

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 1/31/2022 (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 (Jan-Jun)	N/A	N/A	0.11	Dry	-0.34	Dry	-0.31	Dry
Multi Seasonal (Jan-Oct)	N/A	N/A	2.62	Wet	2.03	Normal	1.63	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:

-1665.26 cfs 14-day running average for Lake Okeechobee Net Inflow through 1/31/2022.

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

-1.94 for Palmer Drought Index on 1/31/2022.

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

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 1/31/2022:

Lake Okeechobee Stage: **14.96 feet**

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		17.25	
Operational Band	High sub-band	16.76	
	Intermediate sub-band	16.01	
	Low sub-band	13.68	← 14.96 ft
Base Flow sub-band		12.60	
Beneficial Use sub-band		12.00	
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

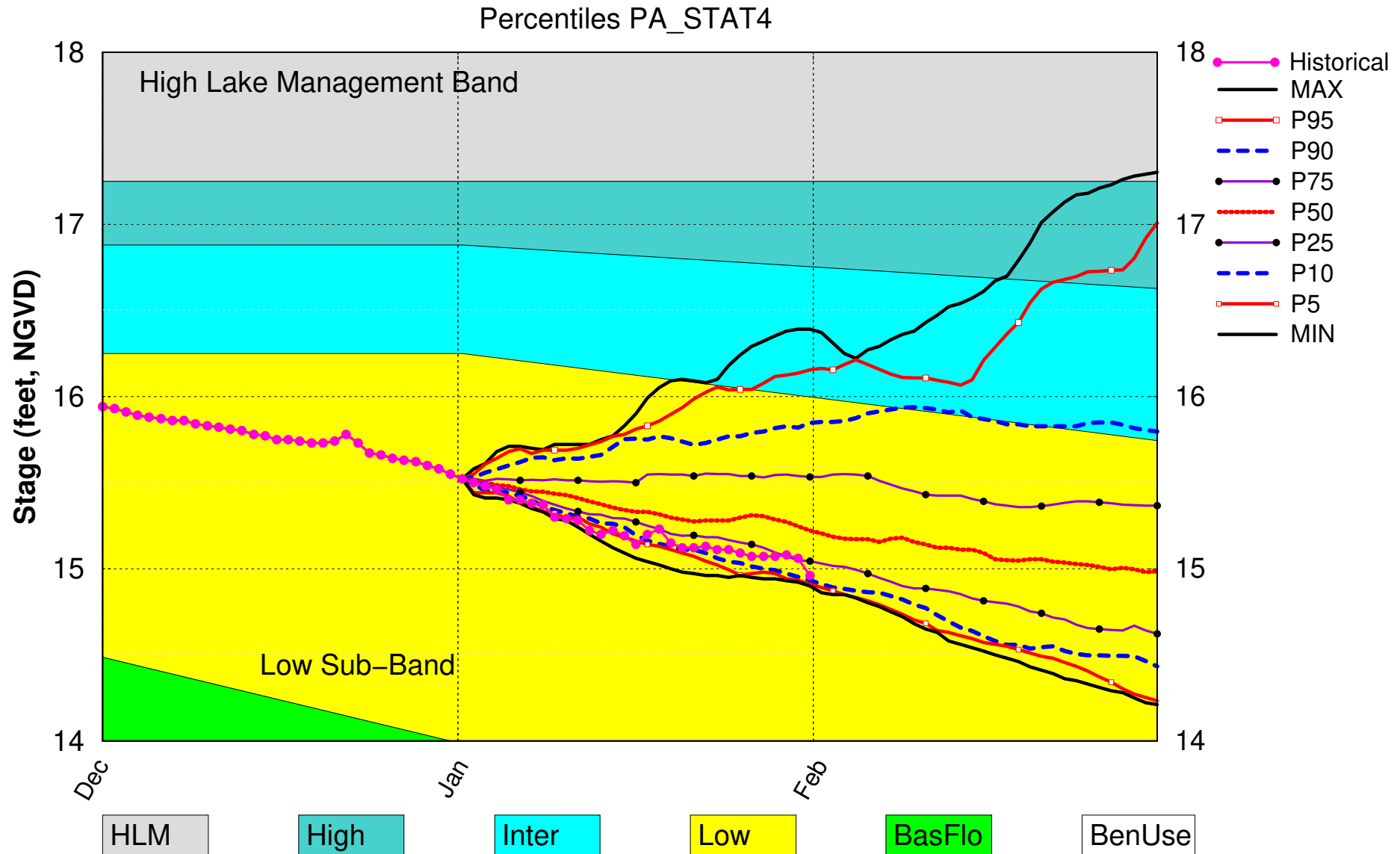
Up to 450 cfs at S-79 and up to 200 cfs at S-80.

LORS2008 Implementation on 1/31/2022 (ENSO Condition- La Nina Watch):**Status for week ending 1/31/2022:****Water Supply Risk Evaluation**

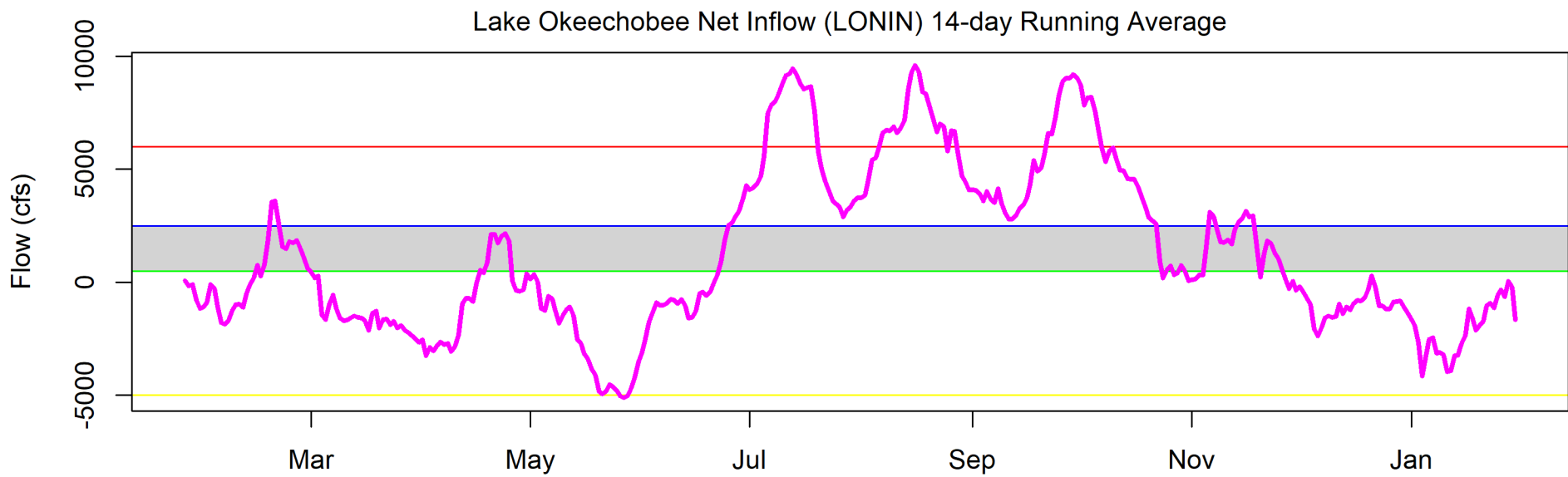
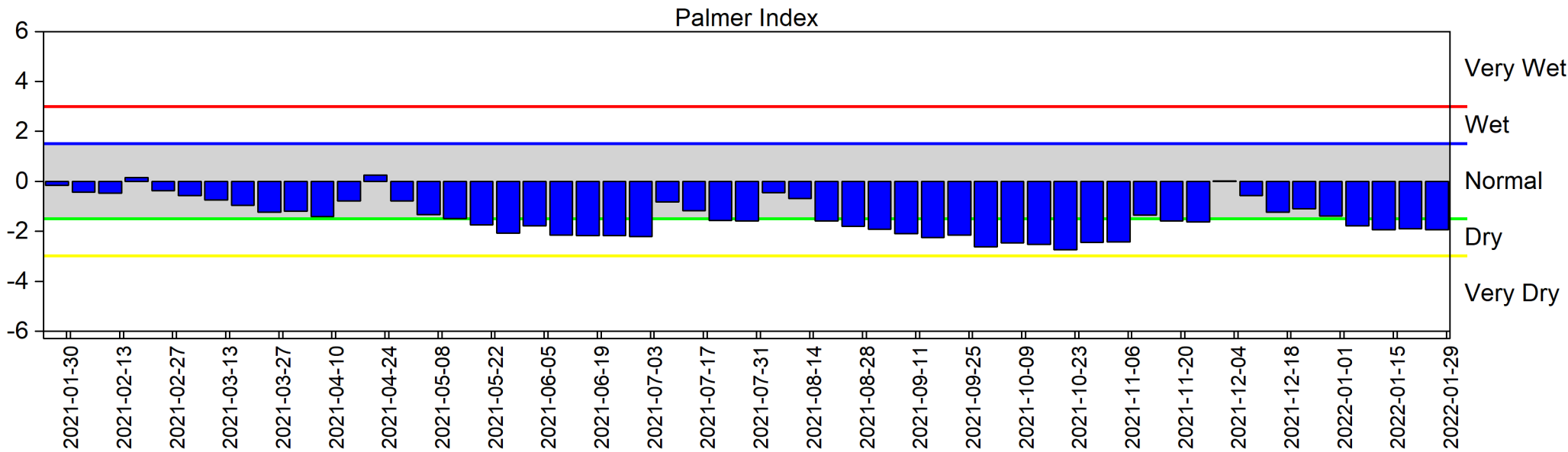
Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-band	M
	Palmer Drought Index for LOK Tributary Conditions	-1.94 (Dry)	M
	CPC Precipitation Outlook	1 month: Below Normal	M
		3 months: Below Normal	H
	LOK Seasonal Net Inflow Outlook	-0.26 ft	H
	ENSO Forecast	Extremely Dry	
	LOK Multi-Seasonal Net Inflow Outlook	2.11 ft	M
	ENSO Forecast	Normal	
WCAs	WCA 1: 3 Station Average (Sites 1-7, 1-8T and 1-9)	Above Line 1 (17.12 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 (9.62 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 Jan 2022 Position Analysis



(See assumptions on the Position Analysis Results website)



2008 LORS

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

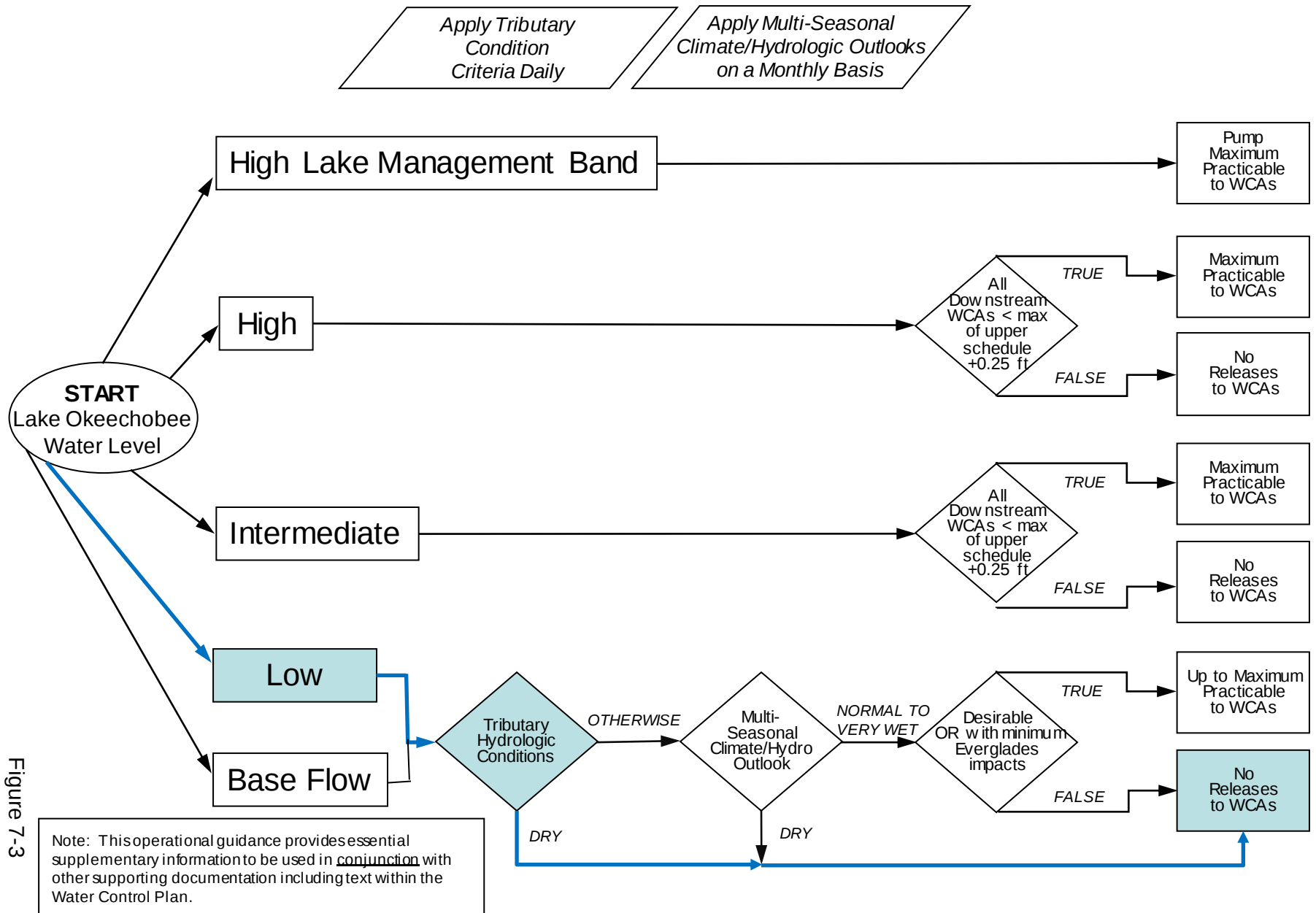
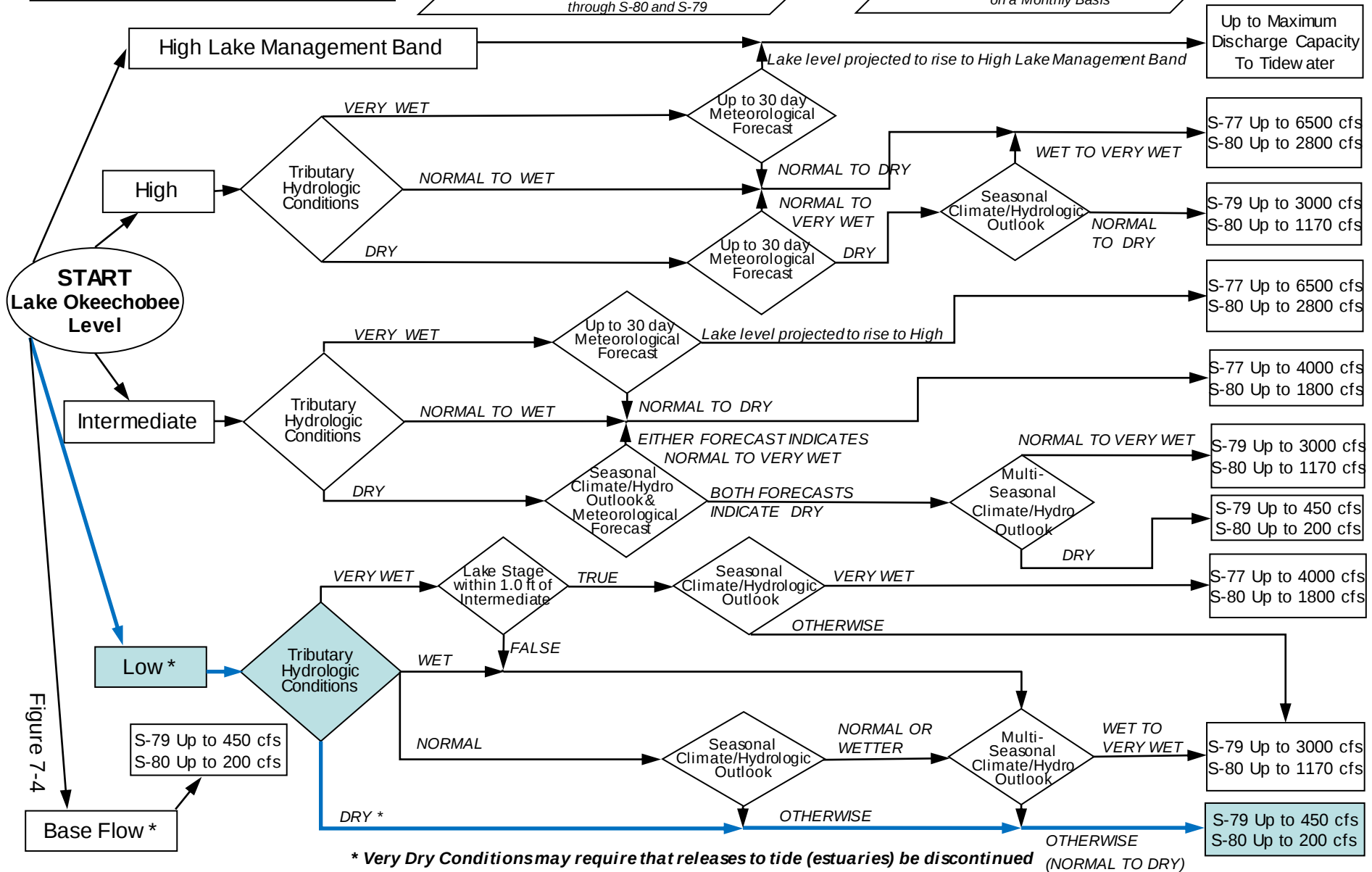


Figure 7-3

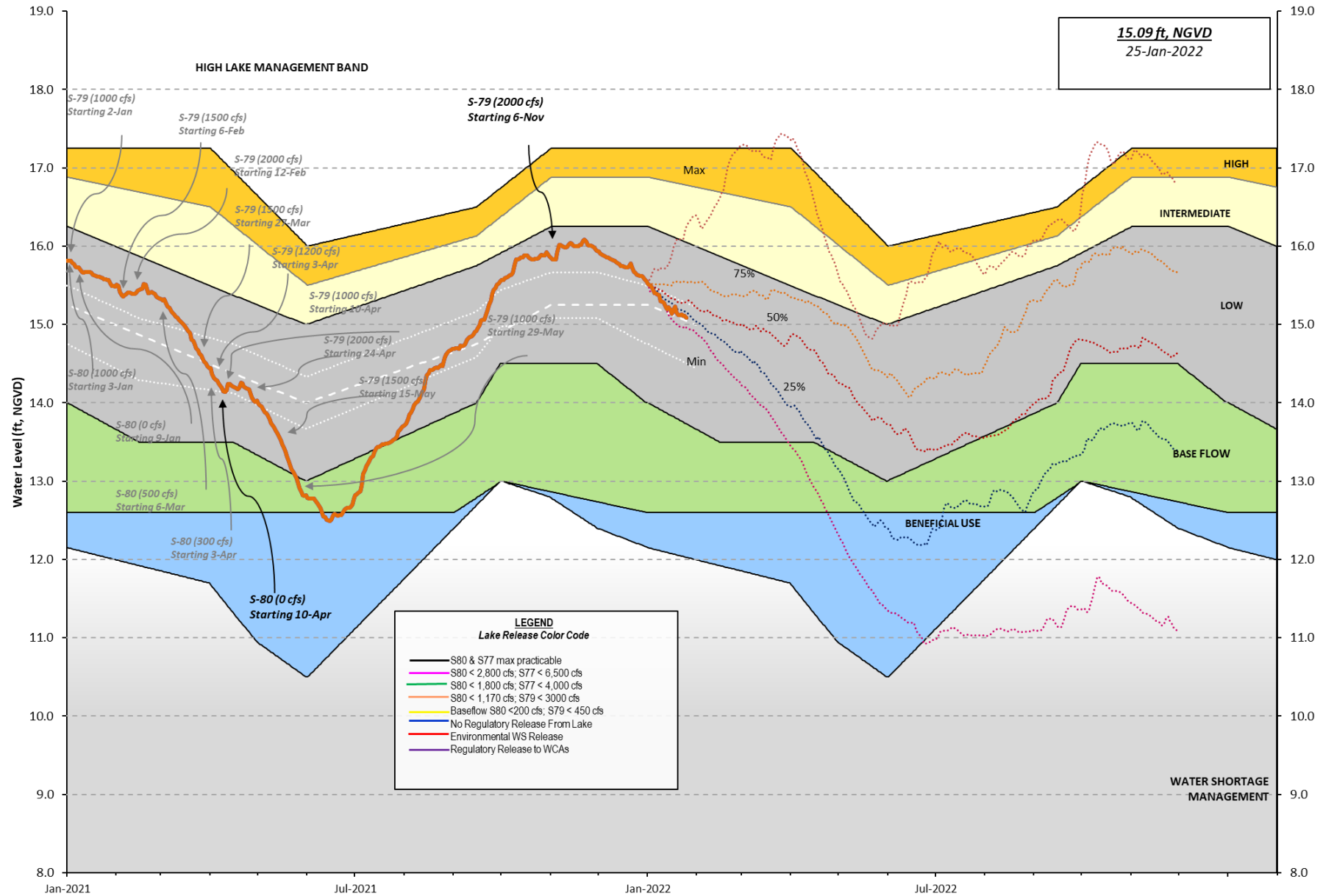
Part D: Establish Allowable Lake Okeechobee Releases to Tide (Estuaries)

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 30 JAN 2022

Okeechobee Lake Regulation	Elevation (ft-NGVD)	Last Year (ft-NGVD)	2YRS Ago (ft-NGVD)
*Okeechobee Lake Elevation	14.96	15.47	12.84 (Official Elv)
Bottom of High Lake Mngmt= 17.25 Top of Water Short Mngmt= 12.00			
Currently in Operational Management Band			

Simulated Average LORS2008 [1965-2000]	13.53
Difference from Average LORS2008	1.43

30JAN (1965-2007) Period of Record Average	14.66
Difference from POR Average	0.30

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 8.90'

++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 7.10'

Bridge Clearance = 49.78'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
14.79	14.93	15.03	14.97	-NR-	15.14	14.97	14.76

*Combination Okeechobee Avg-Daily Lake Average = 14.96
 (*See Note)

Okeechobee Inflows (cfs):

S65E	1014	S65EX1	0	Fisheating Cr	21
S154	0	S191	0	S135 Pumps	0
S84	0	S133 Pumps	0	S2 Pumps	0
S84X	0	S127 Pumps	0	S3 Pumps	0
S71	4	S129 Pumps	0	S4 Pumps	0
S72	0	S131 Pumps	0	C5	0
Total Inflows: 1039					

Okeechobee Outflows (cfs):

S135 Culverts	-NR-	S354	563	S77	-NR-
S127 Culverts	0	S351	932	S308	0
S129 Culverts	0	S352	132		
S131 Culverts	0	L8 Canal Pt	-NR-		
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 0.17
 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 -21478 cfs or -42600 AC-FT

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	Headwater	Tailwater		----- Gate Positions -----						
---	Elevation	Elevation	Disch	#1	#2	#3	#4	#5	#6	#7
#8	(ft-msl)	(ft-msl)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
(ft)										
			(I) see note at bottom							
North East Shore										
S133 Pumps:	13.48	14.93	0	0	0	0	0	0	0	(cfs)
S193:										
S191:	18.86	14.91	0	0.0	0.0	0.0				
S135 Pumps:	13.65	14.82	0	0	0	0	0			(cfs)
S135 Culverts:			-NR-	-NR-	-NR-					
North West Shore										
S65E:	21.09	14.76	1014	0.6	0.7	0.1	0.7	0.7	0.0	
S65EX1:	21.09	14.76	0							
S127 Pumps:	13.41	14.83	0	0	0	0	0	0		(cfs)
S127 Culvert:			0	0.0						
S129 Pumps:	12.98	14.88	0	0	0	0				(cfs)
S129 Culvert:			0	0.1						
S131 Pumps:	12.94	14.95	0	0	0					(cfs)
S131 Culvert:			0							
Fisheating Creek										
nr Palmdale		28.89	21							
nr Lakeport										
C5:		-NR-	0	-NR-	-NR-	-NR-				
South Shore										
S4 Pumps:	11.45	-NR-	0	0	0	0				(cfs)
S169:	14.94	14.98	-NR-	-NR-	-NR-	-NR-				
S310:	14.98		107							

S3 Pumps:	10.66	14.91	0	0	0	0		(cfs)
S354:	14.91	10.66	563	0.4	0.4			
S2 Pumps:	10.63	-NR-	0	0	0	0	0	(cfs)
S351:	-NR-	10.63	932	1.0	0.9	1.0		
S352:	15.04	10.72	132	0.3	0.0			
C10A:	-NR-	14.72		8.0	8.0	8.0	0.0	0.0
L8 Canal PT		14.74	-NR-					

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.63	-NR-	932	-NR-	-NR-	-NR-	-NR-	-NR-	-NR-
S352:	10.72	15.04	132	-NR-	-NR-	-NR-	-NR-		
S354:	10.66	14.91	563	-NR-	-NR-	-NR-	-NR-		

Caloosahatchee River (S77, S78, S79)

S47B:	13.23	12.55		1.0	1.5
S47D:	12.52	10.99	0	0.0	

S77:

Spillway and Sector Preferred Flow:

	14.46	10.86	2508	2.5	2.5	2.5	2.5
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Flow Due to Lockages+: -NR-

S78:

Spillway and Sector Flow:

	10.85	2.86	1890	2.0	0.0	2.5	2.0
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Flow Due to Lockages+: -NR-

S79:

Spillway and Sector Flow:

	3.02	1.75	2141	0.0	0.0	2.0	2.0	2.0	1.0	0.0
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0.0

Flow Due to Lockages+: 3

Percent of flow from S77 117%

Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:

	14.91	13.72	0	0.0	0.0	0.0	0.0
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Flow Due to Lockages+: 0

S153:	19.00	13.55	0	0.0	0.0
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S80:

Spillway and Sector Flow:

	13.81	1.29	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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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

----- Wind -----					
-					
Daily Precipitation Totals	1-Day	3-Day	7-Day	Direction	
Speed	(inches)	(inches)	(inches)	(Degø)	
(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	0.06	2	1
S78:	1.53	1.53	1.59	216	1
S79:	6.41	6.41	6.48	309	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:	2.38	2.38	2.46	88	2
S80:	2.82	2.82	2.97	245	2
Okeechobee Average	2.38	0.18	0.19		
(Sites S78, S79 and S80 not included)					

Oke Nexrad Basin Avg	-NR-	0.00	0.00		

Okeechobee Lake Elevations	30 JAN 2022	14.96	Difference from
30JAN22			
30JAN22 -1 Day =	29 JAN 2022	15.06	0.10
30JAN22 -2 Days =	28 JAN 2022	15.08	0.12
30JAN22 -3 Days =	27 JAN 2022	15.07	0.11
30JAN22 -4 Days =	26 JAN 2022	15.07	0.11
30JAN22 -5 Days =	25 JAN 2022	15.07	0.11
30JAN22 -6 Days =	24 JAN 2022	15.09	0.13
30JAN22 -7 Days =	23 JAN 2022	15.11	0.15
30JAN22 -30 Days =	31 DEC 2021	15.52	0.56
30JAN22 -1 Year =	30 JAN 2021	15.47	0.51
30JAN22 -2 Year =	30 JAN 2020	12.84	-2.12

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

30JAN22	Today =	30 JAN 2022	-979	MON	-17149
30JAN22	-1 Day =	29 JAN 2022	1146	SUN	802
30JAN22	-2 Days =	28 JAN 2022	481	SAT	7149
30JAN22	-3 Days =	27 JAN 2022	-306	FRI	4262
30JAN22	-4 Days =	26 JAN 2022	-40	THU	1440
30JAN22	-5 Days =	25 JAN 2022	-168	WED	-2879
30JAN22	-6 Days =	24 JAN 2022	-625	TUE	-2631
30JAN22	-7 Days =	23 JAN 2022	-321	MON	2059
30JAN22	-8 Days =	22 JAN 2022	-417	SUN	-3157
30JAN22	-9 Days =	21 JAN 2022	-1020	SAT	3426
30JAN22	-10 Days =	20 JAN 2022	-1107	FRI	1565
30JAN22	-11 Days =	19 JAN 2022	-1232	THU	-3632
30JAN22	-12 Days =	18 JAN 2022	-638	WED	-14625
30JAN22	-13 Days =	17 JAN 2022	-233	TUE	9668

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S65E					
Average Flow over previous 14 days					Avg-Daily Flow
30JAN22	Today=	30 JAN 2022	662	MON	1112
30JAN22	-1 Day =	29 JAN 2022	614	SUN	1066
30JAN22	-2 Days =	28 JAN 2022	580	SAT	1045
30JAN22	-3 Days =	27 JAN 2022	525	FRI	956
30JAN22	-4 Days =	26 JAN 2022	480	THU	868
30JAN22	-5 Days =	25 JAN 2022	445	WED	714
30JAN22	-6 Days =	24 JAN 2022	423	TUE	545
30JAN22	-7 Days =	23 JAN 2022	412	MON	458
30JAN22	-8 Days =	22 JAN 2022	406	SUN	433
30JAN22	-9 Days =	21 JAN 2022	400	SAT	386
30JAN22	-10 Days =	20 JAN 2022	399	FRI	407
30JAN22	-11 Days =	19 JAN 2022	398	THU	413
30JAN22	-12 Days =	18 JAN 2022	400	WED	406
30JAN22	-13 Days =	17 JAN 2022	400	TUE	462

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S65EX1					
Average Flow over previous 14 days					Avg-Daily Flow
30JAN22	Today=	30 JAN 2022	0	MON	0
30JAN22	-1 Day =	29 JAN 2022	0	SUN	0
30JAN22	-2 Days =	28 JAN 2022	0	SAT	0
30JAN22	-3 Days =	27 JAN 2022	0	FRI	0
30JAN22	-4 Days =	26 JAN 2022	0	THU	0
30JAN22	-5 Days =	25 JAN 2022	0	WED	0
30JAN22	-6 Days =	24 JAN 2022	0	TUE	0
30JAN22	-7 Days =	23 JAN 2022	0	MON	0
30JAN22	-8 Days =	22 JAN 2022	0	SUN	0
30JAN22	-9 Days =	21 JAN 2022	0	SAT	0
30JAN22	-10 Days =	20 JAN 2022	0	FRI	0
30JAN22	-11 Days =	19 JAN 2022	0	THU	0
30JAN22	-12 Days =	18 JAN 2022	0	WED	0
30JAN22	-13 Days =	17 JAN 2022	0	TUE	0

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Lake Okeechobee Outlets Last 14 Days

			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	JAN	2022	-NR-	5117	-NR-	4225
29	JAN	2022	-NR-	4300	-NR-	4786
28	JAN	2022	-NR-	4618	3635	4107
27	JAN	2022	-NR-	3084	3184	4183
26	JAN	2022	-NR-	2526	2617	4048
25	JAN	2022	-NR-	2993	3032	4049
24	JAN	2022	-NR-	2944	3068	4075
23	JAN	2022	-NR-	2684	3228	3935
22	JAN	2022	-NR-	2234	3158	3356
21	JAN	2022	-NR-	2656	2804	4084
20	JAN	2022	-NR-	2914	2923	4212
19	JAN	2022	2477	2559	3406	4103
18	JAN	2022	2551	2877	3312	4279
17	JAN	2022	1434	1998	2858	3995

			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	JAN	2022	213	1848	261	1117	-NR-
29	JAN	2022	200	2466	705	1618	-NR-
28	JAN	2022	333	2600	803	1277	-NR-
27	JAN	2022	*****	2042	707	1675	-NR-
26	JAN	2022	8	0	0	0	-NR-
25	JAN	2022	34	0	0	0	-NR-
24	JAN	2022	99	363	172	40	-NR-
23	JAN	2022	65	385	933	0	-NR-
22	JAN	2022	16	0	0	0	-NR-
21	JAN	2022	-2	0	0	0	-NR-
20	JAN	2022	63	216	17	0	-NR-
19	JAN	2022	-32	1133	167	500	-NR-
18	JAN	2022	-23	1408	170	208	-NR-
17	JAN	2022	28	0	0	0	-NR-

			S-308 Discharge (ALL DAY) (AC-FT)	Below S-308 Discharge (ALL-DAY) (AC-FT)	S-80 Discharge (ALL-DAY) (AC-FT)
30	JAN	2022	1	-NR-	0
29	JAN	2022	0	-NR-	0
28	JAN	2022	0	-NR-	0
27	JAN	2022	432	-NR-	0
26	JAN	2022	1	-NR-	0
25	JAN	2022	1	-NR-	0
24	JAN	2022	0	-NR-	358
23	JAN	2022	0	-NR-	467
22	JAN	2022	0	-NR-	555
21	JAN	2022	1	-NR-	0
20	JAN	2022	0	-NR-	0
19	JAN	2022	1343	-NR-	0
18	JAN	2022	1047	2037	0
17	JAN	2022	466	-NR-	0

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

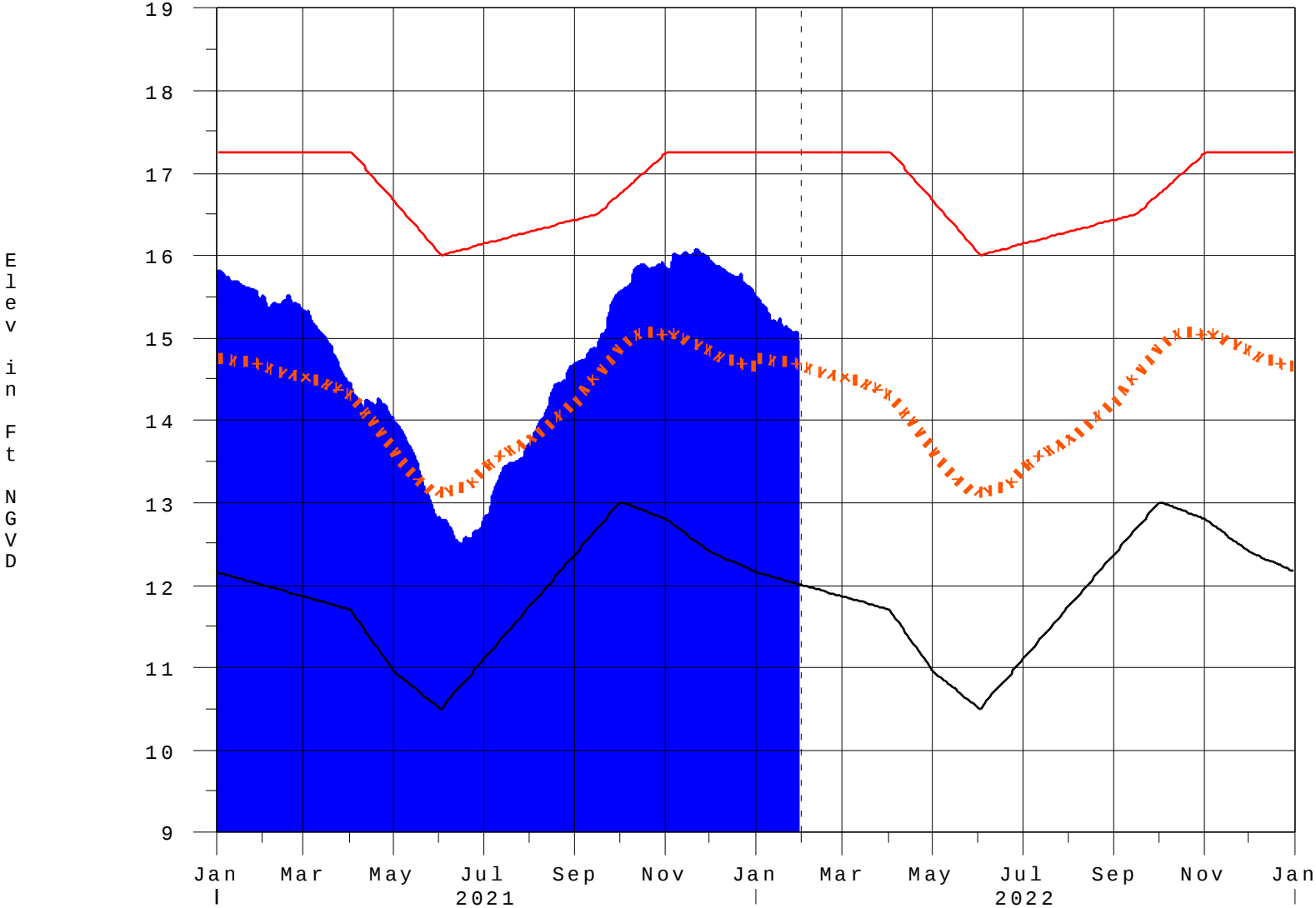
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(I) - Flows preceded by "I" signify an instantaneous
flow computed from the single value reported for the day

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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 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 31JAN2022 @ 08:15 ** Preliminary Data - Subject to Revision
**

Lake Okeechobee

31JAN22 08:17:24



- 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