06MAR22	-12 Days =	22 FEB 2022	1218	WED	1127
06MAR22	-13 Days =	21 FEB 2022	1225	TUE	1165

S65EX1

		Average Flow over previous 14 days			Avg-Daily Flow
06MAR22	Today=	06 MAR 2022	0	MON	0
06MAR22	-1 Day =	05 MAR 2022	0	SUN	0
06MAR22	-2 Days =	04 MAR 2022	0	SAT	0
06MAR22	-3 Days =	03 MAR 2022	0	FRI	0
06MAR22	-4 Days =	02 MAR 2022	0	THU	0
06MAR22	-5 Days =	01 MAR 2022	0	WED	0
06MAR22	-6 Days =	28 FEB 2022	0	TUE	0
06MAR22	-7 Days =	27 FEB 2022	0	MON	0
06MAR22	-8 Days =	26 FEB 2022	0	SUN	0
06MAR22	-9 Days =	25 FEB 2022	0	SAT	0
06MAR22	-10 Days =	24 FEB 2022	0	FRI	0
06MAR22	-11 Days =	23 FEB 2022	0	THU	0
06MAR22	-12 Days =	22 FEB 2022	0	WED	0
06MAR22	-13 Days =	21 FEB 2022	0	TUE	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)
06 MAR 2022	4068	3920	-NR-	4017
05 MAR 2022	4095	3899	3226	4096
04 MAR 2022	4217	4017	3047	3740
03 MAR 2022	4232	3909	3170	3737
02 MAR 2022	3858	3525	3294	4008
01 MAR 2022	3482	3167	2950	4094
28 FEB 2022	3274	3118	2649	3982
27 FEB 2022	3458	3415	2772	3796
26 FEB 2022	3699	3653	2701	4036
25 FEB 2022	3760	3506	2901	3917
24 FEB 2022	3896	3975	3165	3937
23 FEB 2022	4447	3374	2994	3763
22 FEB 2022	3455	3514	2728	3894
21 FEB 2022	3476	3525	3000	4031

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)
06 MAR 2022	174	1381	138	529	-NR-
05 MAR 2022	266	1504	113	626	-NR-
04 MAR 2022	157	2107	365	403	-NR-
03 MAR 2022	165	1853	398	517	-NR-
02 MAR 2022	214	2014	228	534	-NR-
01 MAR 2022	88	2704	229	561	-NR-
28 FEB 2022	78	2687	191	444	-NR-
27 FEB 2022	280	1762	8	252	-NR-
26 FEB 2022	150	1973	164	353	-NR-
25 FEB 2022	131	2815	584	415	-NR-
24 FEB 2022	91	2654	679	605	-NR-
23 FEB 2022	136	1001	333	599	-NR-
22 FEB 2022	120	716	59	630	-NR-
21 FEB 2022	13	1238	74	367	-NR-

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
06 MAR 2022	681	-NR-	0
05 MAR 2022	519	-NR-	0
04 MAR 2022	675	-NR-	0
03 MAR 2022	555	-NR-	0
02 MAR 2022	859	-NR-	0
01 MAR 2022	140	-NR-	0
28 FEB 2022	1	-159	0
27 FEB 2022	0	-368	0
26 FEB 2022	630	732	0
25 FEB 2022	-NR-	2044	0
24 FEB 2022	2386	2143	0
23 FEB 2022	2398	2214	0
22 FEB 2022	1946	1952	0
21 FEB 2022	1763	1739	0

*** 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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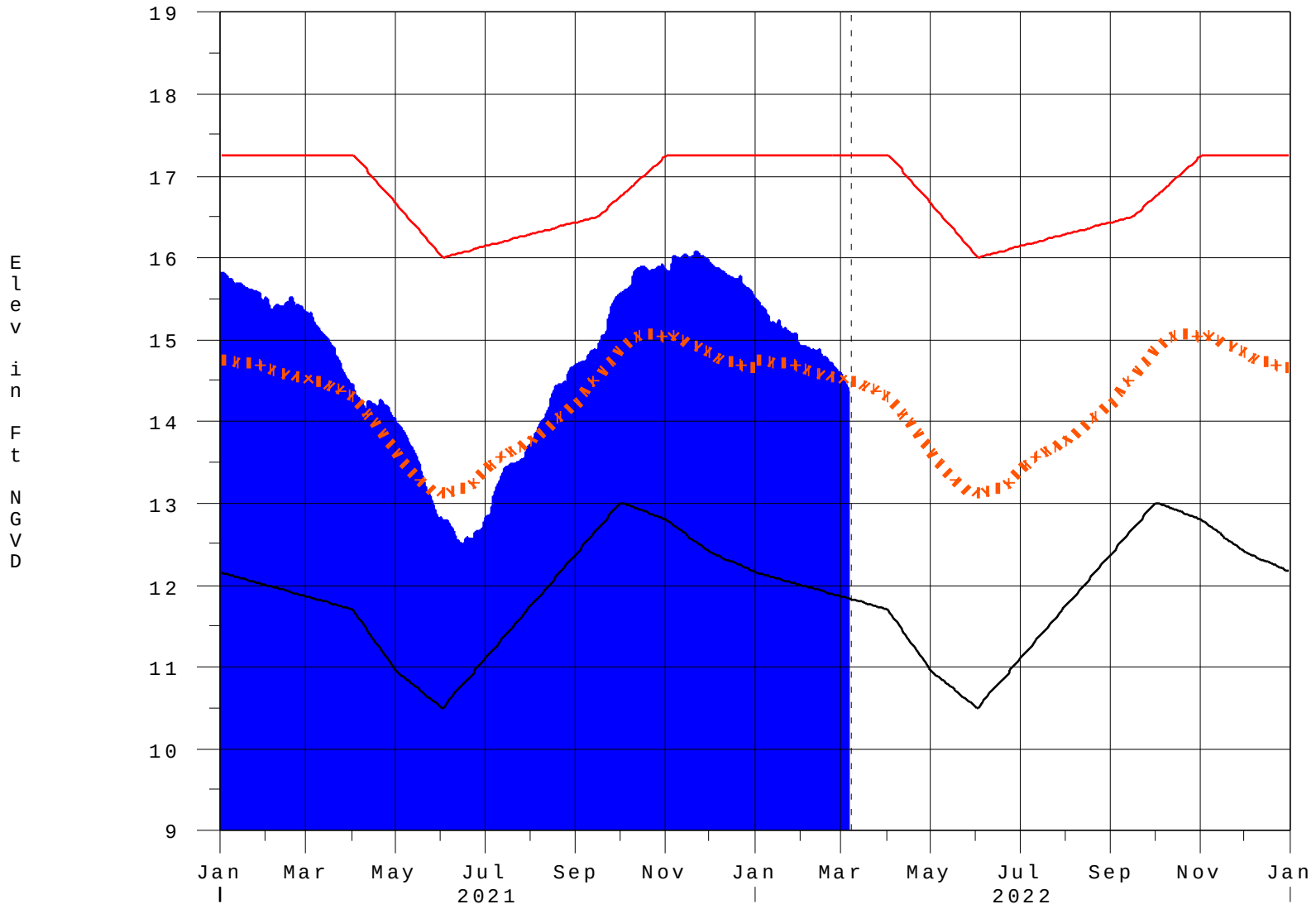
* On 11 May 1999, Lake Okeechobee Elevation was switched from
Instantaneous 2400 value to an average-daily lake average.
On 14 Mar 2001, due to the isolation of various gages within the standard
10 stations, the average of the interior 4 station gages was used
as the Lake Okeechobee Elevation.
On 05 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

Report Generated 07MAR2022 @ 16:07 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

07MAR22 17:30:24



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