

Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 5/29/2017 (ENSO Neutral Condition)

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 Neutral years³ and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with Neutral 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 Neutral ENSO Years ³		Sub-sampling of AMO Warm + Neutral ENSO Years ⁴	
	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition	Value (ft)	Condition
Current (May-Oct)	N/A	N/A	2.51	Very Wet	2.48	Very Wet	3.44	Very Wet
Multi Seasonal (May-Apr)	N/A	N/A	2.87	Wet	3.58	Wet	4.08	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.

[Tributary Hydrologic Conditions Graph:](#)

-2619 cfs 14-day running average for Lake Okeechobee Net Inflow through 5/29/2017. According to the classification in [Tributary Hydrologic Conditions](#) table, this condition is Dry.

-3.68 for Palmer Index on 5/28/2017.

According to the classification in [Tributary Hydrologic Conditions](#) table, this condition is Very Dry.

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

[LORS2008 Classification Tables:](#)

Lake Okeechobee Stage on 5/29/2017

Lake Okeechobee Stage: **11.05 feet**

[USACE Report for Lake Okeechobee](#)

[Lake Okeechobee Stage Hydrograph](#)

Lake Okeechobee Management Zone/Band		Bottom Elevation (feet, NGVD)	Current Lake Stage
High Lake Management Band		16.06	
Operational Band	High sub-band	15.55	
	Intermediate sub-band	15.02	
	Low sub-band	13.03	
Base Flow sub-band		12.60	
Beneficial Use sub-band		10.53	← 11.05
Water Shortage Management Band			

[Part C of LORS2008: Discharge to WCA's](#)

Release Guidance Flow Chart Outcome: No releases to the WCAs.

[Part D of LORS2008: Discharge to Tidewater](#)

Release Guidance Flow Chart Outcome: No releases to the Estuaries.

Technical Input Summaries from:

- [Lake Okeechobee Division](#)
- [Coastal Ecosystems](#)
- [Everglades Ecosystems Division](#)
- [Water Supply Department](#)
- [Water Resource Management Release Recommendation](#)
- [Kissimmee Watershed Environmental Conditions](#)
- [Operations Department](#)

[Back to Lake Okeechobee Operations Main Page](#)

[Back to U.S. Army Corps of Engineers LORSS Homepage](#)

LORS2008 Implementation on 5/29/2017 (ENSO Neutral Condition):

Status for week ending 5/29/2017:

District wide, Raindar rainfall was 1.24 inches for the week. Lake stage on 5/29/2017 was 11.05 ft, down 0.11 ft from last week.

The updated May 2017 SFWMM Dynamic Position Analysis [percentile graph](#) for Lake Okeechobee show that the current lake stage is in the Beneficial Use Operational Sub-Band.

The LORS2008 tributary [indices](#) are classified as **Dry**. The PDSI indicates very dry condition and the LONIN is Dry. The classification is based on the wetter of the two.

Water Supply Risk Evaluation

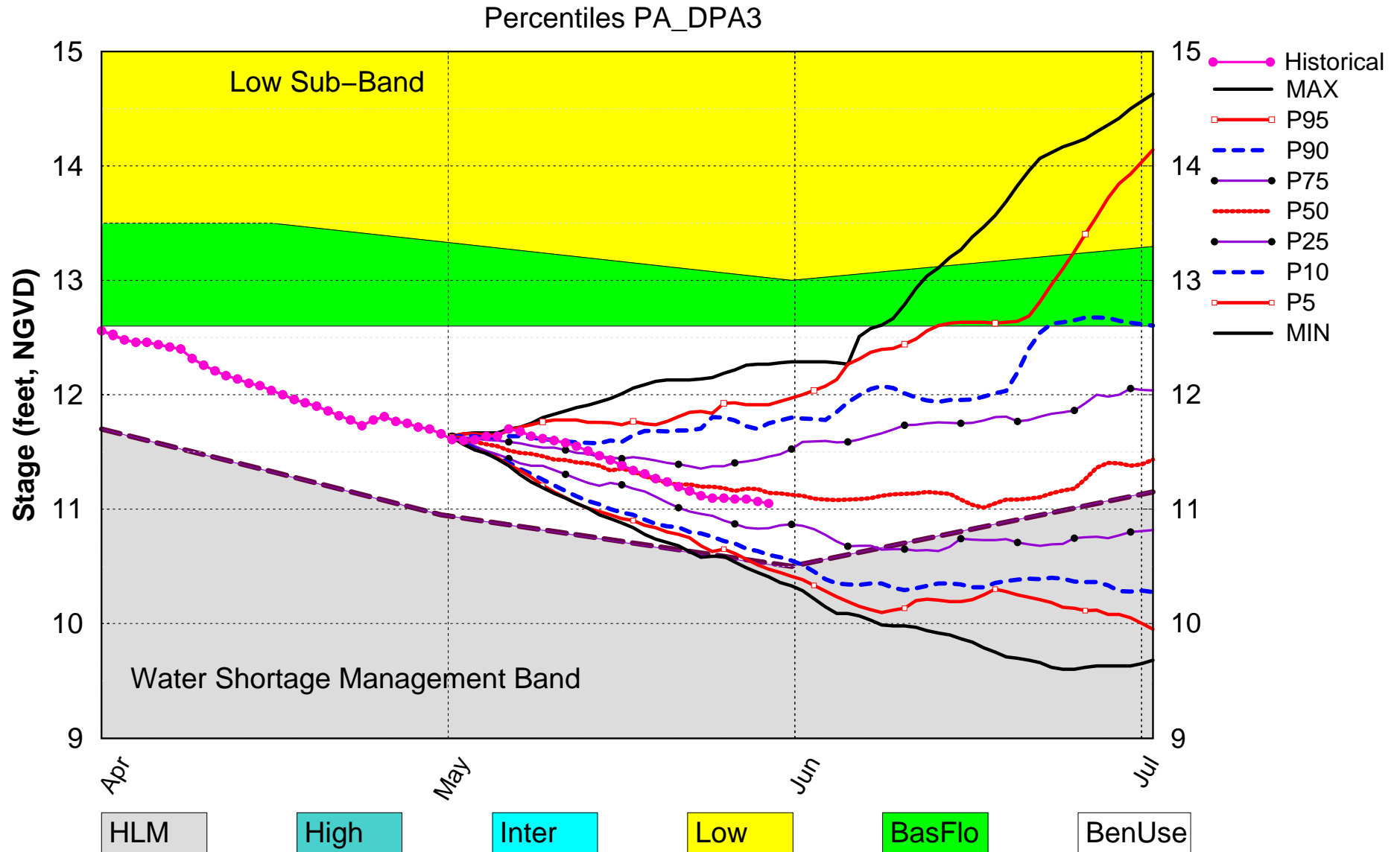
Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Beneficial Use Sub-Band	M
	Palmer Index for LOK Tributary Conditions	-3.75 (Extremely Dry)	H
	CPC Precipitation Outlook	1 month: Normal	L
		3 months: Normal	L
	LOK Seasonal Net Inflow Outlook	2.48 ft (Normal)	L
	ENSO La Nina Years		L
	LOK Multi-Seasonal Net Inflow Outlook		L
WCAs	ENSO La Nina Years	3.58 ft (Wet)	L
	WCA 1: Site 1-7, Site 1-8T, & Site 1-9 Average	Above Line 1 (16.00 ft)	L
	WCA 2A: Site 2-17 HW	Above Line 1 (11.79 ft)	L
LEC	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (8.58 ft)	L
	Service Area 1	Year-Round Irrigation Rule in effect	L
	Service Area 2	Year-Round Irrigation Rule in effect	L
LEC	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.

[Back to Lake Okeechobee Operations Main Page](#)

[Back to U.S. Army Corps of Engineers LORSS Homepage](#)

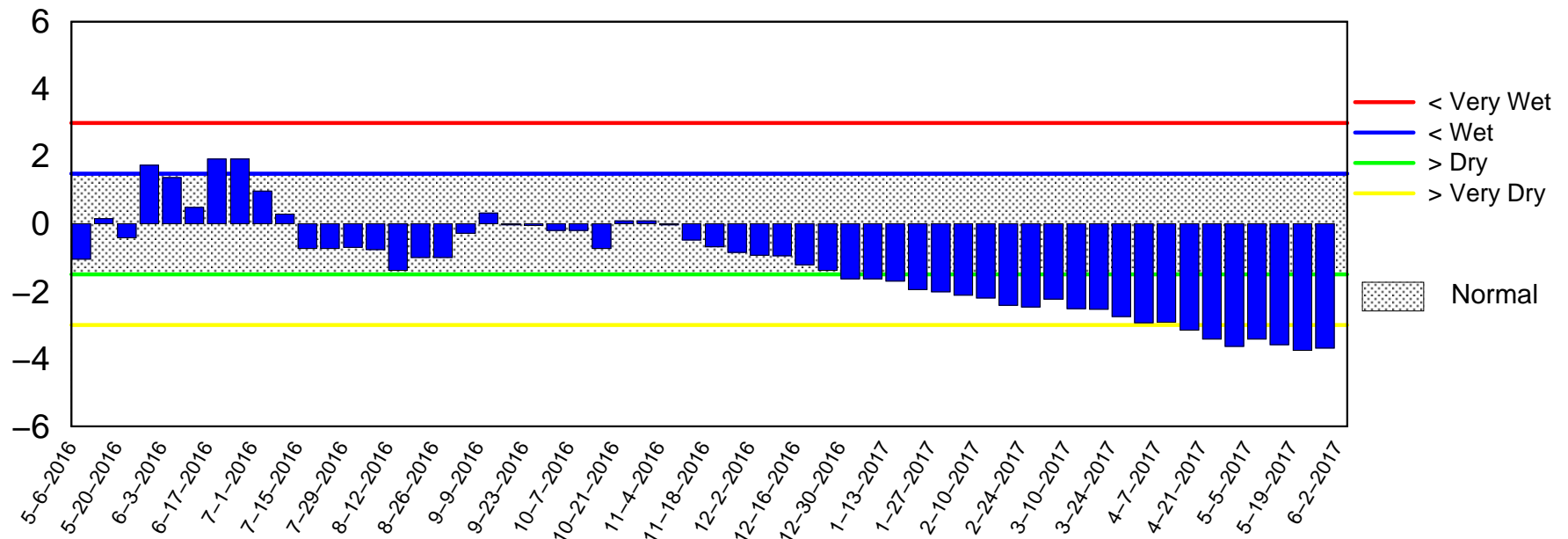
Lake Okeechobee SFWMM May 2017 Dynamic Position Analysis



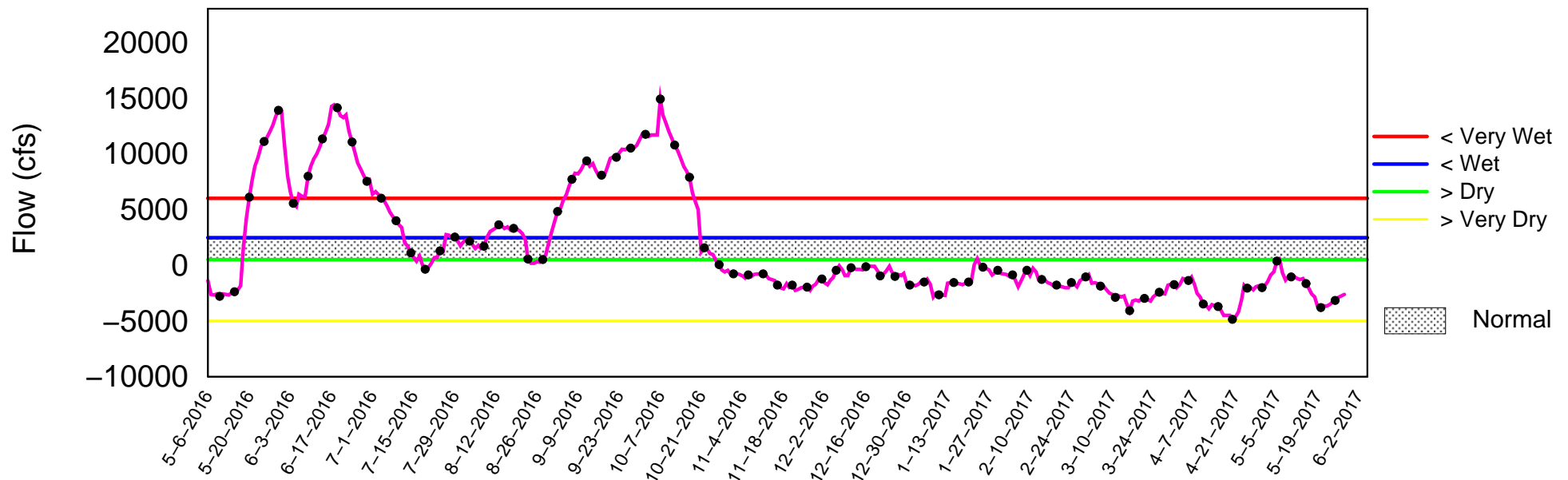
(See assumptions on the Position Analysis Results website)

Tributary Basin Condition Indicators as of May 29 2017

Palmer Index

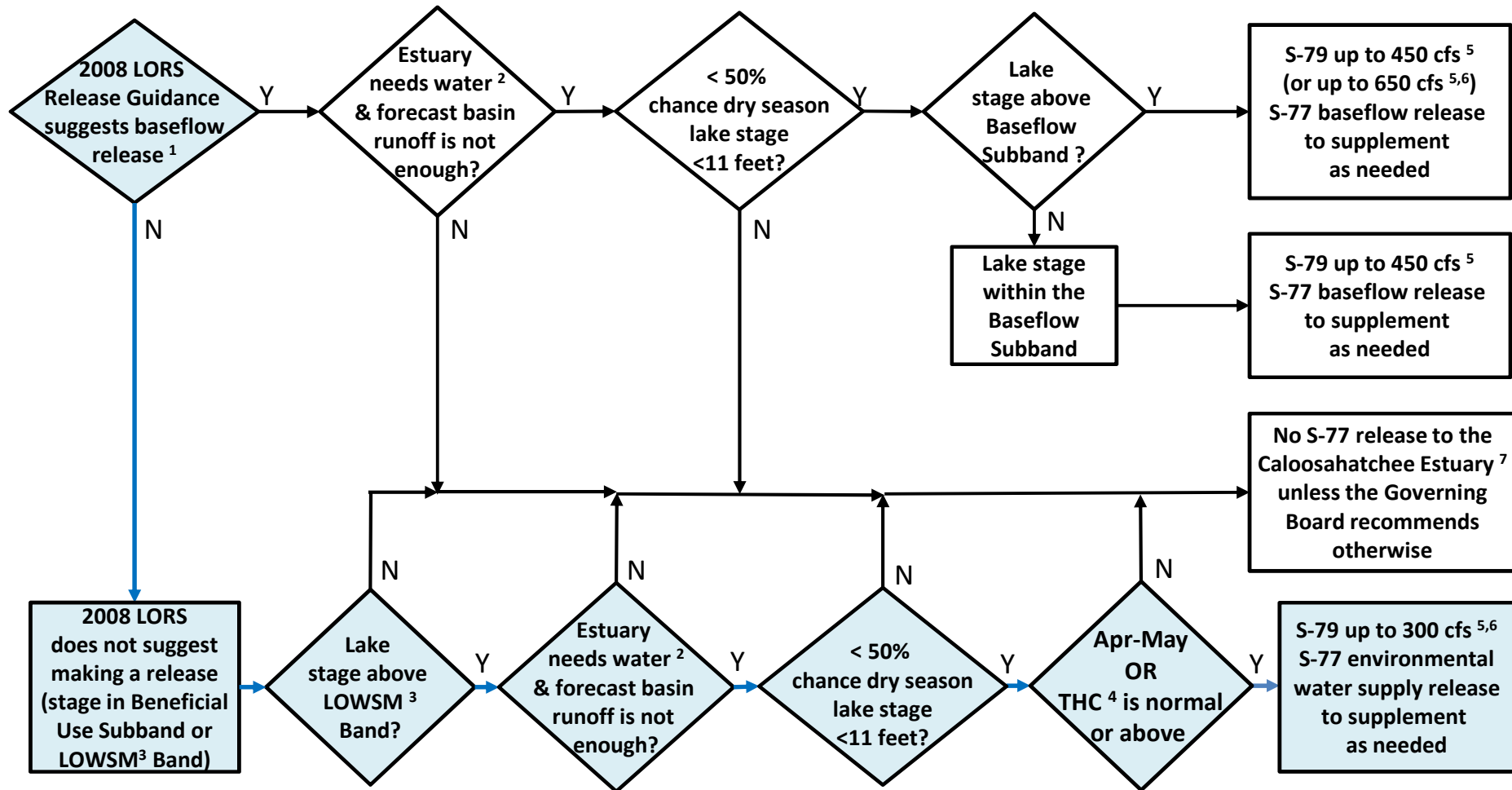


Lake Okeechobee Net Inflow (LONIN) 14-day Running Average



Tue May 30 08:46:56 EDT 2017

Flowchart to Guide Recommendations for Lake Okeechobee Releases to the Caloosahatchee Estuary for 2008 LORS Baseflow & for Environmental Water Supply (revised 9-Aug-2012)



¹The 2008 LORS Release Guidance (Part D) can suggest baseflow releases in the Intermediate, Low, or Baseflow Subbands.

²Estuary “needs” water when the 30-day moving average salinity at I-75 bridge is projected to exceed 5 practical salinity units (psu) within 2 weeks.

³LOWSM = Lake Okeechobee Water Shortage Management.

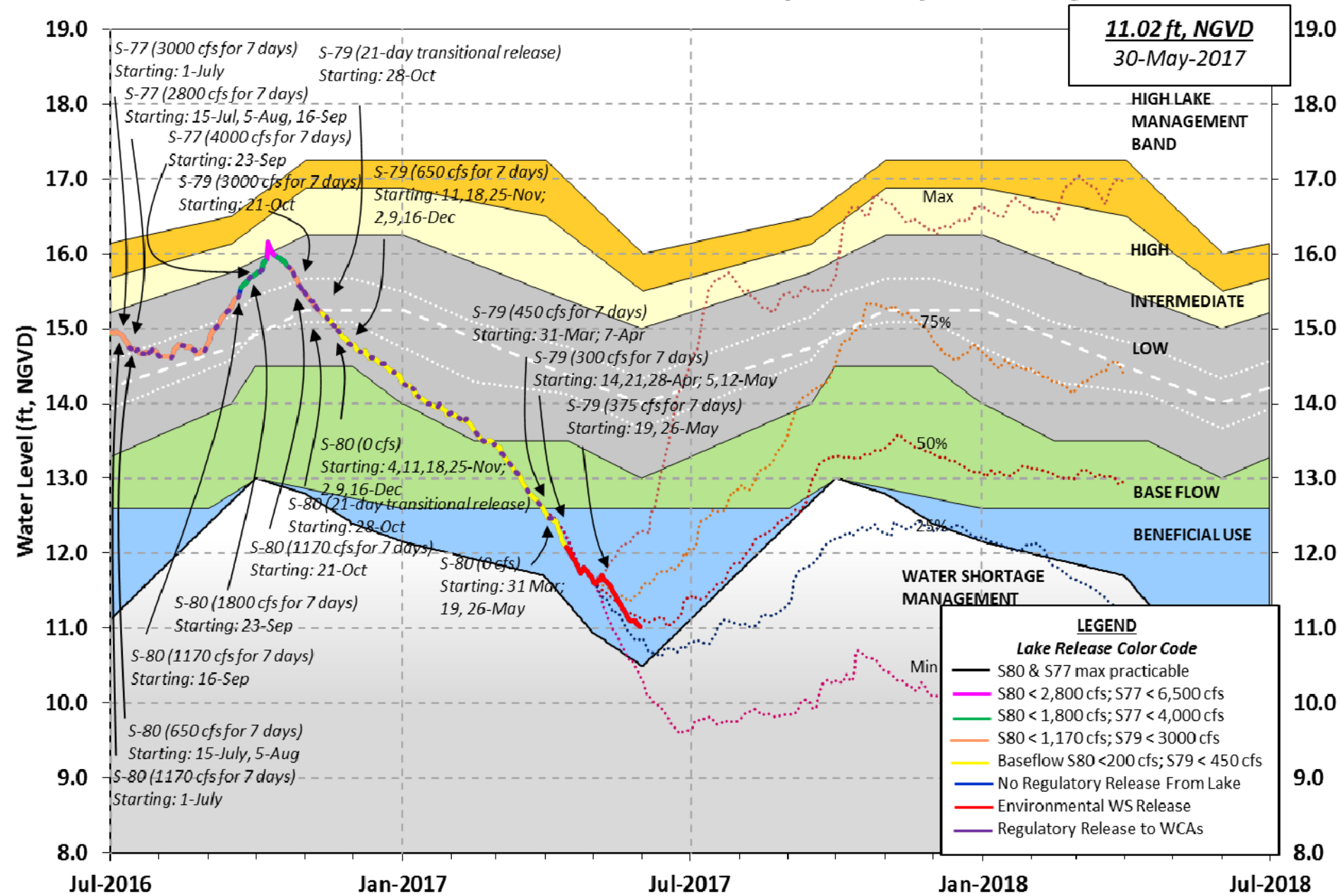
⁴Tributary Hydrologic Condition (THC) is based on classification of Lake Okeechobee Net Inflow and Palmer Index.

⁵Can release less than the “up to” limit if lower release is sufficient to reach or sustain desired estuary salinity; cfs = cubic feet per second.

⁶After reviewing conditions in Water Conservation Areas (WCAs), Stormwater Treatment Areas (STAs), ENP, St. Lucie Estuary and Lake Okeechobee.

⁷Should this condition be reached, the Governing Board will be briefed at their next regularly scheduled meeting as part of the State of the Water Resources agenda item.

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 29 MAY 2017

Okeechobee Lake Regulation	Elevation	Last Year	2YRS Ago
	(ft-NGVD)	(ft-NGVD)	(ft-NGVD)
*Okeechobee Lake Elevation	11.02	14.40	12.76 (Official Elv)
Bottom of High Lake Mngmt= 16.06 Top of Water Short Mngmt= 10.53			
Currently in Operational Management Band			

Simulated Average LORS2008 [1965-2000]	11.96
Difference from Average LORS2008	-0.94

29MAY (1965-2007) Period of Record Average	13.14
Difference from POR Average	-2.12

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

++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 4.96'

++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 3.16'

Bridge Clearance = 52.59'

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

L001	L005	L006	LZ40	S4	S352	S308	S133
10.85	10.99	11.13	11.02	11.00	11.23	11.03	10.95

*Combination Okeechobee Avg-Daily Lake Average = 11.02
(*See Note)

Okeechobee Inflows (cfs):

S65E	0	S65EX1	121	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:	121				

Okeechobee Outflows (cfs):

S135 Culverts	0	S354	349	S77	224
S127 Culverts	0	S351	412	S308	0
S129 Culverts	0	S352	46		
S131 Culverts	0	L8 Canal Pt	-110		
Total Outflows:	920				

S169:	10.91	10.84	149	5.0	5.0	5.0			
S310:	10.92		137						
S3 Pumps:	10.05	10.99	0	0	0	0			(cfs)
S354:	10.99	10.05	349	1.2	1.4				
S2 Pumps:	10.06	10.98	0	0	0	0	0		(cfs)
S351:	10.98	10.06	412	1.6	1.5	1.4			
S352:	11.14	10.20	46	0.0	0.0				
C10A:	-NR-	11.23		8.0	8.0	8.0	0.0	0.0	
L8 Canal PT		11.06	-110						

S351 and S352 Temporary Pumps/S354 Spillway

S351:	10.06	10.98	412	-NR--NR--NR--NR--NR--NR-
S352:	10.20	11.14	46	-NR--NR--NR--NR-
S354:	10.05	10.99	349	-NR--NR--NR--NR-

Caloosahatchee River (S77, S78, S79)

S47B:	12.16	10.72		0.0	0.0
S47D:	10.76	10.75	9	6.2	

S77:

Spillway and Sector Flow:

	10.81	10.82	224.00	3.5	3.5	3.5	3.5
--	-------	-------	--------	-----	-----	-----	-----

Flow Due to Lockages+: 0

S77 Below USGS Flow Gage 771

S78:

Spillway and Sector Flow:

	10.61	2.96	393	0.0	0.0	0.0	1.0
--	-------	------	-----	-----	-----	-----	-----

Flow Due to Lockages+: 16

S79:

Spillway and Sector Flow:

	3.07	1.06	360	0.0	0.0	0.0	0.0	1.0	0.0	0.0
--	------	------	-----	-----	-----	-----	-----	-----	-----	-----

0.0

Flow Due to Lockages+: 12

Percent of flow from S77 62%

Chloride (ppm) 95

St. Lucie Canal (S308, S80)

S308:

Spillway and Sector Flow:

	11.02	10.91	0.00	0.0	0.0	0.0	0.0
--	-------	-------	------	-----	-----	-----	-----

Flow Due to Lockages+: 0

S308 Below USGS Flow Gage -NR-

S153:	18.45	10.72	0	0.0	0.0
-------	-------	-------	---	-----	-----

S80:

Spillway and Sector Flow:

	11.11	0.36	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
--	-------	------	---	-----	-----	-----	-----	-----	-----	-----

Flow Due to Lockages+: 21

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.

----- 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:	0.00	0.00	0.96	270 0
S78:	0.00	0.00	0.43	92 2
S79:	0.00	0.00	0.54	234 0
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:	0.00	0.00	0.28	212 6
S80:	0.00	0.00	0.03	283 2
Okeechobee Average	0.00	0.00	0.10	
(Sites S78, S79 and S80 not included)				

Oke Nexrad Basin Avg	-NR-	0.00	1.10	

Okeechobee Lake Elevations	29 MAY 2017	11.02	Difference from
29MAY17			
29MAY17 -1 Day =	28 MAY 2017	11.05	0.03
29MAY17 -2 Days =	27 MAY 2017	11.07	0.05
29MAY17 -3 Days =	26 MAY 2017	11.09	0.07
29MAY17 -4 Days =	25 MAY 2017	11.09	0.07
29MAY17 -5 Days =	24 MAY 2017	11.10	0.08
29MAY17 -6 Days =	23 MAY 2017	11.10	0.08
29MAY17 -7 Days =	22 MAY 2017	11.12	0.10
29MAY17 -30 Days =	29 APR 2017	11.66	0.64
29MAY17 -1 Year =	29 MAY 2016	14.40	3.38
29MAY17 -2 Year =	29 MAY 2015	12.76	1.74

Long Term Mean 30day Avearge ET for Lake Alfred (Inches) = 5.07

Lake Okeechobee Net Inflow (LONIN)					
Average Flow over the previous 14 days					Avg-Daily Flow
29MAY17	Today =	29 MAY 2017	-2518	TUE	-4414
29MAY17	-1 Day =	28 MAY 2017	-2623	MON	-3208
29MAY17	-2 Days =	27 MAY 2017	-2725	SUN	-3578
29MAY17	-3 Days =	26 MAY 2017	-2796	SAT	48
29MAY17	-4 Days =	25 MAY 2017	-3096	FRI	-1108
29MAY17	-5 Days =	24 MAY 2017	-3219	THU	1162
29MAY17	-6 Days =	23 MAY 2017	-3470	WED	-527
29MAY17	-7 Days =	22 MAY 2017	-3602	TUE	-3989
29MAY17	-8 Days =	21 MAY 2017	-3543	MON	-4420
29MAY17	-9 Days =	20 MAY 2017	-3690	SUN	-4187
29MAY17	-10 Days =	19 MAY 2017	-3624	SAT	-2155
29MAY17	-11 Days =	18 MAY 2017	-2699	FRI	-3687
29MAY17	-12 Days =	17 MAY 2017	-2412	THU	-1822
29MAY17	-13 Days =	16 MAY 2017	-1894	WED	-3374

S65E					
Average Flow over previous 14 days					Avg-Daily Flow
29MAY17	Today=	29 MAY 2017	0	TUE	0
29MAY17	-1 Day =	28 MAY 2017	0	MON	0
29MAY17	-2 Days =	27 MAY 2017	0	SUN	0
29MAY17	-3 Days =	26 MAY 2017	0	SAT	0
29MAY17	-4 Days =	25 MAY 2017	0	FRI	0
29MAY17	-5 Days =	24 MAY 2017	0	THU	0
29MAY17	-6 Days =	23 MAY 2017	0	WED	0
29MAY17	-7 Days =	22 MAY 2017	0	TUE	0
29MAY17	-8 Days =	21 MAY 2017	0	MON	0
29MAY17	-9 Days =	20 MAY 2017	0	SUN	0
29MAY17	-10 Days =	19 MAY 2017	0	SAT	0
29MAY17	-11 Days =	18 MAY 2017	0	FRI	0
29MAY17	-12 Days =	17 MAY 2017	0	THU	0
29MAY17	-13 Days =	16 MAY 2017	0	WED	0

S65EX1					
Average Flow over previous 14 days					Avg-Daily Flow
29MAY17	Today=	29 MAY 2017	167	TUE	121
29MAY17	-1 Day =	28 MAY 2017	170	MON	135
29MAY17	-2 Days =	27 MAY 2017	171	SUN	135
29MAY17	-3 Days =	26 MAY 2017	175	SAT	152
29MAY17	-4 Days =	25 MAY 2017	178	FRI	188
29MAY17	-5 Days =	24 MAY 2017	177	THU	156
29MAY17	-6 Days =	23 MAY 2017	179	WED	177
29MAY17	-7 Days =	22 MAY 2017	178	TUE	170
29MAY17	-8 Days =	21 MAY 2017	178	MON	194
29MAY17	-9 Days =	20 MAY 2017	178	SUN	193
29MAY17	-10 Days =	19 MAY 2017	180	SAT	193
29MAY17	-11 Days =	18 MAY 2017	186	FRI	193
29MAY17	-12 Days =	17 MAY 2017	191	THU	157

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)
29 MAY 2017	472	1529	808	734
28 MAY 2017	238	1301	1050	1318
27 MAY 2017	63	965	-NR-	1778
26 MAY 2017	-84	348	342	857
25 MAY 2017	594	696	11	4
24 MAY 2017	-1	293	209	727
23 MAY 2017	950	1204	691	492
22 MAY 2017	1543	1710	910	779
21 MAY 2017	1399	2285	1071	1200
20 MAY 2017	1947	1828	1189	1199
19 MAY 2017	1186	1075	525	590
18 MAY 2017	1372	1147	266	12
17 MAY 2017	1335	1017	34	140
16 MAY 2017	1792	1871	316	463

	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)
29 MAY 2017	271	841	91	579	-219
28 MAY 2017	101	67	264	135	-210
27 MAY 2017	42	0	0	0	-193
26 MAY 2017	-4	7	3	58	-234
25 MAY 2017	86	17	113	672	-230
24 MAY 2017	47	855	500	884	-175
23 MAY 2017	375	2156	1067	1650	-174
22 MAY 2017	453	1894	1011	1602	-235
21 MAY 2017	479	1791	821	1146	-431
20 MAY 2017	354	1999	797	1295	-258
19 MAY 2017	338	2376	1001	1759	-295
18 MAY 2017	570	2538	922	1924	-282
17 MAY 2017	473	2469	1126	1900	-199
16 MAY 2017	263	2439	1178	2029	-124

	S-308	Below S-308	S-80
	Discharge	Discharge	Discharge
	(ALL DAY)	(ALL-DAY)	(ALL-DAY)
DATE	(AC-FT)	(AC-FT)	(AC-FT)
29 MAY 2017	0	-NR-	42
28 MAY 2017	0	-63	40
27 MAY 2017	-NR-	-261	49
26 MAY 2017	-1	-160	41
25 MAY 2017	-0	-302	32
24 MAY 2017	0	-NR-	19
23 MAY 2017	320	-NR-	30
22 MAY 2017	1	-NR-	42
21 MAY 2017	0	-NR-	46
20 MAY 2017	-83	-NR-	43

19 MAY 2017	187	401	30
18 MAY 2017	83	476	24
17 MAY 2017	186	430	41
16 MAY 2017	-237	183	27

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

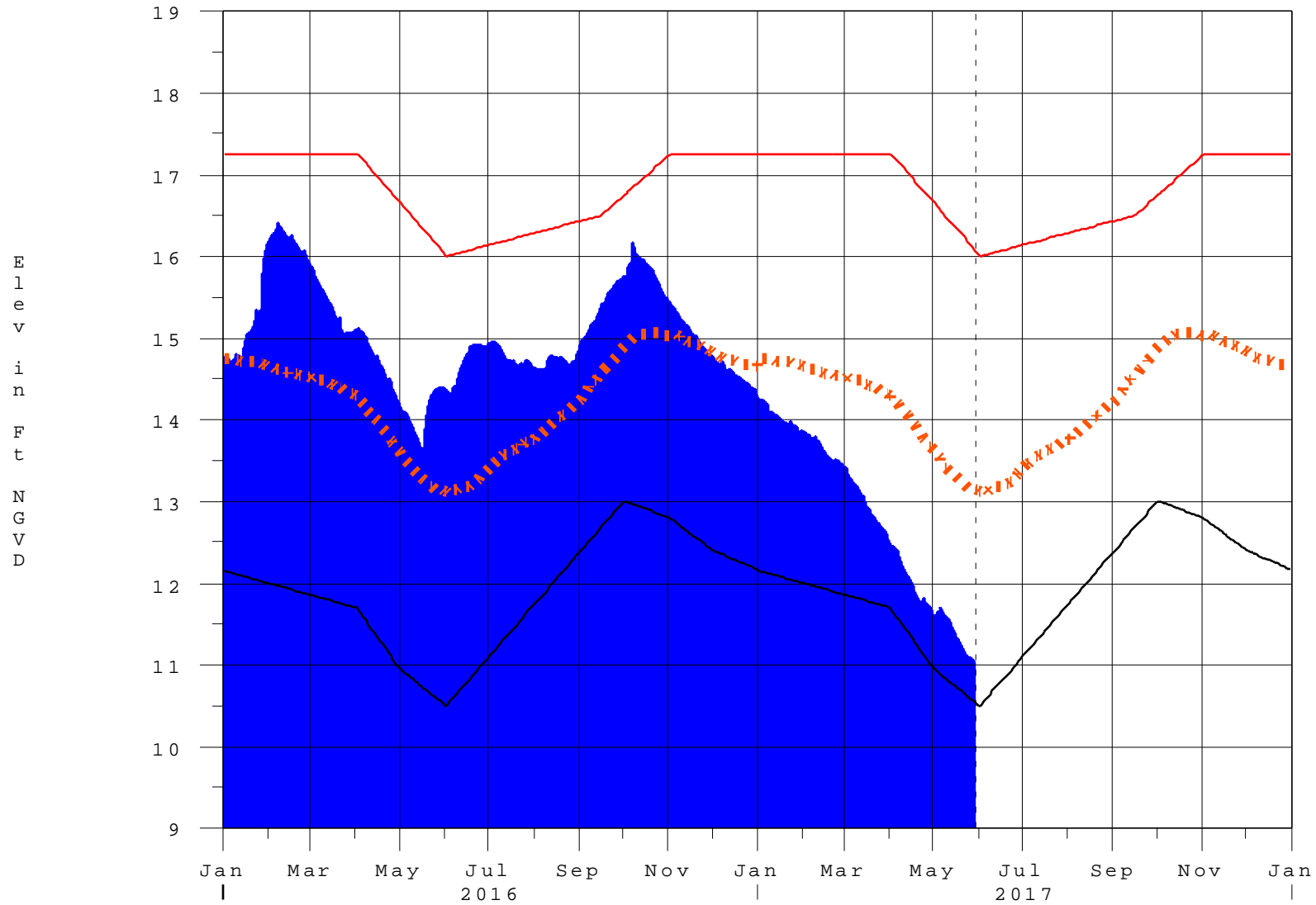
(I) - Flows preceded by "I" signify an instantaneous flow computed from the single value reported for the day

* 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 30MAY2017 @ 08:06 ** Preliminary Data - Subject to Revision
 **

Lake Okeechobee

30MAY17 08:00:22



- 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