

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 05/01/2023 (ENSO Condition: Neutral)

Lake Okeechobee Net Inflow Outlook:

The Lake Okeechobee Net Inflow Outlook has been computed using methods described in the LORS2008 Water Control Plan: Croley's method, the SFWMD empirical method, a sub-sampling of Neutral years and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with Neutral ENSO years. 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*		SFWMD Empirical Method		Sub-sampling of Neutral ENSO Years**		Sub-sampling of AMO Warm + Neutral ENSO Years***	
	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>	Value (ft)	<u>Condition</u>
Current (May-Oct)	N/A	N/A	2.47	Very Wet	2.79	Very Wet	3.75	Very Wet
Multi Seasonal (May-Apr)	N/A	N/A	3.00	Wet	3.46	Wet	4.39	Very Wet

*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 IRI ENSO forecast published.

***Sub-sampling based on combination of ENSO and AMO conditions. For this predominant ENSO categorization is used instead of weights.

Tributary Hydrologic Conditions:

1808 cfs 14-day running average for Lake Okeechobee Net Inflow through 04/30/2023. According to the classification in Tributary Hydrologic Conditions table, this condition is Near normal.

-2.28 for Palmer Drought Index on 04/29/2023.

According to the classification in Tributary Hydrologic Conditions table, this condition is Dry.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 05/01/2023:

Lake Okeechobee Stage: **14.33 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.66	
Operational Band	High sub-band	16.02	
	Intermediate sub-band	15.25	
	Low sub-band	13.34	← 14.33 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		10.95	
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 05/01/2023 (ENSO Condition- Neutral Watch):

Status for week ending 05/01/2023*:

Water Supply Risk Evaluation

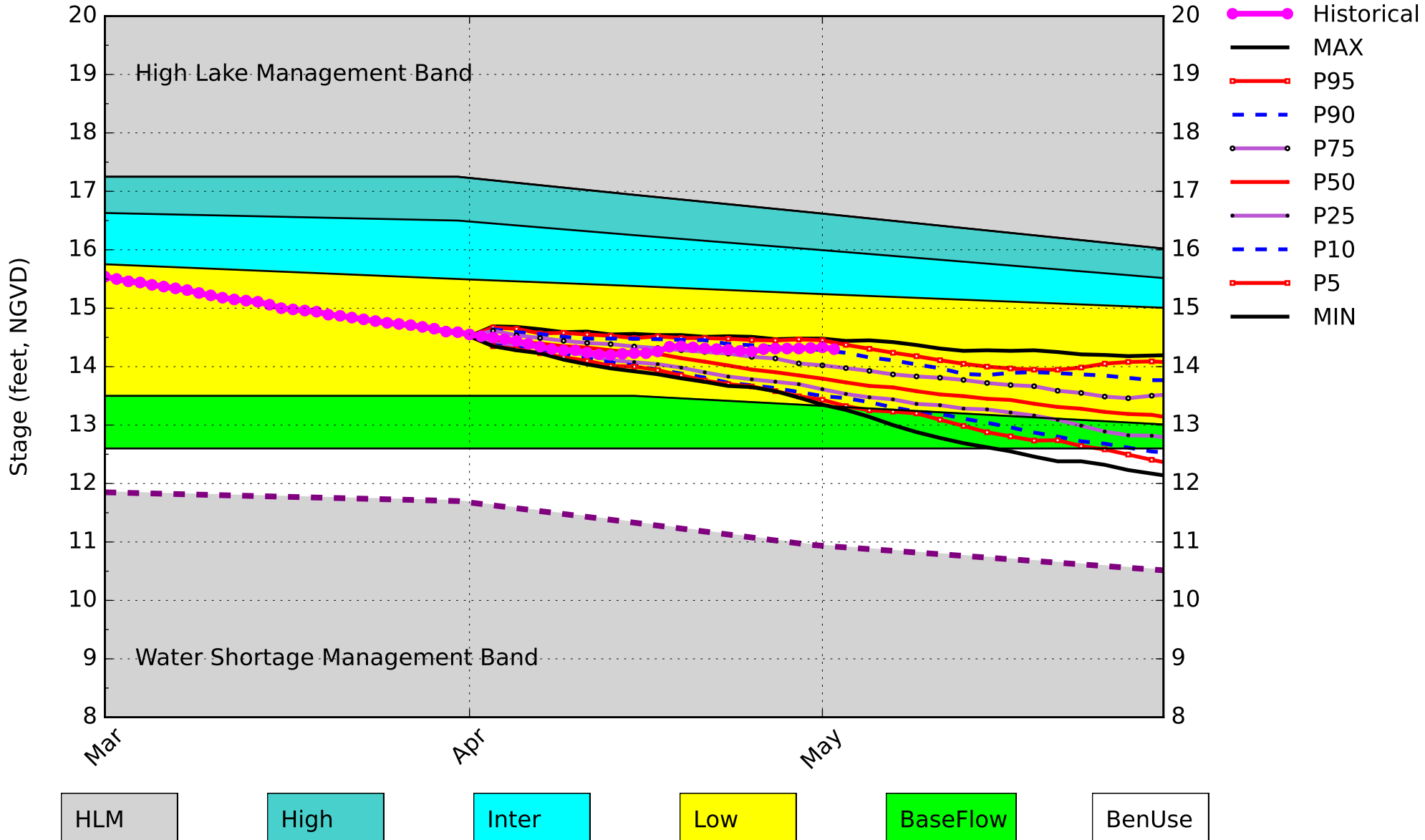
Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-band	M
	Palmer Drought Index for LOK Tributary Conditions	-2.28 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Above Normal	L
		3 months: Above Normal	L
	LOK Seasonal Net Inflow Outlook	2.79 ft	L
	ENSO Forecast	Normal to Extremely Wet	
	LOK Multi-Seasonal Net Inflow Outlook	3.46 ft	L
	ENSO Forecast	Wet	
WCAs	WCA 1: 3 Station Average (Site 1-8C)	Above Line 1 (16.36 ft)	L
	WCA 2A: Site S-11B	Above Line 1 (12.12 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (9.21 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.

*- S308 flow data for April 25-27 is not available from the USACE Daily Reports and was substituted with alternative data sources from USGS

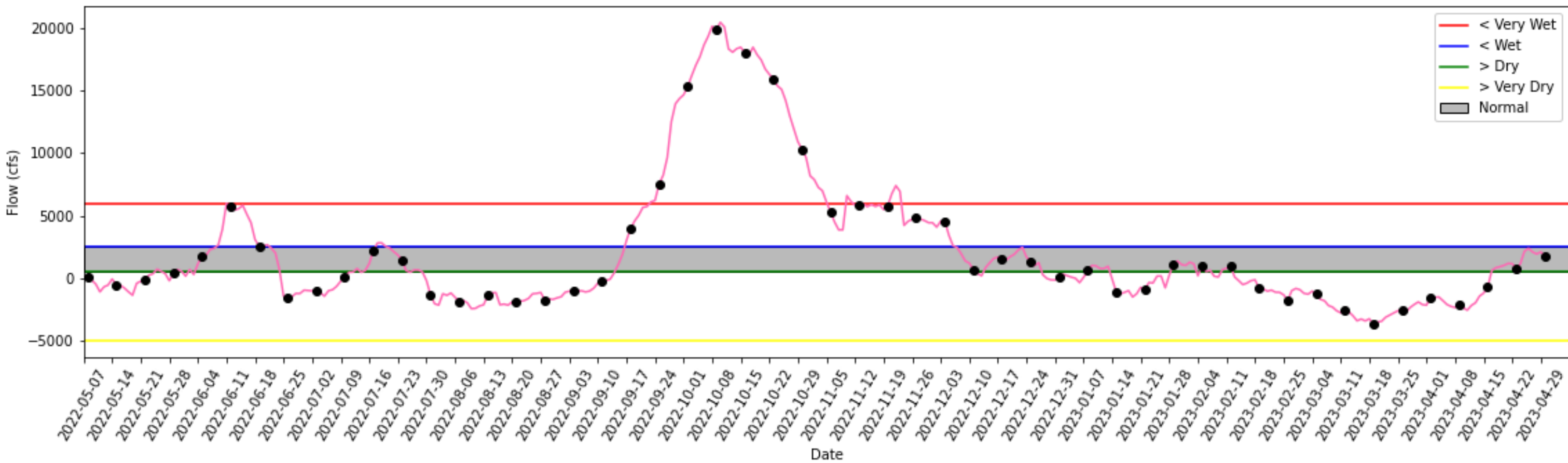
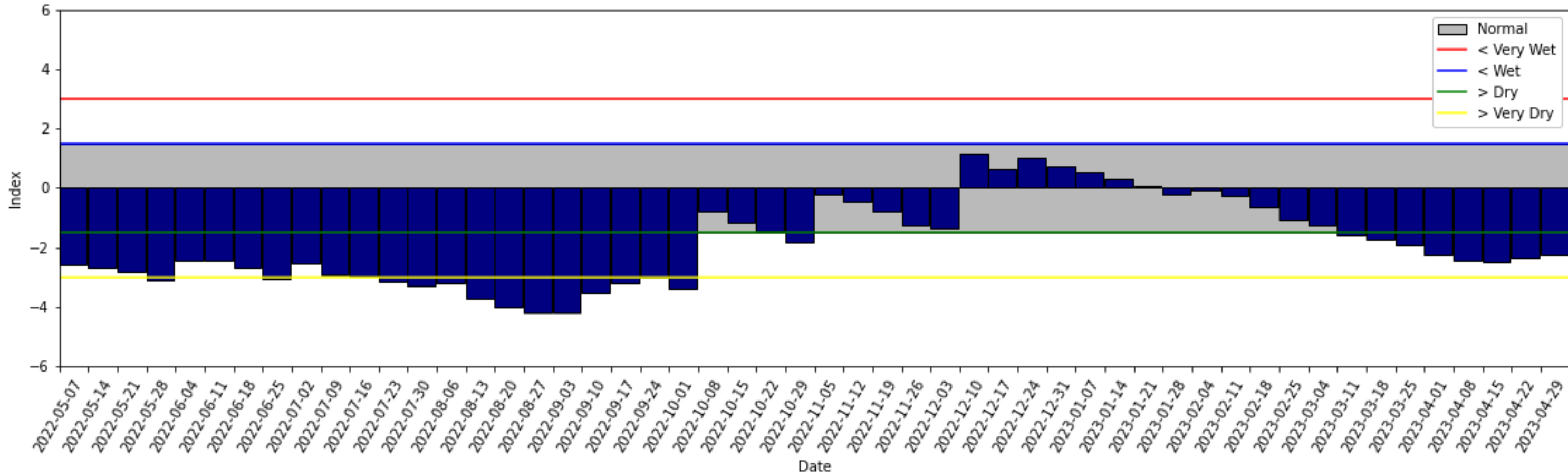
Lake Okeechobee SFWMM April 2023 Position Analysis

Percentiles PA



(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of April 30 2023



2008 LORS

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

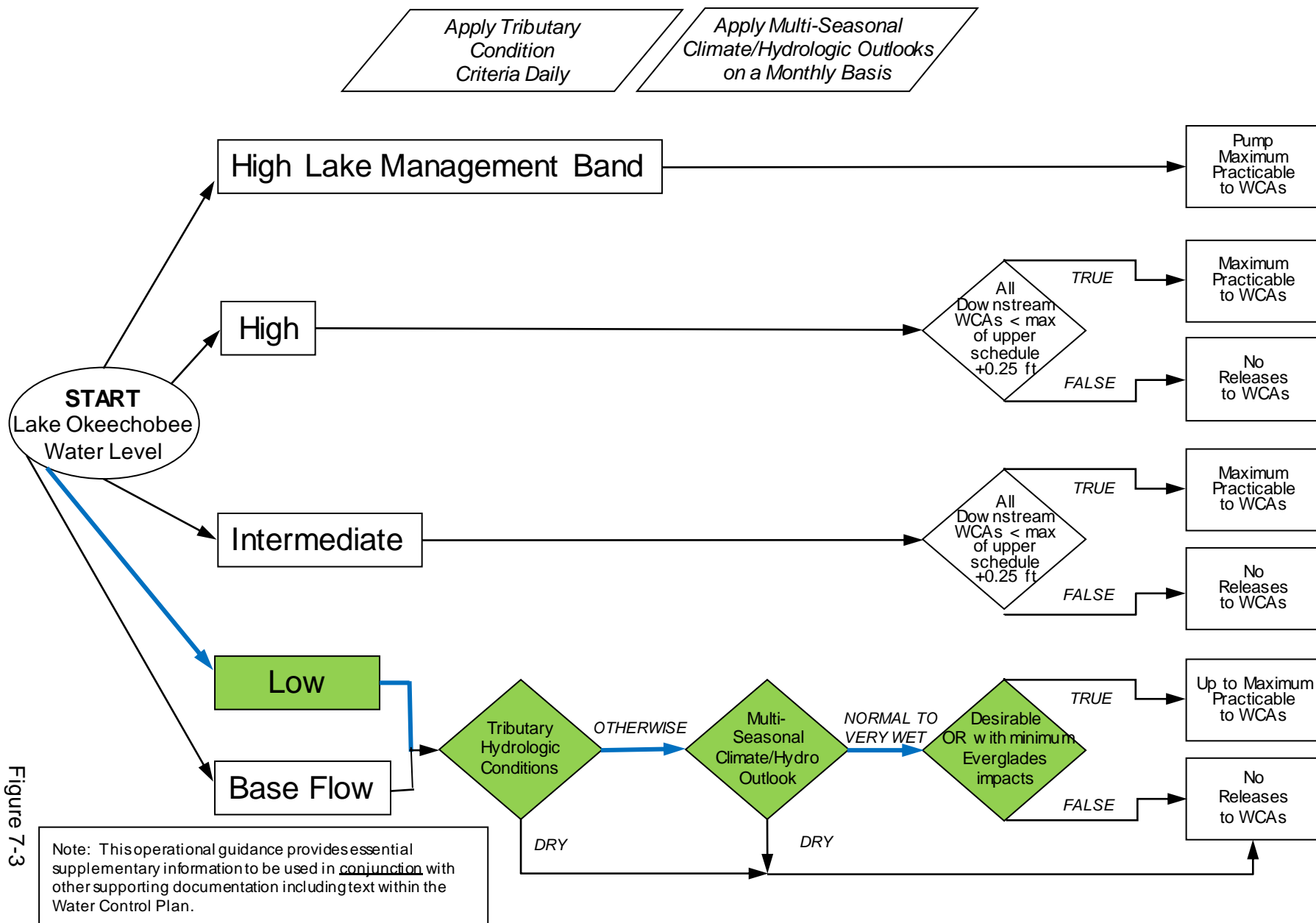


Figure 7-3

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

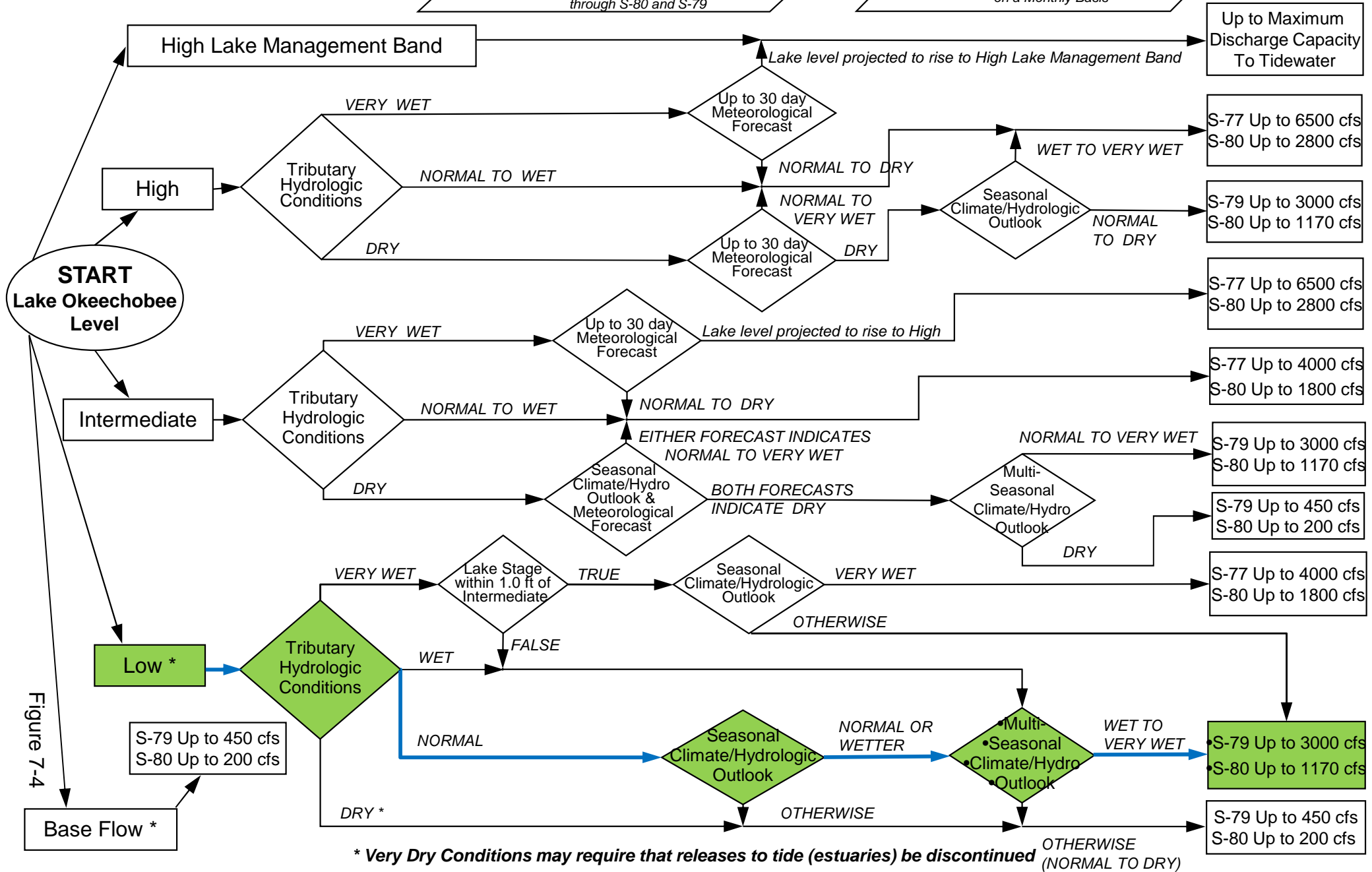
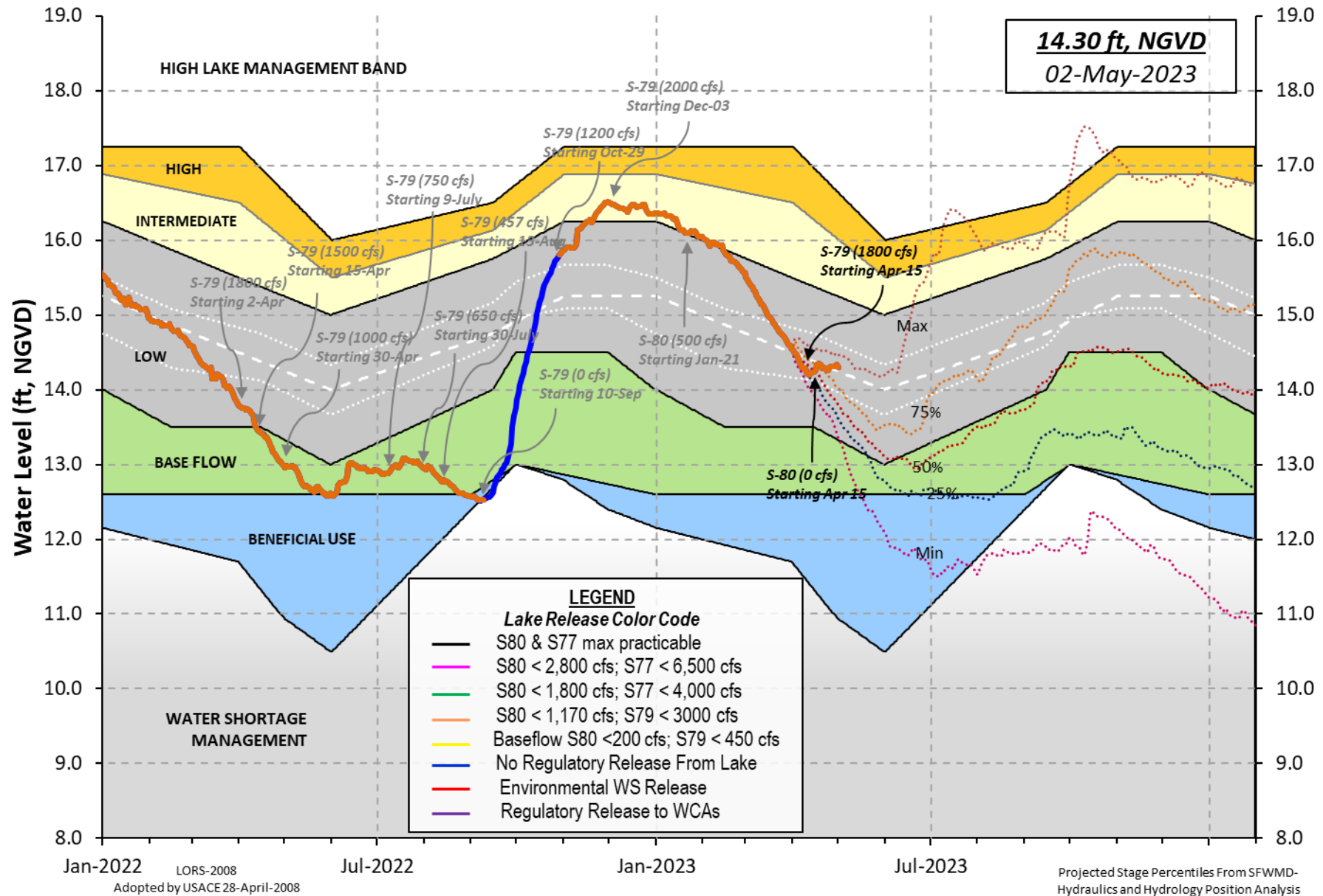


Figure 7-4

* Very Dry Conditions may require that releases to tide (estuaries) be discontinued (NORMAL TO DRY)

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 30 APR 2023

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	14.33	12.96	14.03 (Official Elv)
Bottom of High Lake Mngmt=	16.66	Top of Water Short Mngmt=	10.95
Currently in Operational Management Band			
Simulated Average LORS2008 [1965-2000]	12.41		
Difference from Average LORS2008	1.92		
30APR (1965-2007) Period of Record Average	13.63		
Difference from POR Average	0.70		

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 \diamond 8.27'
 ++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 \diamond 6.47'
 Bridge Clearance = 49.36'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
14.65	14.10	14.25	14.25	13.91	14.59	14.62	14.58

*Combination Okeechobee Avg-Daily Lake Average = 14.33
 (*See Note)

Okeechobee Inflows (cfs):

S65E	230	S65EX1	0	Fisheating Cr	0
S154	0	S191	0	S135 Pumps	0
S84	1	S133 Pumps	0	S2 Pumps	0
S84X	0	S127 Pumps	0	S3 Pumps	0
S71	0	S129 Pumps	0	S4 Pumps	0
S72	182	S131 Pumps	0	C5	0
Total Inflows:	413				

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	0	S77	-NR-
S127 Culverts	0	S351	0	S308	0
S129 Culverts	0	S352	0		
S131 Culverts	0	L8 Canal Pt	146		
Total Outflows:	No Report Due To Missing S77 or S308 Discharge Data				

***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	-NR-	S308	0.41
Average Pan Evap x 0.75 Pan Coefficient = -NR-" = -NR-'			

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:	13.63	14.32	0	0	0	0	0	0	0	0	(cfs)
S193:											
S191:	19.66	14.40	0	0.0	0.0	0.0					
S135 Pumps:	13.40	14.42	0	0	0	0	0				(cfs)
S135 Culverts:			0	0.0	0.0						
North West Shore											
S65E:	21.00	14.30	230	0.3	-0.0	0.0	0.0	0.0	0.0	0.4	
S65EX1:	21.00	14.30	0								
S127 Pumps:	13.42	14.28	0	0	0	0	0	0	0		(cfs)
S127 Culvert:			0	0.0							
S129 Pumps:	13.06	14.18	0	0	0	0					(cfs)
S129 Culvert:			0	0.0							
S131 Pumps:	12.98	-NR-	0	0	0						(cfs)
S131 Culvert:			0								
Fisheating Creek											
nr Palmdale		27.54	0								
nr Lakeport											
C5:		-NR-	0	-NR-	-NR-	-NR-					
South Shore											
S4 Pumps:	11.47	-NR-	0	0	0	0					(cfs)
S169:		-NR-	-NR-	-NR-	-NR-	-NR-					
S310:	14.16		22								
S3 Pumps:	11.30	14.27	0	0	0	0					(cfs)
S354:	14.27	11.30	0	0.0	0.0						
S2 Pumps:	10.69	14.37	0	0	0	0	0				(cfs)
S351:	14.37	10.69	0	0.0	0.0	0.0					
S352:	14.56	11.11	0	0.0	0.0						
C10A:	-NR-	-NR-		-NR-	-NR-	-NR-	-NR-	-NR-	-NR-		
L8 Canal PT		14.56	146								

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.69	14.37	0	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-		
S352:	11.11	14.56	0	-NR-	-NR-	-NR-	-NR-				
S354:	11.30	14.27	0	-NR-	-NR-	-NR-	-NR-				

Caloosahatchee River (S77, S78, S79)

S47B:	13.94	12.04		0.0	0.0						
S47D:	12.01	10.97	0	0.0							
S77:											
Spillway and Sector Preferred Flow:	13.87	10.86	906	0.0	2.5	2.5	0.0				
Flow Due to Lockages+:			-NR-								

S78:

Spillway and Sector Flow:
 10.85 3.17 1241 2.0 0.0 0.0 2.0
 Flow Due to Lockages+: 5

S79:

Spillway and Sector Flow:
 3.32 1.75 1745 0.0 1.0 2.0 2.0 2.0 2.0 2.0 0.0
 Flow Due to Lockages+: 1
 Percent of flow from S77 52%
 Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:
 14.51 14.14 0 0.0 0.0 0.0 0.0
 Flow Due to Lockages+: 0

S153: 18.61 13.90 48 0.0 0.0

S80:

Spillway and Sector Flow:
 14.21 0.52 699 0.0 0.5 0.0 0.0 0.0 0.5 0.0
 Flow Due to Lockages+: 12
 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:	-NR-	0.00	0.00	225	5
S78:	-NR-	0.00	0.00	248	2
S79:	-NR-	0.00	0.00	232	1
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:	-NR-	0.00	0.00	-NR-	-NR-
S80:	-NR-	0.00	0.00	307	7
Okeechobee Average (Sites S78, S79 and S80 not included)	-NR-	0.00	0.00		

Oke Nexrad Basin Avg	-NR-	0.00	0.00		

Okeechobee Lake Elevations 30 APR 2023 14.33 Difference from 30APR23
 30APR23 -1 Day = 29 APR 2023 14.32 -0.01

30APR23	-2 Days =	28 APR 2023	14.31	-0.02
30APR23	-3 Days =	27 APR 2023	14.31	-0.02
30APR23	-4 Days =	26 APR 2023	14.31	-0.02
30APR23	-5 Days =	25 APR 2023	14.30	-0.03
30APR23	-6 Days =	24 APR 2023	14.26	-0.07
30APR23	-7 Days =	23 APR 2023	14.27	-0.06
30APR23	-30 Days =	31 MAR 2023	14.55	0.22
30APR23	-1 Year =	30 APR 2022	12.96	-1.37
30APR23	-2 Year =	30 APR 2021	14.03	-0.30

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
30APR23	Today =	30 APR 2023	1042 MON	3174
30APR23	-1 Day =	29 APR 2023	1418 SUN	2921
30APR23	-2 Days =	28 APR 2023	1215 SAT	589
30APR23	-3 Days =	27 APR 2023	1413 FRI	-NR-
30APR23	-4 Days =	26 APR 2023	1737 THU	-NR-
30APR23	-5 Days =	25 APR 2023	1576 WED	-NR-
30APR23	-6 Days =	24 APR 2023	1165 TUE	-413
30APR23	-7 Days =	23 APR 2023	780 MON	-3056
30APR23	-8 Days =	22 APR 2023	1172 SUN	-1272
30APR23	-9 Days =	21 APR 2023	1187 SAT	-1691
30APR23	-10 Days =	20 APR 2023	1039 FRI	-4018
30APR23	-11 Days =	19 APR 2023	930 THU	-4235
30APR23	-12 Days =	18 APR 2023	846 WED	2118
30APR23	-13 Days =	17 APR 2023	625 TUE	17345

S65E

Average Flow over previous 14 days				Avg-Daily Flow
30APR23	Today=	30 APR 2023	325 MON	259
30APR23	-1 Day =	29 APR 2023	328 SUN	312
30APR23	-2 Days =	28 APR 2023	334 SAT	325
30APR23	-3 Days =	27 APR 2023	338 FRI	316
30APR23	-4 Days =	26 APR 2023	344 THU	464
30APR23	-5 Days =	25 APR 2023	336 WED	378
30APR23	-6 Days =	24 APR 2023	331 TUE	299
30APR23	-7 Days =	23 APR 2023	320 MON	257
30APR23	-8 Days =	22 APR 2023	328 SUN	237
30APR23	-9 Days =	21 APR 2023	335 SAT	292
30APR23	-10 Days =	20 APR 2023	339 FRI	283
30APR23	-11 Days =	19 APR 2023	344 THU	350
30APR23	-12 Days =	18 APR 2023	345 WED	374
30APR23	-13 Days =	17 APR 2023	350 TUE	408

S65EX1

Average Flow over previous 14 days				Avg-Daily Flow
30APR23	Today=	30 APR 2023	3 MON	0
30APR23	-1 Day =	29 APR 2023	3 SUN	0
30APR23	-2 Days =	28 APR 2023	3 SAT	0
30APR23	-3 Days =	27 APR 2023	3 FRI	0
30APR23	-4 Days =	26 APR 2023	3 THU	0
30APR23	-5 Days =	25 APR 2023	3 WED	0
30APR23	-6 Days =	24 APR 2023	3 TUE	0
30APR23	-7 Days =	23 APR 2023	3 MON	0
30APR23	-8 Days =	22 APR 2023	3 SUN	0
30APR23	-9 Days =	21 APR 2023	3 SAT	0
30APR23	-10 Days =	20 APR 2023	3 FRI	0
30APR23	-11 Days =	19 APR 2023	3 THU	0
30APR23	-12 Days =	18 APR 2023	3 WED	47
30APR23	-13 Days =	17 APR 2023	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)
30 APR 2023	-NR-	2221	2472	3449
29 APR 2023	1454	1754	2089	2465
28 APR 2023	1047	1913	1680	2479
27 APR 2023	2263	2914	2603	2880
26 APR 2023	1764	2412	2440	3879
25 APR 2023	2379	3043	3357	4113
24 APR 2023	3160	3580	3316	4438
23 APR 2023	2149	2572	2927	4263
22 APR 2023	1431	2015	2279	2721
21 APR 2023	718	1071	1722	2322
20 APR 2023	337	1604	2732	3141
19 APR 2023	9	1467	3587	4100
18 APR 2023	-NR-	540	3458	5663
17 APR 2023	705	1101	3447	4902

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)
30 APR 2023	44	0	0	0	289
29 APR 2023	-74	0	0	0	155
28 APR 2023	-173	0	0	0	129
27 APR 2023	-211	0	0	0	22
26 APR 2023	-191	0	0	0	-66
25 APR 2023	31	0	0	0	120
24 APR 2023	-110	0	0	0	211
23 APR 2023	24	0	0	0	237
22 APR 2023	-25	0	0	0	291
21 APR 2023	-165	0	0	0	177
20 APR 2023	-268	0	0	0	92
19 APR 2023	-363	0	0	0	-73
18 APR 2023	-387	0	0	0	-37
17 APR 2023	-214	0	0	0	78

DATE	S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
30 APR 2023	0	-NR-	1406
29 APR 2023	-1	-NR-	710
28 APR 2023	0	-NR-	429
27 APR 2023	-NR-	-NR-	310
26 APR 2023	-NR-	-NR-	196
25 APR 2023	-NR-	-NR-	38
24 APR 2023	-1	-NR-	37
23 APR 2023	1	-NR-	45
22 APR 2023	2	-NR-	333
21 APR 2023	-1	-NR-	638
20 APR 2023	-2	-NR-	34
19 APR 2023	-0	-NR-	529
18 APR 2023	-2	-NR-	1268
17 APR 2023	-1	-NR-	964

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

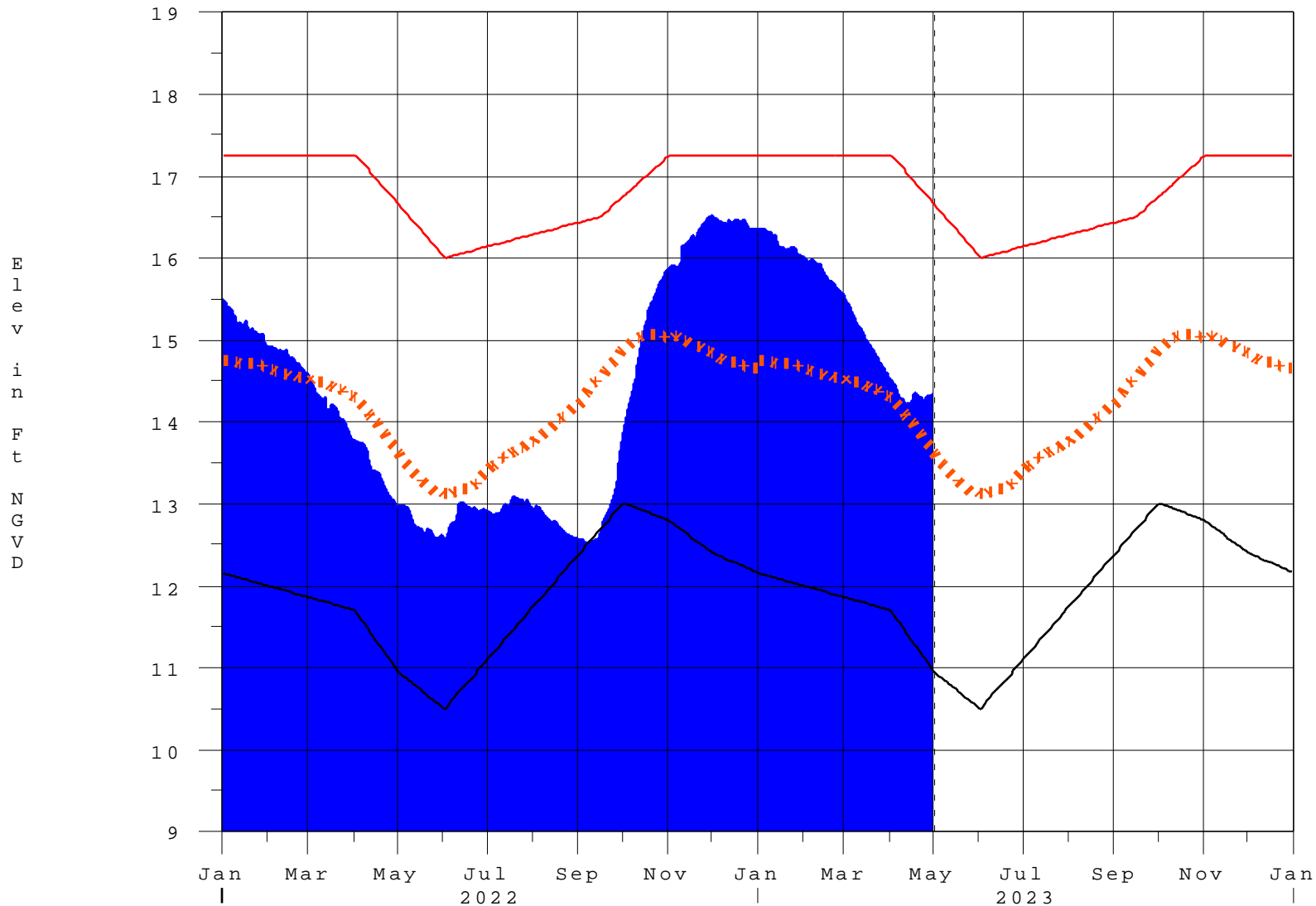
(I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

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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 Okeechobee 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 01MAY2023 @ 14:38 ** Preliminary Data - Subject to Revision **

Lake Okeechobee

01MAY23 14:30:20



- 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