# Application of the Lake Okeechobee Regulation Schedule (LORS2008) on 12/09/2019 (ENSO Neutral Condition)

#### **Lake Okeechobee Net Inflow Outlook:**

The Lake Okeechobee Net Inflow Outlook has been computed using 4 methods: Croley's method<sup>1</sup>, the SFWMD empirical method<sup>2</sup>, a sub-sampling of Neutral years<sup>3</sup> and a sub-sampling of warm years of the Atlantic Multi-decadal Oscillation (AMO) in combination with La Nina ENSO years<sup>4</sup>. 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                             |               | roley's<br>ethod <sup>1*</sup> | SFWMD<br>Empirical<br>Method <sup>2</sup> |           | Neutr         | ampling of<br>al ENSO<br>ears <sup>3</sup> | Sub-sampling of<br>AMO Warm +<br>Neutral ENSO<br>Years <sup>4</sup> |           |
|------------------------------------|---------------|--------------------------------|---|-----------|---------------|--|---|-----------|
|                                    | Value<br>(ft) | Condition                      | Value<br>(ft)                             | Condition | Value<br>(ft) | Condition                                  | Value<br>(ft)   | Condition |
| Current<br>(Nov-<br>Apr)           | N/A           | N/A N/A                        |   | Dry       | 0.41          | Dry  | 1.61  | Wet       |
| Multi<br>Seasonal<br>(Nov-<br>Oct) | N/A           | N/A                            | 3.02                                      | Wet       | 3.14          | Wet  | 5.47  | Very Wet  |

<sup>\*</sup>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 ENSO forecast used.

#### **Tributary Hydrologic Conditions Graph:**

- **-1660 cfs** 14-day running average for Lake Okeechobee Net Inflow through 12/09/2019. According to the classification in <u>Tributary Hydrologic Conditions</u> table, this condition is Dry.
- **-1.69** for Palmer Index on 12/07/2019. 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 12/09/2019

Lake Okeechobee Stage: 12.92 feet

**USACE** Report for Lake Okeechobee

Lake Okeechobee Stage Hydrograph

|                     | ee Management<br>/Band | Bottom Elevation (feet, NGVD) | Current Lake<br>Stage |
|---------------------|------------------------|-------------------------------|-----------------------|
| High Lake Manage    | ement Band             | 17.25                         |                       |
|                     | High sub-band          | 16.88                         |                       |
| Operational<br>Band | Intermediate sub-band  | 16.25                         |                       |
|                     | Low sub-band           | 14.35                         |                       |
| Base Flow sub-ba    | nd                     | 12.70                         | <b>←</b> 12.92        |
| Beneficial Use sub  | o-band                 | 12.39                         |                       |
| Water Shortage M    | lanagement Band        |                               |                       |

#### Part C of LORS2008: Discharge to WCA's

NO releases to the WCAs.

Part D of LORS2008: Discharge to Tidewater

Release Guidance Flow Chart Outcome: S-79 Up to 450 cfs & S-80 Up to 200 cfs.

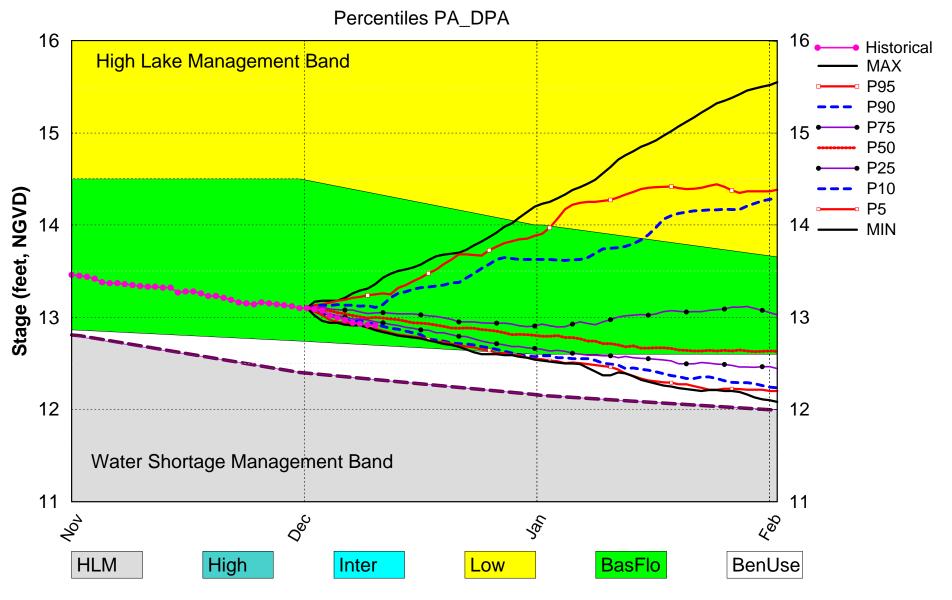
#### Adaptive Protocol's Release Guidance: Caloosahatchee Estuary

Release Guidance Flow Chart Outcome: S-79 Up to 450 cfs & S-77 baseflow release to supplement as needed.

**Back to Lake Okeechobee Operations Main Page** 

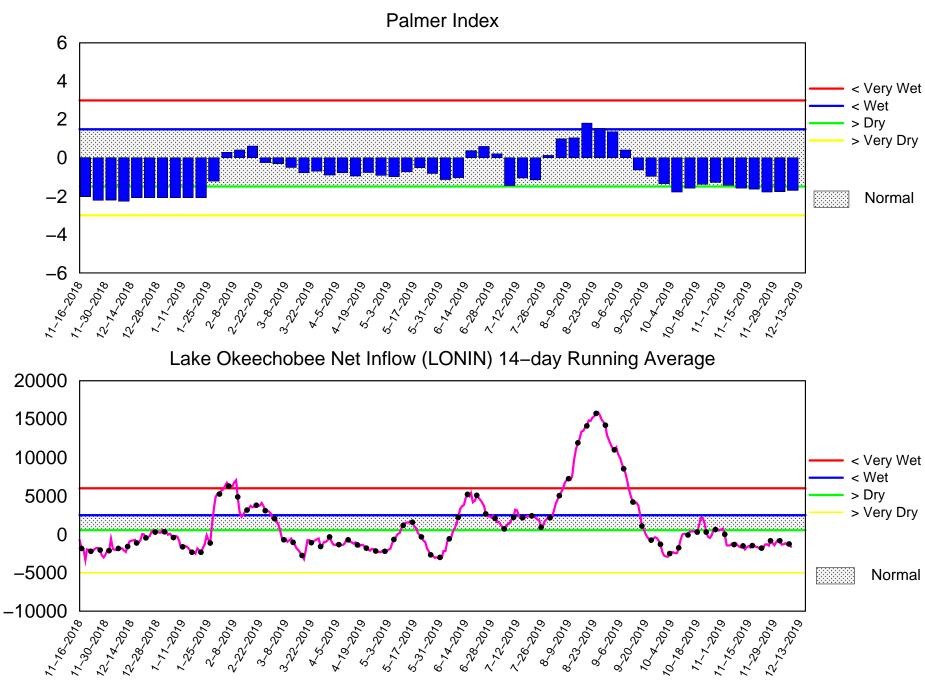
Back to U.S. Army Corps of Engineers LORSS Homepage

# Lake Okeechobee SFWMM Dec 2019 Position Analysis



(See assumptions on the Position Analysis Results website)

# Tributary Basin Condition Indicators as of December 9 2019



Flow (cfs)

Mon Dec 09 13:25:43 EST 2019

#### LORS2008 Implementation on 12/09/2019 (ENSO Neutral Condition):

#### Status for week ending 12/09/2019:

District wide, Raindar rainfall was 0.009 inches for the week. Lake stage on 12/09/2019 was 12.92 ft, NGVD, down 0.17 ft from last week. The updated December 2019 SFWMM Dynamic Position Analysis percentile graph for Lake Okeechobee show that the current lake stage is in the Base-Flow Sub-Band. The LORS2008 Tributary Hydrologic Conditions (THC) are classified as **Dry.** The PDI indicates Dry conditions and the LONIN is Dry. The THC classification is based on the wetter of the two indices.

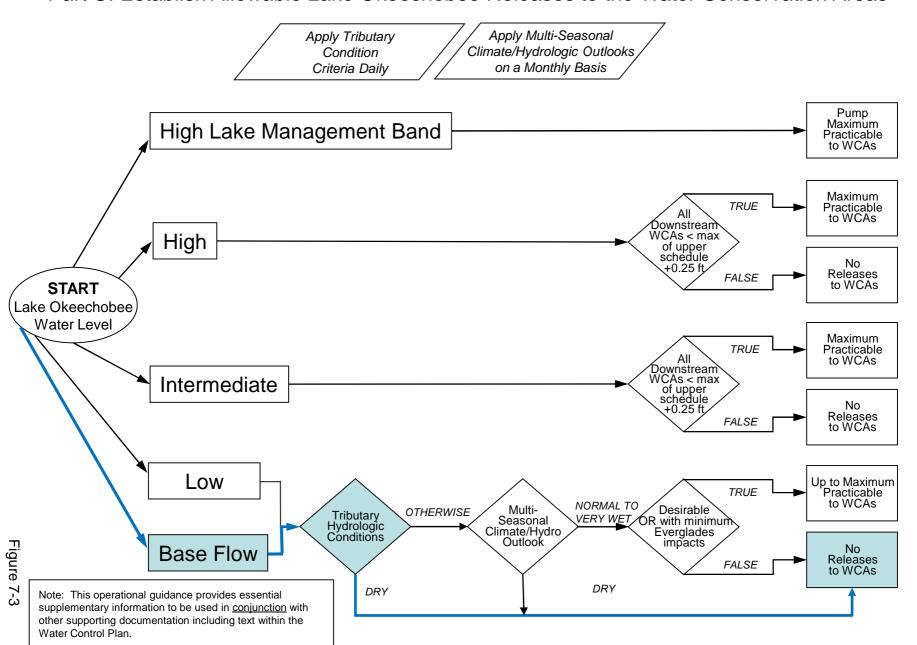
**Water Supply Risk Evaluation** 

| Area | Indicator   | Value                                | Color Coded<br>Scoring Scheme |
|------|---|--------------------------------------|-------------------------------|
|      | Projected LOK Stage for the next two months               | Base-Flow Sub-Band                   | M                             |
|      | Palmer Index for LOK Tributary Conditions                 | -1.69<br>(Dry)                       | M                             |
|      | CDC Presinitation Outlank                                 | 1 month: Below Normal                | M                             |
| LOK  | CPC Precipitation Outlook                                 | 3 months: Normal                     | L                             |
|      | LOK Seasonal Net Inflow Outlook ENSO Forecast (positive)  | 0.41 ft<br>(Dry)                     | М                             |
|      | LOK Multi-Seasonal Net Inflow<br>Outlook                  | 3.14 ft<br>(Normal)                  | M                             |
|      | ENSO Forecast (positive)                                  | (Normal)                             |                               |
|      | WCA 1: 3 Station Average (Site 1-7, Site 1-8T & Site 1-9) | Above Line 1 (16.55 ft)              | L                             |
| WCAs | WCA 2A: Site 2-17 HW                                      | Above Line 1 (12.26ft)               | L                             |
|      | WCA-3A: 3 Station Average (Site 63, 64, and 65)           | Above Line 1 (9.63 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 | 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.

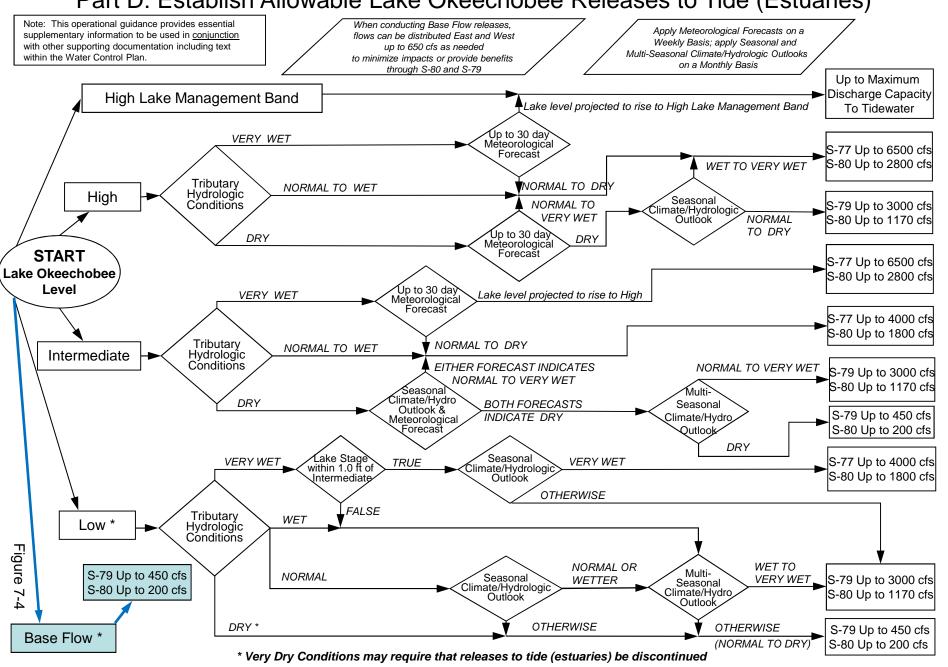
#### **2008 LORS**

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

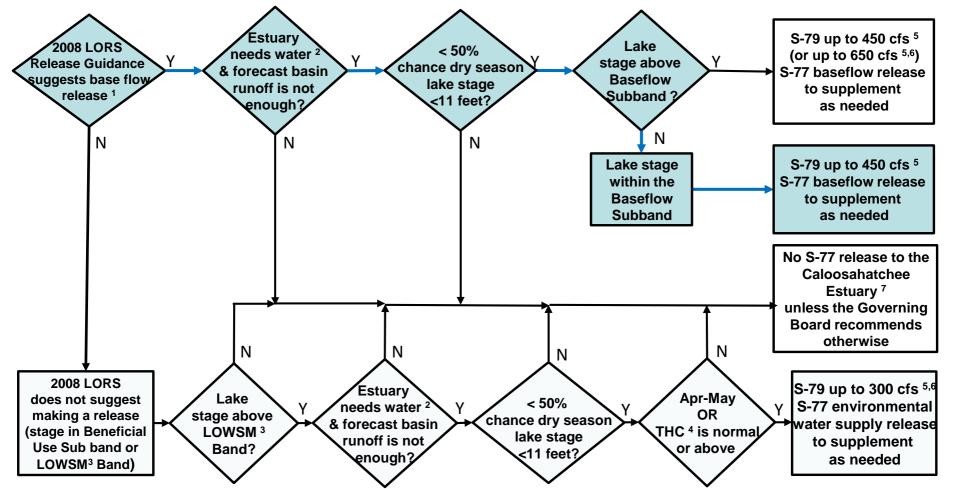


#### **2008 LORS**

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



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



<sup>&</sup>lt;sup>1</sup>The 2008 LORS Release Guidance (Part D) can suggest baseflow releases in the Intermediate, Low, or Baseflow Subbands.

<sup>&</sup>lt;sup>2</sup>Estuary "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.

<sup>&</sup>lt;sup>3</sup>LOWSM = Lake Okeechobee Water Shortage Management.

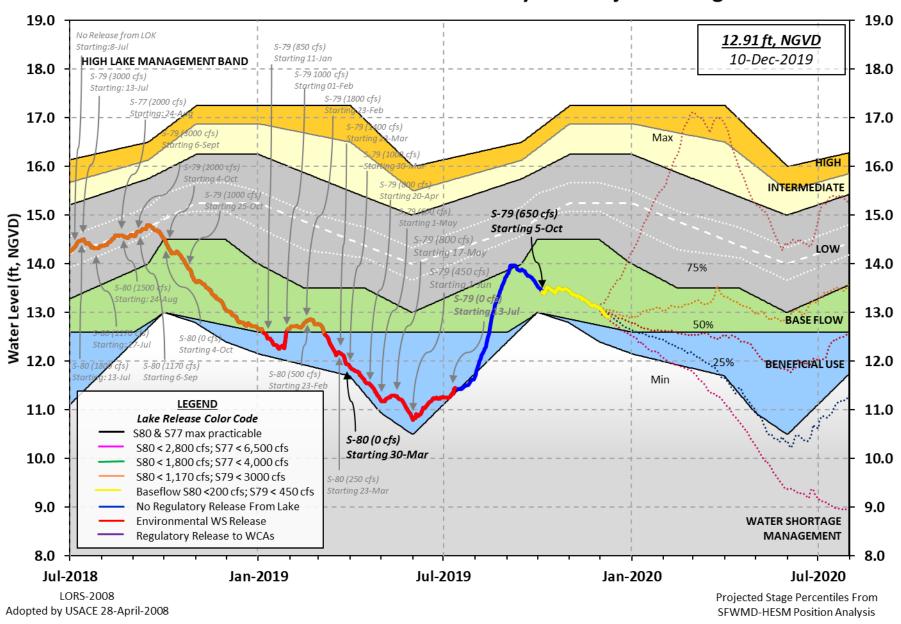
<sup>&</sup>lt;sup>4</sup>Tributary Hydrologic Condition (THC) is based on classification of Lake Okeechobee Net Inflow and Palmer Index.

<sup>&</sup>lt;sup>5</sup>Can release less than the "up to" limit if lower release is sufficient to reach or sustain desired estuary salinity; cfs = cubic feet per second.

<sup>&</sup>lt;sup>6</sup>After reviewing conditions in Water Conservation Areas (WCAs), Stormwater Treatment Areas (STAs), ENP, St. Lucie Estuary and Lake Okeechobee.

<sup>&</sup>lt;sup>7</sup>Should 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**



oke Page 1 of 6

Data Ending 2400 hours 08 DEC 2019

```
Okeechobee Lake Regulation
                                Elevation
                                           Last Year 2YRS Ago
                                (ft-NGVD)
                                            (ft-NGVD)
                                                       (ft-NGVD)
  *Okeechobee Lake Elevation
                                   12.92
                                               12.93
                                                         -NR- (Official Elv)
 Bottom of High Lake Mngmt= 17.25 Top of Water Short Mngmt= 12.34
 Currently in Operational Management Band
 Simulated Average LORS2008 [1965-2000]
                                            13.69
 Difference from Average LORS2008
                                           -0.77
 08DEC (1965-2007) Period of Record Average
                                                14.76
 Difference from POR Average
                                               -1.84
 Today Lake Okeechobee elevation is determined from the 4 Int & 4 Edge stations
 ++Navigation Depth (Based on 2007 Channel Condition Survey) Route 1 ÷ 6.86'
 ++Navigation Depth (Based on 2008 Channel Condition Survey) Route 2 ÷ 5.06'
 Bridge Clearance = 50.70'
4 Interior and 4 Edge Okeechobee Lake Average (Avg-Daily values):
 L001
         L005
                L006
                      LZ40
                              S4
                                     S352
                                            S308
                                                   S133
 12.88 12.93 12.93 12.90 12.95 13.01
                                           12.89 12.84
 *Combination Okeechobee Avg-Daily Lake Average = 12.92
                                                   (*See Note)
Okeechobee Inflows (cfs):
 S65E
                  339
                           S65EX1
                                                    Fisheating Cr
 S154
                   0
                           S191
                                             0
                                                    S135 Pumps
 S84
                   0
                           S133 Pumps
                                            0
                                                    S2 Pumps
                                                                      0
 S84X
                   0
                           S127 Pumps
                                            0
                                                    S3 Pumps
                                                                      0
 S71
                   0
                           S129 Pumps
                                            0
                                                    S4 Pumps
                                                                      0
                   0
                           S131 Pumps
                                                                      0
 S72
                                                    C5
Total Inflows:
                  341
Okeechobee Outflows (cfs):
                          S354
                                           361
                                                    S77
                                                                    660
 S135 Culverts 0
 S127 Culverts
                          S351
                                           894
                                                    S308
                                                                    159
 S129 Culverts
                           S352
                                           336
 S131 Culverts
                  0
                           L8 Canal Pt
                                           164
                 2573
Total Outflows:
****S77 structure flow is being used to compute Total Outflow.
****S308 structure flow is being used to compute Total Outflow.
Okeechobee Pan Evaporation (inches):
                 0.18
                          S308
                                          0.08
 Average Pan Evap x 0.75 Pan Coefficient = 0.10" = 0.01'
Lake Average Precipitation using NEXRAD: = -NR-" = -NR-"
```

oke Page 2 of 6

Evaporation - Precipitation: = -NR-" = -NR-"

Evaporation - Precipitation using Lake Area of 730 square miles is equal to -NR
Lake Okeechobee (Change in Storage) Flow is -1966 cfs or -3900 AC-FT

\_\_\_\_

|   | Headwater  | Tailwater  |  |  |  | - Gat                               | - Pos   | ition | ıs   |     |     |
|---|--|--|--|--|--|-------------------------------------|---|-------|------|-----|-----|
|   |  | Elevation  |  |  |  | #3                                  | #4  | #5    | #6   | #7  | #8  |
|   |  | (ft-msl)   |  |  |  | _                                   |   | _     |      |     |     |
|   | (  |  | [) see r   |  |  |                                     | ( /   | ( /   | ( /  | ( / | ( / |
| North East S  | hore   | \-   | ,  |  |  |                                     |   |       |      |     |     |
| S133 Pumps  |  | 12.82  | 0  | 0  | 0  | 0                                   | 0   | 0     | (cfs | 5)  |     |
| S193:   |  |  |  |  |  |                                     |   |       | `    | ,   |     |
| S191:   | 18.61  | 12.81  | 0  | -NR-   | 0.0  | 0.0                                 |   |       |      |     |     |
| S135 Pumps  | : 12.69  | 12.77  | 0  | 0  | 0  | 0                                   | 0   |       | (cfs | 5)  |     |
| S135 Culve  | rts:   |  | 0  | 0.0  | 0.0  |                                     |   |       |      |     |     |
| Nambh Haat C  | h  |  |  |  |  |                                     |   |       |      |     |     |
| North West S  |  | 12.60  | 220  | ο -  | ۰.   | 0 0                                 | 0 0   | 0 0   | ۰    |     |     |
| S65E:   | 21.04  | 12.68  | 339  | 0.5  | 0.5  | 0.0                                 | 0.0   | 0.0   | 0.5  |     |     |
| S65EX1:   | 21.04  | 12.68  | 0  | 0  | 0  | 0                                   | 0   | 0     | /    | - \ |     |
| S127 Pumps<br>S127 Culve  |  | 12.85  | 0  | 0  | 0  | 0                                   | 0   | 0     | (cfs | )   |     |
| S12/ Culve  | rt:  |  | 0  | 0.0  |  |                                     |   |       |      |     |     |
| S129 Pumps  | : 13.04  | 12.92  | 0  | 0  | 0  | 0                                   |   |       | (cfs | 5)  |     |
| S129 Culve  |  |  | 0  | 0.0  |  |                                     |   |       | `    | ,   |     |
|   |  |  |  |  |  |                                     |   |       |      |     |     |
| S131 Pumps  | : 12.85  | 12.94  | 0  | 0  | 0  |                                     |   |       | (cfs | 5)  |     |
| S131 Culve  | rt:  |  | 0  |  |  |                                     |   |       |      |     |     |
|   |  |  |  |  |  |                                     |   |       |      |     |     |
| Fisheating  |  |  |  |  |  |                                     |   |       |      |     |     |
| nr Palmd  | ale  | 28.13  | 2  |  |  |                                     |   |       |      |     |     |
| nr Lakeport   |  |  |  |  |  |                                     |   |       |      |     |     |
| =   | ort  |  |  |  |  |                                     |   |       |      |     |     |
| nr Lakep<br>C5:   | ort<br>  | -NR-   | 0  | -NR  | NR   | NF                                  | <b>{</b> -  |       |      |     |     |
| C5:   | ort<br>———   | -NR -  | 0  | -NR  | NR   | NF                                  | <b>?</b> -  |       |      |     |     |
| C5:<br>South Shore  |  |  | -  |  |  | NF                                  | <b>?</b> –  |       | (cfs | s)  |     |
| C5:   | 11.57  | -NR-<br>12.96<br>11.59   | 0<br>0<br>0  | 0  | NR<br>0<br>0.0                                       |                                     | ₹-  |       | (cfs | s)  |     |
| C5:<br>South Shore<br>S4 Pumps:   |  | 12.96  | 0  | 0  | 0  | 0                                   | <b>{</b> -  |       | (cfs | 5)  |     |
| C5:<br>South Shore<br>S4 Pumps:<br>S169:  | 11.57<br>12.98   | 12.96  | 0  | 0  | 0  | 0                                   | ₹-  |       |      |     |     |
| C5: South Shore S4 Pumps: S169: S310:   | 11.57<br>12.98<br>12.87  | 12.96<br>11.59   | 0<br>0<br>36   | 0<br>0.0   | 0<br>0.0<br>0  | 0<br>0.0                            | ₹-  |       | (cfs |     |     |
| C5: South Shore S4 Pumps: S169: S310: S3 Pumps:   | 11.57<br>12.98<br>12.87<br>10.88   | 12.96<br>11.59<br>12.94  | 0<br>0<br>36<br>0  | 0.0<br>0.0   | 0<br>0.0<br>0  | 0<br>0.0                            | ₹-  |       |      | 5)  |     |
| C5:  South Shore     S4 Pumps:     S169:     S310:     S3 Pumps:     S354:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94  | 12.96<br>11.59<br>12.94<br>10.88   | 0<br>0<br>36<br>0<br>361   | 0<br>0.0<br>0<br>0.8   | 0<br>0.0<br>0<br>0.9<br>0                            | 0<br>0.0<br>0                       |   |       | (cfs | 5)  |     |
| C5:  South Shore     S4 Pumps:     S169:     S310:     S3 Pumps:     S354:     S2 Pumps:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87   | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-   | 0<br>0<br>36<br>0<br>361   | 0<br>0.0<br>0<br>0.8<br>0                                    | 0<br>0.0<br>0<br>0.9<br>0                            | 0<br>0.0<br>0                       |   |       | (cfs | 5)  |     |
| C5:  South Shore     S4 Pumps:     S169:     S310:     S3 Pumps:     S354:     S2 Pumps:     S351:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-   | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87  | 0<br>0<br>36<br>0<br>361<br>0<br>894   | 0<br>0.0<br>0<br>0.8<br>0                                    | 0<br>0.0<br>0<br>0.9<br>0                            | 0<br>0.0<br>0<br>0<br>1.8           | 0   | 0.0   | (cfs | 5)  |     |
| C5:  South Shore     S4 Pumps:     S169:     S310:     S3 Pumps:     S354:     S2 Pumps:     S351:     S352:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-                              | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93   | 0<br>0<br>36<br>0<br>361<br>0<br>894   | 0<br>0.0<br>0<br>0.8<br>0<br>1.2<br>0.7                      | 0<br>0.0<br>0<br>0.9<br>0<br>1.5<br>0.5              | 0<br>0.0<br>0<br>0<br>1.8           | 0   | ).Ø   | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-                              | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04  | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336  | 0<br>0.0<br>0<br>0.8<br>0<br>1.2<br>0.7                      | 0<br>0.0<br>0<br>0.9<br>0<br>1.5<br>0.5              | 0<br>0.0<br>0<br>0<br>1.8           | 0   | 0.0   | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-                              | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87   | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336  | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0                    | 0<br>0.0<br>0.9<br>0<br>1.5<br>0.5                   | 0<br>0.0<br>0<br>1.8<br>8.          | 0   |       | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-                              | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04  | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336  | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0                    | 0<br>0.0<br>0.9<br>0<br>1.5<br>0.5<br>8.0            | 0<br>0.0<br>0<br>1.8<br>8.          | 0   |       | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A:  | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-                              | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87   | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336  | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0                    | 0<br>0.0<br>0.9<br>0<br>1.5<br>0.5<br>8.0            | 0<br>0.0<br>0<br>1.8<br>8.          | 0<br>0 0  | ay    | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A: L8 Canal P   | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-                              | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87   | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336<br>164                                 | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0                    | 0<br>0.0<br>0.9<br>0.5<br>8.0<br>ps/S3               | 0<br>0.0<br>0<br>1.8<br>8.          | 0<br>0 0<br>0illwa  | ay    | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A: L8 Canal P   | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-<br>T                         | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87   | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336<br>164                                 | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0                    | 0<br>0.0<br>0.9<br>0<br>1.5<br>0.5<br>8.0<br>ps/S3   | 0<br>0.0<br>0<br>1.8<br>8.<br>54 Sp | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | ay    | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A: L8 Canal P   | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-<br>T                         | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87<br>1 and \$352                          | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336<br>164<br>Tempora                      | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0<br>ary Pum<br>-NRN | 0<br>0.0<br>0.9<br>0<br>1.5<br>0.5<br>8.0<br>ps/S3   | 0<br>0.0<br>0<br>1.8<br>8.<br>54 Sp | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | ay    | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A: L8 Canal P   | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-<br>T                         | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87<br>1 and S352<br>-NR-<br>13.00<br>12.94 | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336<br>164<br>Tempora<br>894<br>336<br>361 | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0<br>ary Pum<br>-NRN | 0<br>0.0<br>0.9<br>0<br>1.5<br>0.5<br>8.0<br>ps/S3   | 0<br>0.0<br>0<br>1.8<br>8.<br>54 Sp | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | ay    | (cfs | 5)  |     |
| C5:  South Shore     S4 Pumps:     S169:     S310:     S3 Pumps:     S354:     S2 Pumps:     S351:     S352:     C10A:     L8 Canal P   S351:     S352:     S354:  Caloosahatch | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-<br>T  S35  10.87 10.93 10.88 | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87<br>1 and S352<br>-NR-<br>13.00<br>12.94 | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336<br>164<br>Tempora<br>894<br>336<br>361 | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0<br>-NRN<br>-NRN    | 0<br>0.0<br>0.9<br>0.5<br>8.0<br>ps/S3<br>RNR<br>RNR | 0<br>0.0<br>0<br>1.8<br>8.<br>54 Sp | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | ay    | (cfs | 5)  |     |
| C5:  South Shore S4 Pumps: S169: S310: S3 Pumps: S354: S2 Pumps: S351: S352: C10A: L8 Canal P   | 11.57<br>12.98<br>12.87<br>10.88<br>12.94<br>10.87<br>-NR-<br>13.00<br>-NR-<br>T                         | 12.96<br>11.59<br>12.94<br>10.88<br>-NR-<br>10.87<br>10.93<br>13.04<br>12.87<br>1 and S352<br>-NR-<br>13.00<br>12.94 | 0<br>0<br>36<br>0<br>361<br>0<br>894<br>336<br>164<br>Tempora<br>894<br>336<br>361 | 0<br>0.0<br>0.8<br>0<br>1.2<br>0.7<br>8.0<br>-NRN<br>-NRN    | 0<br>0.0<br>0.9<br>0<br>1.5<br>0.5<br>8.0<br>ps/S3   | 0<br>0.0<br>0<br>1.8<br>8.<br>54 Sp | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | ay    | (cfs | 5)  |     |

oke Page 3 of 6

```
S77:
   Spillway and Sector Preferred Flow:
              12.74
                       11.00
                                657 0.0 0.0 3.5 0.5
                                   3
   Flow Due to Lockages+:
 S78:
   Spillway and Sector Flow:
                                        0.0 2.5 0.0 0.0
              10.95
                      2.82
                                 653
   Flow Due to Lockages+:
                                  18
 S79:
   Spillway and Sector Flow:
                                1052
               2.97
                       1.88
                                        1.0 1.0 1.0 1.0 0.0 0.0 0.0 0.0
   Flow Due to Lockages+:
                                 10
   Percent of flow from S77
                                  62%
   Chloride
                       (ppm)
St. Lucie Canal (S308, S80)
 S308:
   Spillway and Sector Preferred Flow:
              12.89
                        12.80
                                 159 0.0 0.0 0.0 0.0
   Flow Due to Lockages+:
                                   0
 S153:
                        12.60
                                   0
              19.00
                                        0.0 0.0
 S80:
   Spillway and Sector Flow:
              12.86
                                   0
                                        0.0 0.0 0.0 0.0 0.0 0.0 0.0
                        0.88
   Flow Due to Lockages+:
                                  19
   Percent of flow from S308
                              NA %
                              (mg/ml) ****
 Steele Point Top Salinity
 Steele Point Bottom Salinity (mg/ml) ****
                             (mg/ml) ****
 Speedy Point Top Salinity
 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) | (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     | 0.00     | 28       | 1       |
| S78:                       | 0.00     | 0.00     | 0.00     | 75       | 1       |
| S79:                       | 0.00     | 0.00     | 0.08     | 102      | 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:                      | 0.00     | 0.00     | 0.01     | 64       | 1       |
| S80:                       | 0.00     | 0.00     | 0.00     | 62       | 1       |
| Okeechobee Average         | 0.00     | 0.00     | 0.00     |          |         |

oke Page 4 of 6

| (Sites | S78, | S79 | and | S80 | not | included) |
|--------|------|-----|-----|-----|-----|-----------|
|--------|------|-----|-----|-----|-----|-----------|

| Oke Nexrad Basin Avg | -NR- | 0.00 | 0.00 |
|----------------------|------|------|------|
|                      |      |      |      |

| Okeechobee Lake Elevations | 08 DEC 2019 | 12.92 Differe | ence from 08DEC19 |
|----------------------------|-------------|---------------|-------------------|
| 08DEC19 -1 Day =           | 07 DEC 2019 | 12.93         | 0.01              |
| 08DEC19 -2 Days =          | 06 DEC 2019 | 12.94         | 0.02              |
| 08DEC19 -3 Days =          | 05 DEC 2019 | 12.97         | 0.05              |
| 08DEC19 -4 Days =          | 04 DEC 2019 | 13.00         | 0.08              |
| 08DEC19 -5 Days =          | 03 DEC 2019 | 13.02         | 0.10              |
| 08DEC19 -6 Days =          | 02 DEC 2019 | 13.07         | 0.15              |
| 08DEC19 -7 Days =          | 01 DEC 2019 | 13.09         | 0.17              |
| 08DEC19 -30 Days =         | 08 NOV 2019 | 13.34         | 0.42              |
| 08DEC19 -1 Year =          | 08 DEC 2018 | 12.93         | 0.01              |
| 08DEC19 -2 Year =          | 08 DEC 2017 | -NR-          | -NR -             |
|                            |             |               |                   |

Long Term Mean 30day Avearge ET for Lake Alfred (Inches) = 2.25

|         |         | L       | ake ( | Okeed | chobee | Net Inflo | ow (LONIN) |                |
|---------|---------|---------|-------|-------|--------|-----------|------------|----------------|
|         |         | Average | Flo   | N OVE | er the | previous  | 14 days    | Avg-Daily Flow |
| 08DEC19 | Toda    | y =     | 98    | DEC   | 2019   | -1543     | MON        | 604            |
| 08DEC19 | -1 Day  | =       | 07    | DEC   | 2019   | -1082     | SUN        | 896            |
| 08DEC19 | -2 Day  | s =     | 06    | DEC   | 2019   | -1206     | SAT        | -2846          |
| 08DEC19 | -3 Day  | s =     | 05    | DEC   | 2019   | -989      | FRI        | -2773          |
| 08DEC19 | -4 Day  | s =     | 04    | DEC   | 2019   | -1134     | THU        | -1454          |
| 08DEC19 | -5 Day  | s =     | 03    | DEC   | 2019   | -1198     | WED        | -8704          |
| 08DEC19 | -6 Day  | s =     | 02    | DEC   | 2019   | -608      | TUE        | -2330          |
| 08DEC19 | -7 Day  | s =     | 01    | DEC   | 2019   | -301      | MON        | -272           |
| 08DEC19 | -8 Day  | s =     | 30    | NOV   | 2019   | -771      | SUN        | 1895           |
| 08DEC19 | -9 Day  | s =     | 29    | NOV   | 2019   | -1275     | SAT        | -NR-           |
| 08DEC19 | -10 Day | s =     | 28    | NOV   | 2019   | -1146     | FRI        | -NR-           |
| 08DEC19 | -11 Day | s =     | 27    | NOV   | 2019   | -862      | THU        | -1273          |
| 08DEC19 | -12 Day | s =     | 26    | NOV   | 2019   | -1461     | WED        | -1160          |
| 08DEC19 | -13 Day | s =     | 25    | NOV   | 2019   | -1319     | TUE        | -1100          |
|         | -       |         |       |       |        |           |            |                |

|             |        |         | S65E      |          |         |                |
|-------------|--------|---------|-----------|----------|---------|----------------|
|             |        | Average | Flow over | previous | 14 days | Avg-Daily Flow |
| 08DEC19     | Today= | 98      | DEC 2019  | 316      | MON     | 398            |
| 08DEC19 -1  | Day =  | 07      | DEC 2019  | 313      | SUN     | 297            |
| 08DEC19 -2  | Days = | 06      | DEC 2019  | 325      | SAT     | 279            |
| 08DEC19 -3  | Days = | 05      | DEC 2019  | 324      | FRI     | 359            |
| 08DEC19 -4  | Days = | 04      | DEC 2019  | 310      | THU     | 261            |
| 08DEC19 -5  | Days = | 03      | DEC 2019  | 305      | WED     | 217            |
| 08DEC19 -6  | Days = | 02      | DEC 2019  | 321      | TUE     | 384            |
| 08DEC19 -7  | Days = | 01      | DEC 2019  | 327      | MON     | 349            |
| 08DEC19 -8  | Days = | 30      | NOV 2019  | 320      | SUN     | 243            |
| 08DEC19 -9  | Days = | 29      | NOV 2019  | 328      | SAT     | 337            |
| 08DEC19 -10 | Days = | 28      | NOV 2019  | 330      | FRI     | 342            |
| 08DEC19 -11 | Days = | 27      | NOV 2019  | 323      | THU     | 419            |
| 08DEC19 -12 | Days = | 26      | NOV 2019  | 318      | WED     | 228            |
| 08DEC19 -13 | Days = | 25      | NOV 2019  | 325      | TUE     | 315            |
|             | -      |         |           |          |         |                |

|         |           | S65EX1            |            |         |                |
|---------|-----------|-------------------|------------|---------|----------------|
|         |           | Average Flow over | previous 1 | 14 days | Avg-Daily Flow |
| 08DEC19 | Today=    | 08 DEC 2019       | 49         | MON     | 0              |
| 08DEC19 | -1 Day =  | 07 DEC 2019       | 49         | SUN     | 78             |
| 08DEC19 | -2 Days = | 06 DEC 2019       | 43         | SAT     | 113            |

oke Page 5 of 6

| 08DEC19 | -3  | Days | = | 05 | DEC | 2019 | 42 | FRI |   | 0  |
|---------|-----|------|---|----|-----|------|----|-----|---|----|
| 08DEC19 | -4  | Days | = | 04 | DEC | 2019 | 54 | THU |   | 0  |
| 08DEC19 | -5  | Days | = | 03 | DEC | 2019 | 57 | WED |   | 95 |
| 08DEC19 | -6  | Days | = | 02 | DEC | 2019 | 51 | TUE |   | 0  |
| 08DEC19 | -7  | Days | = | 01 | DEC | 2019 | 51 | MON |   | 90 |
| 08DEC19 | -8  | Days | = | 30 | NOV | 2019 | 44 | SUN |   | 9  |
| 08DEC19 | -9  | Days | = | 29 | NOV | 2019 | 44 | SAT |   | 86 |
| 08DEC19 | -10 | Days | = | 28 | NOV | 2019 | 37 | FRI |   | 0  |
| 08DEC19 | -11 | Days | = | 27 | NOV | 2019 | 37 | THU |   | 35 |
| 08DEC19 | -12 | Days | = | 26 | NOV | 2019 | 35 | WED |   | 60 |
| 08DEC19 | -13 | Days | = | 25 | NOV | 2019 | 31 | TUE | 1 | 19 |
|         |     |      |   |    |     |      |    |     |   |    |

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)   |             |
| 08 DEC 2019 | 1309      | 1299       | 1352       | 2102      |             |
| 07 DEC 2019 | 9 1467    | 1590       | 861        | 1557      |             |
| 06 DEC 2019 | 9 1812    | 1976       | 722        | 608       |             |
| 05 DEC 2019 | 9 1921    | 2021       | 1133       | 739       |             |
| 04 DEC 2019 | 9 1885    | 2042       | 1494       | 991       |             |
| 03 DEC 2019 | 9 1876    | 1802       | 1500       | 1595      |             |
| 02 DEC 2019 | 9 1691    | 1823       | 1633       | 1967      |             |
| 01 DEC 2019 | 1763      | 2044       | 1650       | 2075      |             |
| 30 NOV 2019 | 9 1484    | 1704       | 1177       | 1811      |             |
| 29 NOV 2019 |           | 614        | 318        | 436       |             |
| 28 NOV 2019 | 519       | 627        | 307        | 388       |             |
| 27 NOV 2019 | 631       | 945        | 562        | 815       |             |
| 26 NOV 2019 | 749       | 968        | 978        | 1475      |             |
| 25 NOV 2019 | 1293      | 1326       | 1165       | 2250      |             |
|             |           |            |            |           |             |
|             | 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)     |
| 08 DEC 2019 |           | 1772       | 666        | 488       | 325         |
| 07 DEC 2019 |           | 1925       | 869        | 708       | 281         |
| 06 DEC 2019 |           | 2015       | 1021       | 476       | 300         |
| 05 DEC 2019 |           | 1817       | 983        | 577       | 299         |
| 04 DEC 2019 |           | 1306       | 697        | 607       | 401         |
| 03 DEC 2019 |           | 644        | 164        | 529       | 293         |
| 02 DEC 2019 |           | 878        | 419        | 295       | 382         |
| 01 DEC 2019 |           | 989        | 189        | 301       | 305         |
| 30 NOV 2019 |           | 888        | 387        | 365       | 284         |
| 29 NOV 2019 |           | 363        | 143        | 151       | -NR -       |
| 28 NOV 2019 |           | 440        | 117        | 147       | -NR -       |
| 27 NOV 2019 |           | 558        | 34         | 244       | 169         |
| 26 NOV 2019 |           | 392        | 91         | 264       | 268         |
| 25 NOV 2019 | 9 3       | 264        | 44         | 50        | 306         |
|             | S-308     | Below S-30 | 8 S-80     |           |             |
|             | Discharge | Discharge  |            | -Δ        |             |
|             | (ALL DAY) | (ALL-DAY)  |            |           |             |
| DATE        | (AC-FT)   | (AC-FT)    | (AC-FT)    |           |             |
| 08 DEC 2019 |           | -30        | 37         |           |             |
| 07 DEC 2019 |           | -132       | 48         |           |             |
| 06 DEC 2019 |           | -55        | 44         |           |             |
| 05 DEC 2019 |           | 171        | 51         |           |             |
| 04 DEC 2019 |           | 49         | 31         |           |             |
| 03 DEC 2019 |           | -200       | 32         |           |             |
|             |           | _50        | J <u>-</u> |           |             |

oke Page 6 of 6

| 02 | DEC | 2019 | 53  | 351  | 29 |
|----|-----|------|-----|------|----|
| 01 | DEC | 2019 | 38  | 167  | 49 |
| 30 | NOV | 2019 | 102 | 118  | 55 |
| 29 | NOV | 2019 | 70  | 103  | 48 |
| 28 | NOV | 2019 | 89  | -5   | 18 |
| 27 | NOV | 2019 | 104 | 23   | 38 |
| 26 | NOV | 2019 | 3   | -170 | 51 |
| 25 | NOV | 2019 | 151 | 70   | 30 |

\*\*\* 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 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/

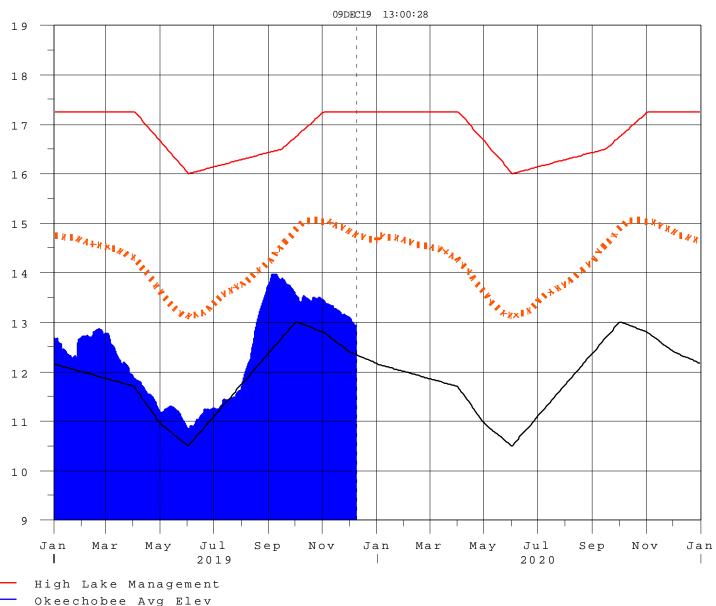
\$ For information regarding Lake Okeechobee Service Area water restrictions
please refer to www.sfwmd.gov

Report Generated 09DEC2019 @ 23:39 \*\* Preliminary Data - Subject to Revision \*\*

<sup>\*</sup> 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.





Okeechobee Avg Elev
Average Elev [1965-2007]
Water Shortage Management

E 1 e

i n

F t N

G V D

#### **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 |  |

<sup>\*</sup> use the wettest of the two indicators

#### Classification of Lake Okeechobee Net Inflow Seasonal Outlook\*

| Lake Net Inflow<br>Prediction | Equivalent<br>Depth** | Lake Okeechobee  |  |
|-------------------------------|-----------------------|------------------|--|
| [million acre-feet]           | [feet]                | Net Inflow       |  |
|                               | 2000                  | 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              |  |

<sup>\*\*</sup>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<br>Prediction | Equivalent<br>Depth** | Lake Okeechobee<br>Net Inflow |  |
|-------------------------------|-----------------------|-------------------------------|--|
| [million acre-feet]           | [feet]                |                               |  |
|                               |                       | 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                           |  |

<sup>\*\*</sup>Volume-depth conversion based on average lake surface area of 467,000 acres

# 6-15 Day Precipitation Outlook Categories\*

| 6-15 Day Precipitation Outlook<br>Categories | WSE Decision Tree<br>Categories |  |
|--|---------------------------------|--|
| Above Normal                                 | Wet to Very Wet                 |  |
| Normal                                       | Normal                          |  |
| Below Normal                                 | Dry                             |  |

<sup>\*</sup> Corresponds to Table 7-6 in the Lake Okeechobee Water Control Plan

**Under Construction**