Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 04/03/2023 (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 subsampling 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)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (Apr-Sep)	N/A	N/A	1.87	Wet	2.09	Very Wet	2.81	Very Wet
Multi Seasonal (Apr-Oct)	N/A	N/A	2.35	Normal	2.67	Wet	3.61	Wet

^{*}Croley's Method Not Produced for This Report

See <u>Seasonal</u> and <u>Multi-Seasonal</u> 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:

- **-1783 cfs** 14-day running average for Lake Okeechobee Net Inflow through 04/02/2023. According to the classification in <u>Tributary Hydrologic Conditions</u> table, this condition is Dry.
- **-2.24** for Palmer Drought Index on 04/01/2023. According to the classification in <u>Tributary Hydrologic Conditions</u> table, this condition is Dry.

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

LORS2008 Classification Tables:

Lake Okeechobee Stage on 04/03/2023:

Lake Okeechobee Stage: 14.50 feet

	ee Management /Band	Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Manage	ement Band	17.23	
0	High sub-band	16.48	
Operational Band	Intermediate sub-band	15.48	
	Low sub-band	13.50	← 14.50 ft
Base Flow sub-ba	nd	12.60	
Beneficial Use sub	o-band	11.65	
Water Shortage M	lanagement Band		

Part C of LORS2008: Discharge to WCAs

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.

<u>Lake Okeechobee Releases to the Caloosahatchee Estuary for LORS 2008 Baseflow &</u> for Environmental Water Supply

Guidance for Lake Okeechobee Releases to the Caloosahatchee Estuary indicates no S77 release to the Caloosahatchee Estuary unless the Governing Board recommends otherwise.

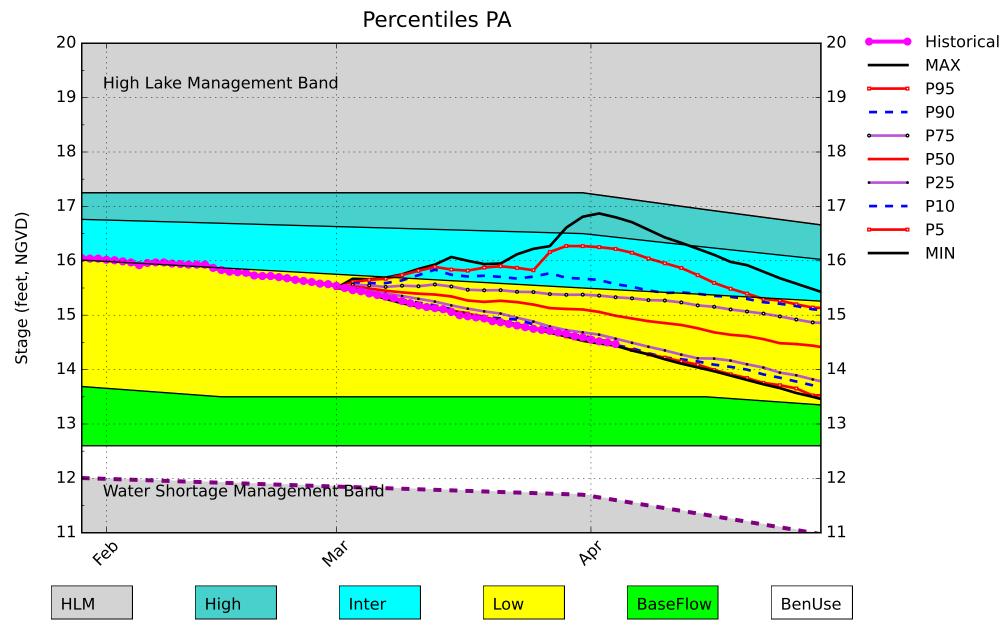
<u>LORS2008 Implementation on 04/03/2023 (ENSO Condition- Neutral Watch)</u>: Status for week ending 04/03/2023:

Water Supply Risk Evaluation

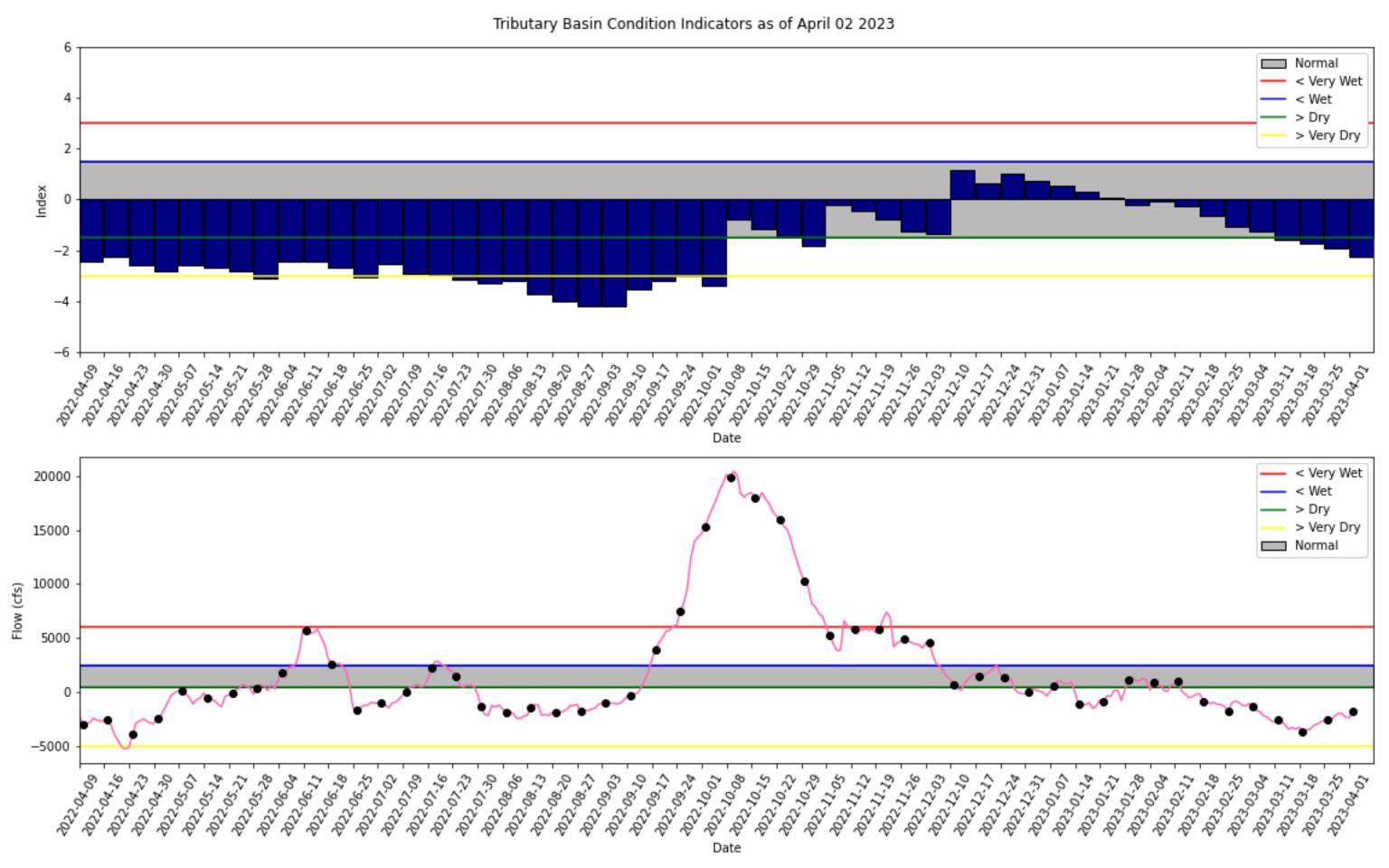
Area	Indicator	Value	Color Coded Scoring Scheme
	Projected LOK Stage for the next two months	Low Sub-band	M
	Palmer Drought Index for LOK Tributary Conditions	-2.24 (Extremely Dry)	Н
	CPC Precipitation Outlook	1 month: Equal Chances	L
LOK	CPC Precipitation Outlook	3 months: Equal Chances	L
	LOK Seasonal Net Inflow Outlook	2.09 ft	
	ENSO Forecast	Normal to Extremely Wet	_
	LOK Multi-Seasonal Net Inflow Outlook	2.67 ft	M
	ENSO Forecast	Normal	IVI
	WCA 1: 3 Station Average (Sites 1-8C)	Above Line 1 (16.02 ft)	L
WCAs	WCA 2A: Site S11B	Above Line 1 (11.44 ft)	L
	WCA-3A: 3 Station Average (Sites 63, 64, and 65)	Above Line 1 (8.93 ft)	L
	Service Area 1	Year-Round Irrigation Rule in effect	L
LEC	Service Area 2	Year-Round Irrigation Rule in effect	L
	Service Area 3	Year-Round Irrigation Rule in effect	Г

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 March 2023 Position Analysis

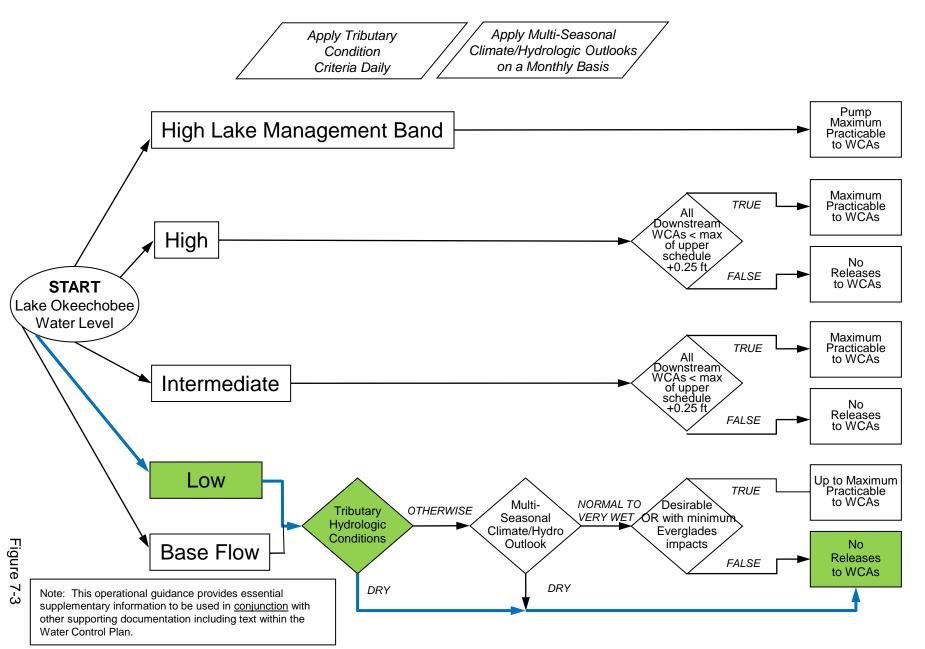


(See assumptions on the Position Analysis Results website)



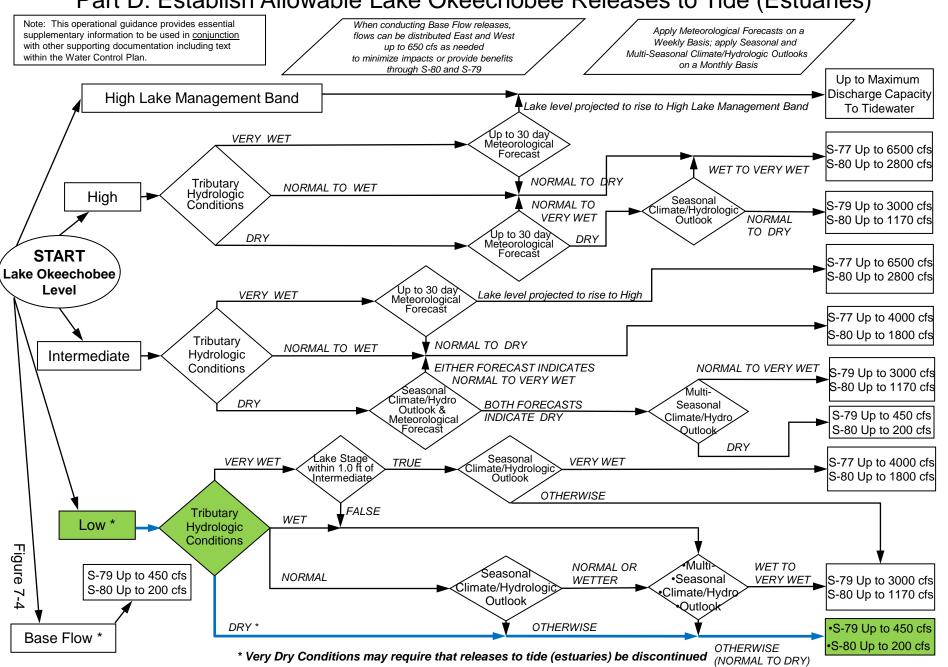
2008 LORS

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

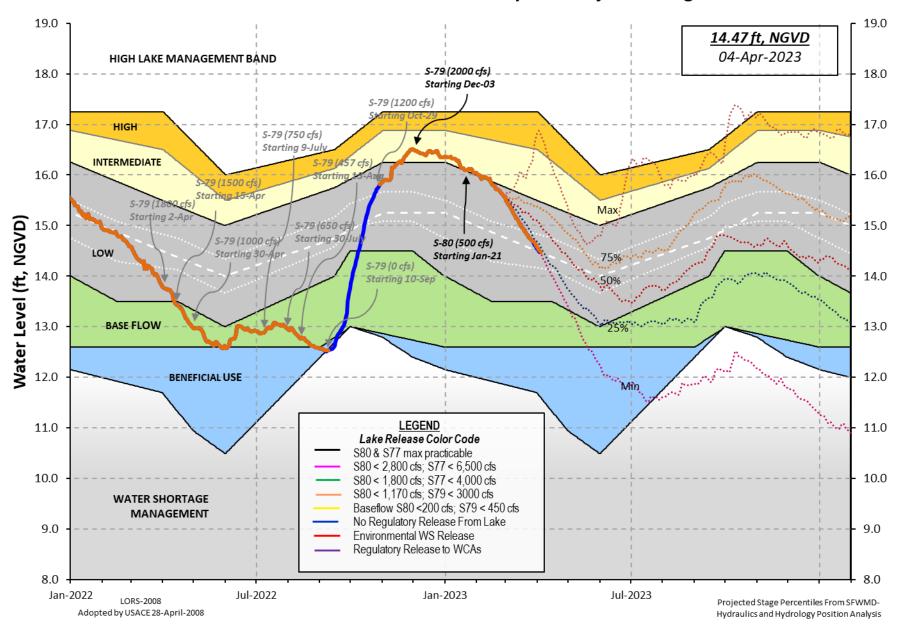


2008 LORS

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



Lake Okeechobee Water Level History and Projected Stages



4/3/23, 10:10 AM oke

Data Ending 2400 hours 02 APR 2023

```
Okeechobee Lake Regulation
                                Elevation
                                             Last Year
                                                        2YRS Ago
                                 (ft-NGVD)
                                             (ft-NGVD)
                                                        (ft-NGVD)
  *Okeechobee Lake Elevation
                                    14.50
                                                13.75
                                                         14.37 (Official Elv)
  Bottom of High Lake Mngmt= 17.23 Top of Water Short Mngmt= 11.65
  Currently in Operational Management Band
  Simulated Average LORS2008 [1965-2000]
                                             13.01
  Difference from Average LORS2008
                                             1.49
  02APR (1965-2007) Period of Record Average
                                                 14.27
  Difference from POR Average
                                                 0.23
  Today Lake Okeechobee elevation is determined from the 4 Int & 4 Edge stations
  ++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ♦ 8.44'
  ++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 � 6.64'
  Bridge Clearance = 49.17'
4 Interior and 4 Edge Okeechobee Lake Average (Avg-Daily values):
  L001
         L005
                L006
                       LZ40
                              S4
                                             S308
                                                    S133
                                      S352
  14.58
        14.51
                14.48 14.46 14.40
                                     14.60
                                              14.29 14.48
 *Combination Okeechobee Avg-Daily Lake Average =
                                                    14.50
                                                    (*See Note)
Okeechobee Inflows (cfs):
  S65E
                  485
                           S65EX1
                                                     Fisheating Cr
  S154
                    0
                           S191
                                              0
                                                     S135 Pumps
                                                                       0
                    0
                           S133 Pumps
                                              0
                                                     S2 Pumps
  S84
                                                                       a
                    0
  S84X
                           S127 Pumps
                                              0
                                                     S3 Pumps
                                                                       0
  S71
                    0
                           S129 Pumps
                                              0
                                                     S4 Pumps
  S72
                    0
                           S131 Pumps
                                              0
                                                     C5
                                                                       0
Total Inflows:
                  485
Okeechobee Outflows (cfs):
  S135 Culverts
                           S354
                                            126
                                                     S77
                                                                     2028
                    a
                    0
                                            995
  S127 Culverts
                           S351
                                                     S308
                                                                     514
  S129 Culverts
                    0
                           S352
                                            691
  S131 Culverts
                    0
                           L8 Canal Pt
                                            237
Total Outflows:
                  4591
****S77 structure flow is being used to compute Total Outflow.
****S308 below flow meter is being used to compute Total Outflow.
Okeechobee Pan Evaporation (inches):
                 0.26
                           S308
                                           -NR-
  Average Pan Evap x 0.75 Pan Coefficient = -NR-" =
Lake Average Precipitation using NEXRAD: = -NR-" =
                                          = -NR-" = -NR-'
Evaporation - Precipitation:
Evaporation - Precipitation using Lake Area of 730 square miles
```

is equal to -NR-Lake Okeechobee (Change in Storage) Flow is -4235 cfs or -8400 AC-FT

```
----- Gate Positions -----
             Headwater Tailwater
             Elevation Elevation Disch #1 #2 #3 #4 #5 #6 #7 #8
                                  (cfs) (ft) (ft) (ft) (ft) (ft) (ft)
             (ft-msl) (ft-msl)
                               (I) see note at bottom
North East Shore
 S133 Pumps: 13.42
                         14.57
                                     0
                                            0
                                                 a
                                                                  (cfs)
 S193:
 S191:
               18.57
                         14.53
                                          0.0
                                               0.0
                                                    0.0
                                     0
 S135 Pumps: 13.19
                         14.38
                                                 0
                                     0
                                            0
                                                      0
                                                           0
                                                                   (cfs)
 S135 Culverts:
                                     0
                                          0.0
                                              0.0
North West Shore
 S65E:
              20.97
                         14.44
                                   485
                                         -0.0 0.5
                                                    0.0 0.5 0.1 0.2
 S65EX1:
               20.97
                         14.44
                                     0
 S127 Pumps: 13.42
                         14.51
                                     0
                                            0
                                                 0
                                                      0
                                                           0
                                                                   (cfs)
 S127 Culvert:
                                     0
                                          0.0
 S129 Pumps: 13.15
                                     0
                                            0
                                                                   (cfs)
                         14.47
                                                 0
                                                      0
 S129 Culvert:
                                          0.0
 S131 Pumps: 12.82
                          -NR-
                                     0
                                            0
                                                                   (cfs)
                                                 0
 S131 Culvert:
                                     0
 Fisheating Creek
   nr Palmdale
                         27.58
   nr Lakeport
                         -NR-
                                           -NR- -NR- -NR-
 C5:
South Shore
                          -NR-
 S4 Pumps:
               11.98
                                     0
                                                 0
                                                                   (cfs)
               14.43
                                  -NR-
                                         -NR- -NR- -NR-
 S169:
                          -NR-
 S310:
               14.42
                                     2
 S3 Pumps:
               10.87
                         14.44
                                            0
                                                 0
                                                                   (cfs)
                                     0
                                                      0
 S354:
               14.44
                         10.87
                                   126
                                          0.4
                                              0.4
                         14.44
 S2 Pumps:
               10.85
                                     0
                                            0
                                                 0
                                                      0
                                                                   (cfs)
               14.44
                         10.85
                                   995
                                          1.1 1.5
 S351:
                                                    1.3
               14.49
                         11.32
                                   691
                                          0.0 3.2
 S352:
 C10A:
                -NR-
                          -NR-
                                         -NR-
                                              -NR-
                                                   -NR-
                                                           -NR-
 L8 Canal PT
                         14.43
                                   237
                  S351 and S352 Temporary Pumps/S354 Spillway
 S351:
               10.85
                         14.44
                                   995
                                       -NR--NR--NR--NR--NR-
 S352:
               11.32
                         14.49
                                   691
                                       -NR - -NR - -NR - -NR -
 S354:
               10.87
                         14.44
                                   126 -NR--NR--NR-
Caloosahatchee River (S77, S78, S79)
 S47B:
               13.89
                         12.25
                                          1.2 1.2
 S47D:
               12.30
                         10.79
                                          0.0
 S77:
   Spillway and Sector Preferred Flow:
                        10.71
                                  2023 3.0 3.0 2.5 0.0
               14.18
                                     5
   Flow Due to Lockages+:
```

S78:

4/3/23, 10:10 AM oke

Spillway and Sector Flow:

10.68 2.83 1560 0.5 2.5 2.5 0.0

Flow Due to Lockages+: 15

S79:

Spillway and Sector Flow:

3.03 1.41 2205 0.0 0.0 1.0 2.0 2.0 2.0 2.0 0.0

Flow Due to Lockages+: 9
Percent of flow from S77 92%
Chloride (ppm) 0

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Preferred Flow:

14.27 14.33 514 0.0 3.0 3.0 0.0

Flow Due to Lockages+: 0

S153: 18.69 14.05 0 0.0 0.0

S80:

Spillway and Sector Flow:

14.26 0.83 516 0.0 0.5 0.0 0.0 0.0 0.5 0.0

Flow Due to Lockages+: 22 Percent of flow from S308 100%

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

				Wi	nd
Daily Precipitation Totals	1-Day	3-Day	7-Day	Directio	n Speed
	(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:	-NR-	0.00	0.00	272	8
S78:	-NR-	0.00	0.00	301	4
S79:	-NR-	0.00	0.00	258	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		
•	-NR-	0.00	0.00		
S308:	-NR-	0.00	0.00	92	7
S80:	-NR-	0.00	0.00	85	2
Okeechobee Average	-NR-	0.00	0.00		
(Sites S78, S79 and					
Oke Nexrad Basin Avg	-NR-	0.00	0.00		

Okeechobee Lake Elevations 02 APR 2023 02APR23 -1 Day = 01 APR 2023 14.50 Difference from 02APR23 14.52 0.02 4/3/23, 10:10 AM oke

```
0.05
02APR23
        -2 Days =
                         31 MAR 2023
                                               14.55
        -3 Days =
                         30 MAR 2023
                                               14.59
                                                                 0.09
02APR23
        -4 Days =
                                               14.61
                         29 MAR 2023
                                                                 0.11
02APR23
02APR23
        -5 Days =
                         28 MAR 2023
                                               14.66
                                                                 0.16
02APR23
        -6 Days =
                         27 MAR 2023
                                               14.68
                                                                 0.18
                         26 MAR 2023
02APR23
        -7 Days =
                                               14.71
                                                                 0.21
                         03 MAR 2023
                                               15.44
                                                                 0.94
02APR23 -30 Days =
                         02 APR 2022
                                               13.75
                                                                 -0.75
02APR23 -1 Year =
02APR23 -2 Year =
                         02 APR 2021
                                               14.37
                                                                 -0.13
```

Long Term Mean 30day Avearge ET for Lake Alfred (Inches) = -NR-

	Lake Okeechobee	Net Inflow (LONIN)	
Aver	age Flow over the	previous 14 days	Avg-Daily Flow
02APR23 Today =	02 APR 2023	-1663 MON	354
02APR23 -1 Day =	01 APR 2023	-2305 SUN	-3153
02APR23 -2 Days =	31 MAR 2023	-2226 SAT	-5676
02APR23 -3 Days =	30 MAR 2023	-1940 FRI	-446
02APR23 -4 Days =	29 MAR 2023	-1948 THU	-5741
02APR23 -5 Days =	28 MAR 2023	-2178 WED	435
02APR23 -6 Days =	27 MAR 2023	-2693 TUE	-2564
02APR23 -7 Days =	26 MAR 2023	-2551 MON	-298
02APR23 -8 Days =	25 MAR 2023	-2590 SUN	76
02APR23 -9 Days =	24 MAR 2023	-2759 SAT	-1553
02APR23 -10 Days =	23 MAR 2023	-2929 FRI	-1166
02APR23 -11 Days =	22 MAR 2023	-3108 THU	-1291
02APR23 -12 Days =	21 MAR 2023	-3431 WED	-1811
02APR23 -13 Days =	20 MAR 2023	-3481 TUE	-452

					Se	55E			
				Average	Flov	v over	previous	14 days	Avg-Daily Flow
02APR23		Today	/=	02	APR	2023	617	MON	559
02APR23	-1	Day	=	01	APR	2023	621	SUN	600
02APR23	-2	Days	=	31	MAR	2023	621	SAT	501
02APR23	-3	Days	=	30	MAR	2023	634	FRI	732
02APR23	-4	Days	=	29	MAR	2023	630	THU	786
02APR23	-5	Days	=	28	MAR	2023	627	WED	604
02APR23	-6	Days	=	27	MAR	2023	631	TUE	597
02APR23	-7	Days	=	26	MAR	2023	634	MON	608
02APR23	-8	Days	=	25	MAR	2023	644	SUN	607
02APR23	-9	Days	=	24	MAR	2023	652	SAT	601
02APR23	-10	Days	=	23	MAR	2023	661	FRI	604
02APR23	-11	Days	=	22	MAR	2023	670	THU	629
02APR23	-12	Days	=	21	MAR	2023	680	WED	611
02APR23	-13	Days	=	20	MAR	2023	684	TUE	598

_											
						Sé	55EX1				
					Average	Flov	v over	previous	14 days		Avg-Daily Flow
	02APR23		Today	/=	02	APR	2023	0	MON		0
	02APR23	-1	Day	=	01	APR	2023	0	SUN	ĺ	0
	02APR23	-2	Days	=	31	MAR	2023	0	SAT	ĺ	0
	02APR23	-3	Days	=	30	MAR	2023	0	FRI	Ì	0
	02APR23	-4	Days	=	29	MAR	2023	0	THU	Ì	0
	02APR23	-5	Days	=	28	MAR	2023	0	WED	Ì	0
	02APR23	-6	Days	=	27	MAR	2023	0	TUE	Ì	0
	02APR23	-7	Days	=	26	MAR	2023	0	MON	Ì	0
	02APR23	-8	Days	=	25	MAR	2023	0	SUN	Ì	0
	02APR23	-9	Days	=	24	MAR	2023	0	SAT	Ì	0
	02APR23	-10	Days	=	23	MAR	2023	0	FRI	Ì	0
	02APR23	-11	Days	=	22	MAR	2023	0	THU	i	0
	02APR23	-12	Days	=	21	MAR	2023	0	WED	i	0
	02APR23		-			MAR	2023	0	TUE	j	0
			-								

oke

Lake Okeechobee Outlets Last 14 Days

S-77 Discharge (ALL DAY) (AC-FT) 4027 2922 3275 4554 5429 4148 2961 2855 2798 3561 4626 4742 3941 2906	Below S-77 Discharge (ALL-DAY) (AC-FT) 3269 2574 3271 3723 5504 4383 3195 2896 3881 5162 4644 4542 3848 3038	S-78 Discharge (ALL DAY) (AC-FT) 3132 2322 2562 3492 3993 3633 2451 1617 2985 3887 3659 3242 3139 2881	S-79 Discharge (ALL DAY) (AC-FT) 4410 3111 3628 5173 5428 4639 3336 2955 3465 4411 4989 4303 3432 3476	
S-310 Discharge (ALL DAY) (AC-FT) 5 30 31 22 181 107 117 54 26 131 115 128 4 184	S-351 Discharge (ALL DAY) (AC-FT) 1973 1490 1001 1484 1566 1639 1734 1976 2263 2477 2199 2125 2346 1790	S-352 Discharge (ALL DAY) (AC-FT) 1370 1170 615 677 684 774 354 641 963 1214 1166 1033 1055 736	S-354 Discharge (ALL DAY) (AC-FT) 250 0 126 632 1243 966 887 958 806 1034 897 438 765	L8 Canal Pt Discharge (ALL DAY) (AC-FT) 470 679 638 672 736 775 755 724 727 705 730 729 706 705
S-308 Discharge (ALL DAY) (AC-FT) -1589 190 -1216 -181 681 845 710 718 794 773 603 815 812 815	Below S-308 Discharge (ALL-DAY) (AC-FT) -NRNRNRNRNRNRNRNR			

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

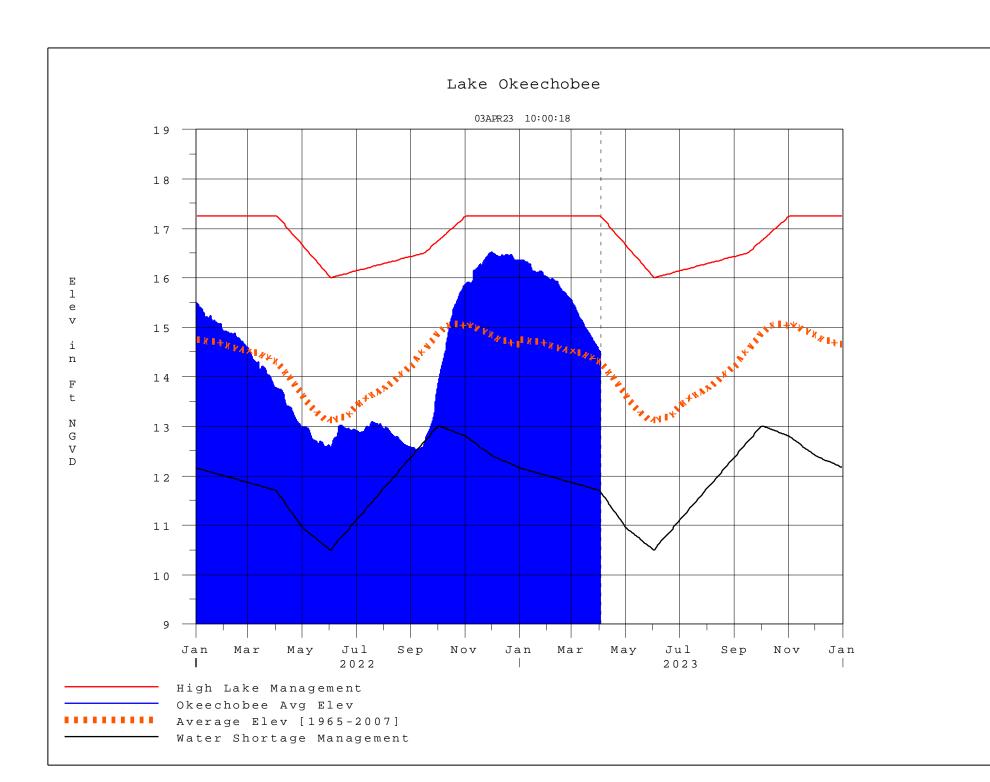
⁽I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

4/3/23, 10:10 AM

* On 11 May 1000 Lake Okeashahaa Flavation was switched from

- * 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
- ++ 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 03APR2023 @ 10:07 ** Preliminary Data - Subject to Revision **



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	Palmer Index	2-wk Mean L.O. Net
Classification*	Class Limits	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	Equivalent Depth**	Lake Okeechobee
[million acre-feet]	[feet]	Net Inflow
	20003	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	Equivalent Depth**	Lake Okeechobee		
[million acre-feet]	[feet]	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