

# Tamiami Trail Flow Formula (TTFF) - Target Flow from WCA-3A to ENP

Daily Target Flow for 9/5/2023 to 9/11/2023 MAX cfs

## Observed Stage Data

| Station                                 | Variable            | on | 9/1/2023 | Value | Unit      |
|---|---------------------|----|----------|-------|-----------|
| WCA-3A (Average for Site 63, 64 and 65) | Average Daily Stage |    |          | 11.04 | ft-NGVD29 |
| NESRS2                                  | Average Daily Stage |    |          | 8.26  | ft-NGVD29 |
| Regulatory Stage WCA-3A                 | Average Daily Stage |    |          | 10.11 | ft-NGVD29 |

## Observed Flow Data

| Station                          | Variable                 | From | 8/26/2023 | to | 9/1/2023 | Value | Unit |
|----------------------------------|--------------------------|------|-----------|----|----------|-------|------|
| S-12A                            | 7-day Average Daily Flow |      |           |    |          | 259   | cfs  |
| S-12B                            | 7-day Average Daily Flow |      |           |    |          | 215   | cfs  |
| S-12C                            | 7-day Average Daily Flow |      |           |    |          | 510   | cfs  |
| S-12D                            | 7-day Average Daily Flow |      |           |    |          | 780   | cfs  |
| S-333                            | 7-day Average Daily Flow |      |           |    |          | 598   | cfs  |
| S-333N                           | 7-day Average Daily Flow |      |           |    |          | 0     | cfs  |
| S-334                            | 7-day Average Daily Flow |      |           |    |          | 0     | cfs  |
| S-12s Total                      | 7-day Average Daily Flow |      |           |    |          | 1764  | cfs  |
| S333 + S333N - S334 <sup>1</sup> | 7-day Average Daily Flow |      |           |    |          | 598   | cfs  |
| Total Flow to ENP                | 7-day Average Daily Flow |      |           |    |          | 2363  | cfs  |

## Meteorological Data

| Forecasted   | From | 9/2/2023  | to | 9/8/2023 | Value | Unit |
|--|------|-----------|----|----------|-------|------|
| WCA3 7-day Quantitative Precipitation Forecast (QPF) |      |           |    |          | 0.40  | in   |
| 3AS3WX - 7-day Total Forecasted PET                  |      |           |    |          | 1.12  | in   |
| Observed   | From | 8/26/2023 | to | 9/1/2023 | Value | Unit |
| WCA-3 7-day Total Observed NEXRAD Rainfall           |      |           |    |          | 2.85  | in   |
| 3AS3WX 7-day Total Observed PET                      |      |           |    |          | 1.12  | in   |

## TTFF Application

|  |  |            |            |
|--|--|------------|------------|
| 1  | Previous week target flow (calculated with forecasted 7-day QPF and PET) | MAX        | cfs        |
| 2  | Previous week target flow (recalculated with observed rainfall and PET)  | MAX        | cfs        |
| 3  | Adjustment for forecast (2-1)  | 0          | cfs        |
| 4  | This week calculated target flow   | MAX        | cfs        |
| 5  | This week target flow with adjustment (3 + 4)                            | MAX        | cfs        |
| <b>Average Daily Target Flow<sup>2</sup></b> |  | <b>MAX</b> | <b>cfs</b> |

| TTFF formula coefficients |                   |                                  |                             |                   |                                |
|---------------------------|-------------------|----------------------------------|-----------------------------|-------------------|--------------------------------|
| WCA-3A Average Stage (β1) | NESRS2 Stage (β2) | Previous 7-day Average Flow (β3) | Forecast Precipitation (β4) | Forecast PET (β5) | Regulation Schedule Stage (β6) |
| 318.42                    | -44.62            | 0.644                            | 24.32                       | -96.31            | -221.79                        |

Target flow is distributed from east to west (S-333, S-12D, S-12C, S-12B, and S-12A) to prioritize water deliveries to NESRS first and WSRS second, subject to downstream constraints.

<sup>1</sup>S-333 + S-333N - S-334 becomes zero if the sum of S-333 and S-333N is less than S-334 flow. Calculation is done daily.

<sup>2</sup>Actual discharges may vary from target discharges because of changing hydrologic conditions.

