

# Request for Changes to Settlement Agreement Monitoring

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TOC Meeting,  
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## TAMBR105 Information

- Historical ENP station on Tamiami Trail in Collier County sampled BWF/M
- Currently sampled by Miami Dade DERM
- DERM policy changes prevent travel outside Miami-Dade
- SFWMD has negotiated with BCNP to take over sampling, initiated in mid-January

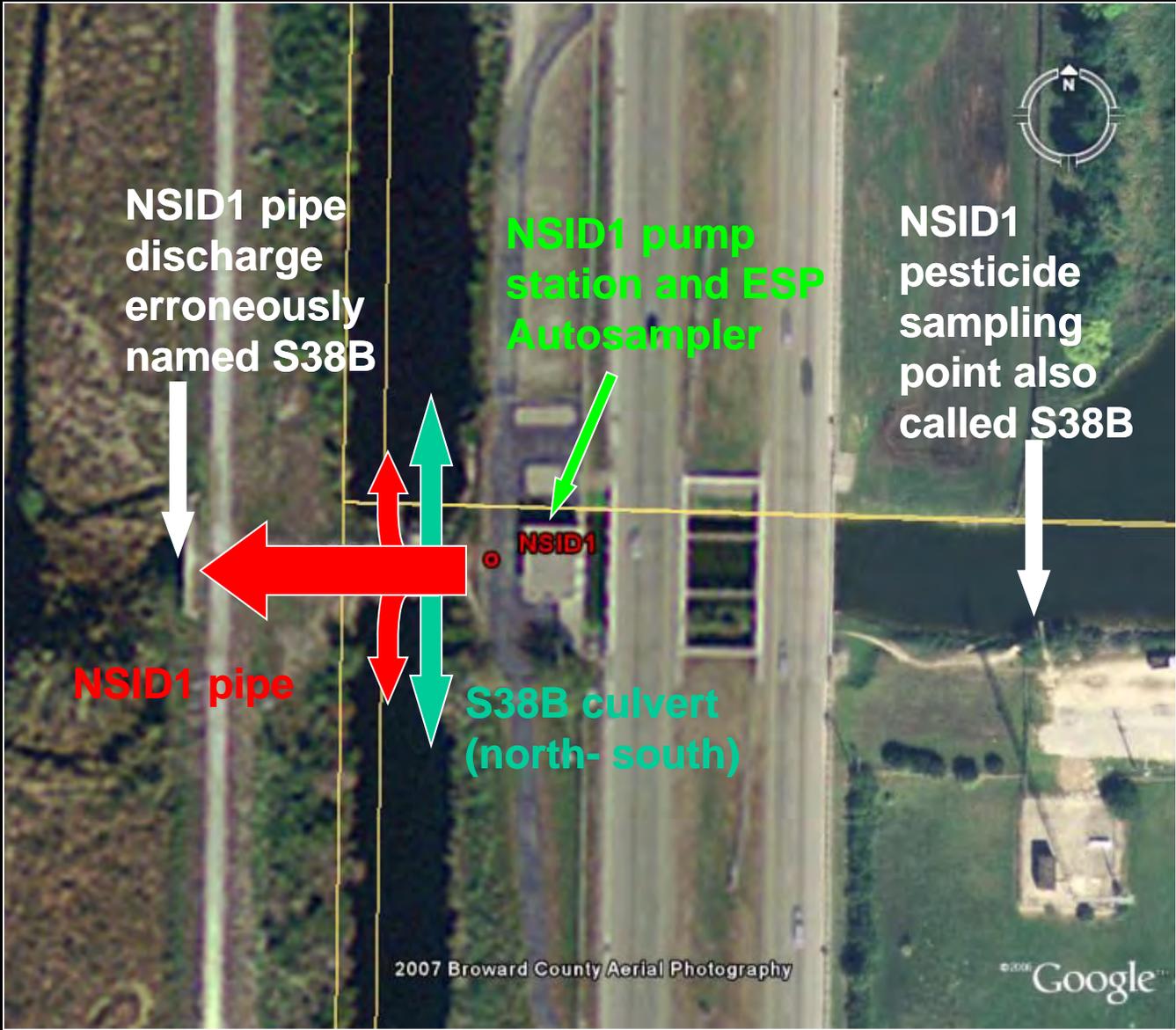
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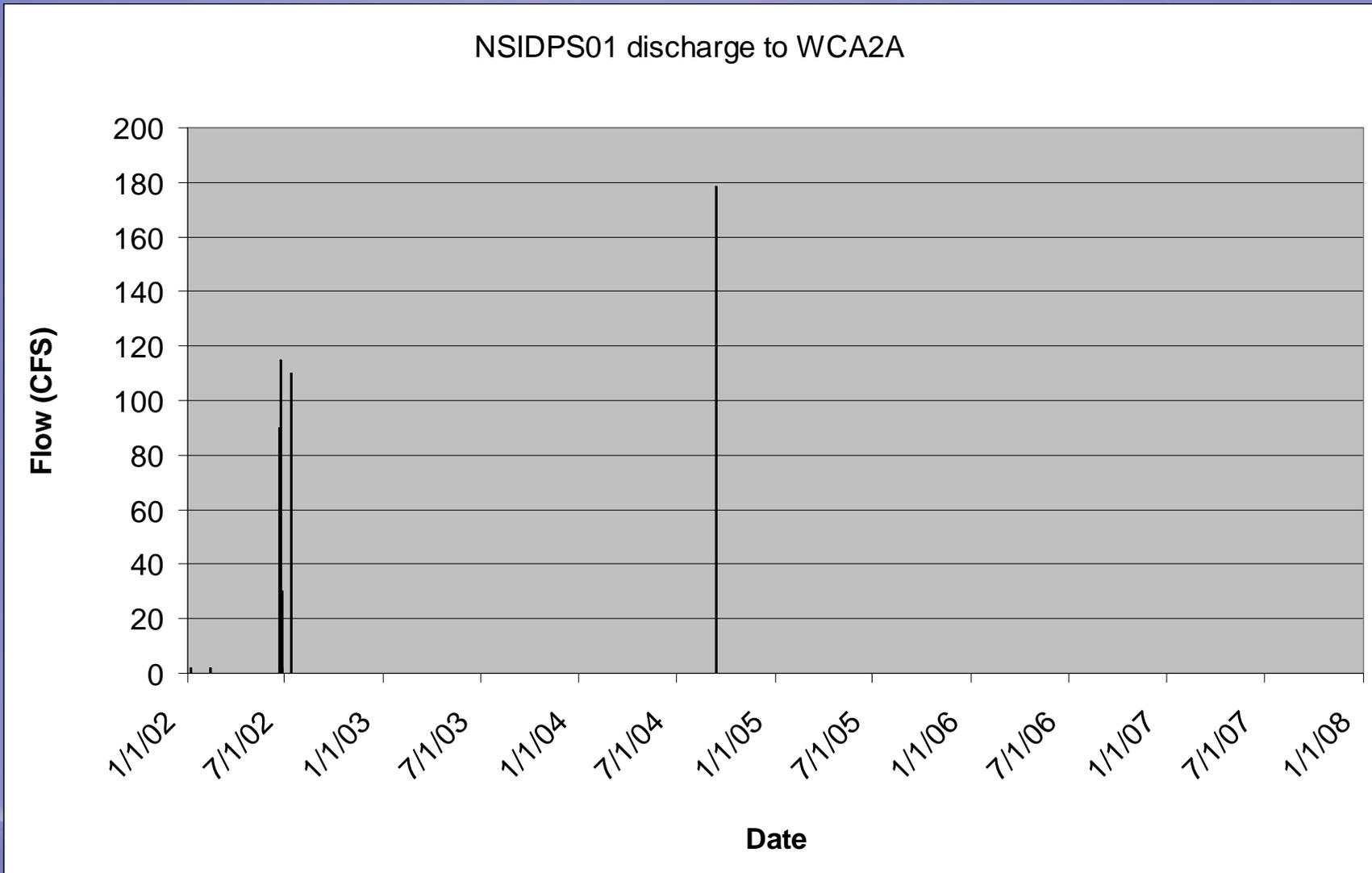
## S38B/NSID1

- NSID Pump Station Number 1 discharges from Broward County suburb
- WCA2A Sampling Station improperly named S38B and sampled at the discharge pipe when flowing only
- Pump can discharge in three directions
  - L36 north of S38B divide structure
  - L36 south of S38B divide structure
  - WCA-2A

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# Limited Discharges to WCA-2A



## **S38B/NSID1, Reconfigure**

- Request to clean up this situation
  - Relocate sampling point to upstream of the structure
  - Maintain frequency of BWF, but only if discharging to WCA-2A
  - New station will be coded as NSID1

## Parameter Changes

- In May 2006, the TOC agreed to eliminate monitoring of Color, NO<sub>2</sub>, Hardness, Cd, Cu, and Zn at the vast majority of Settlement Agreement stations
- This rectified discrepancies between SA and NECP monitoring sets
- Two stations (S38B and S5A) were not included in this change

## S5A and S38B (NSID1) Parameter Changes

- Usefulness of color questionable
  - S5A Turbidity (BWF/M) and TSS (Q)
  - S38B Turbidity and TSS (BWF)
- No excursions of Cd, Cu and Zn since prior to 2003
  - Limited data at S38B (N=4)(Rare discharges)

## **S5A and S38B (NSID1)**

- Request that the following parameters be eliminated at S5A and S38B
  - NO<sub>2</sub>
  - Color
  - Trace metals (Cd, Cu, Zn)
  - Hardness (Ca, Mg)

## S5A Parameter List

- Biweekly if Flowing otherwise Monthly
  - TPO<sub>4</sub>, OPO<sub>4</sub>
  - TKN, NO<sub>x</sub>, NH<sub>4</sub>
  - Cl, Turbidity, Alkalinity
- Quarterly
  - Ca, Mg, Na, K, SiO<sub>2</sub>, SO<sub>4</sub>, TSS, Fe

## S38B/NSID1 Parameter List

- Biweekly if Flowing
  - TPO<sub>4</sub>, OPO<sub>4</sub>
  - TKN, NOX, NH<sub>4</sub>
  - Cl, Turbidity, TSS, Alkalinity
- Quarterly if Flowing
  - Ca, Mg, Na, K, SiO<sub>2</sub>, SO<sub>4</sub>, TSS, Fe

## CA215

- CA215 is an EVPA station in WCA2A
- Established to meet the requirements of the Settlement Agreement
- Station specifically located to monitor water quality conditions near the 2-17 Stage Gauge
- Threshold Research Station U3 established for the same purpose
- U3 now a TP Rule Station

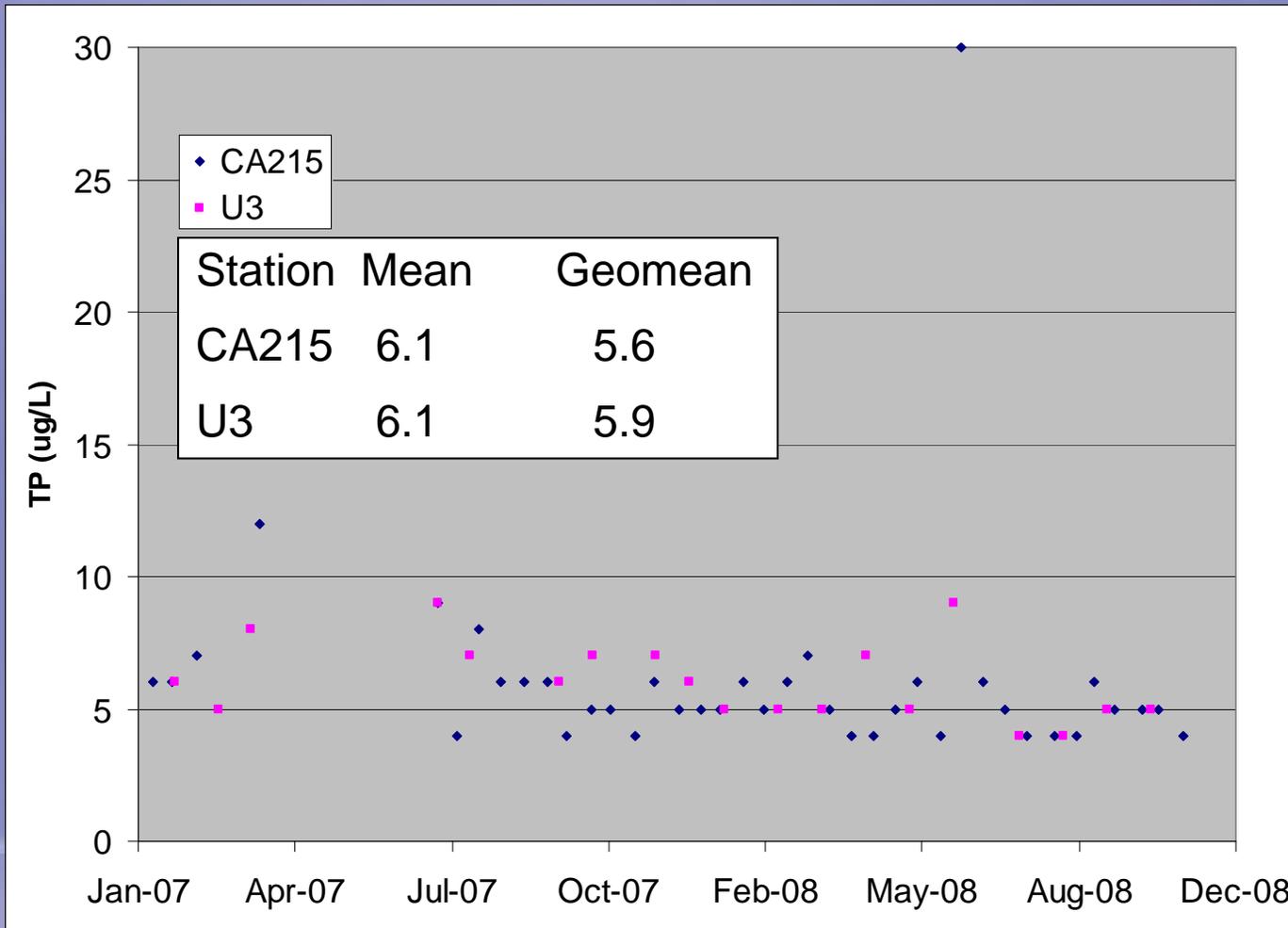
# Location of U3 and CA215



## CA215 and U3 WQMD and Research Data

- Comparison of data from these two stations (n=70+ and n= 40+) found some differences:
  - Geomeans TP 5.2 vs 7.6\*
  - Conductivity 875.2 and 851.7\*
  - SO4 35.0 and 36.4 (Not statistically different)
- However, these differences may result from differences in methods between sampling approaches or differences in stations
- Recent data allows comparison with the same sampling approach

# CA215 and U3 WQMD Data Comparison



## **Request to Consolidate CA215 and U3**

- Despite some statistical differences in data from differences in sampling approaches, recent data indicates that this area of WCA-2A is sufficiently characterized by one station.
- U3 has existing platforms and is a TP Rule station as well as a Research station. Therefore, U3 appears the more logical choice for retention and discontinuation of monitoring at CA215 is requested.

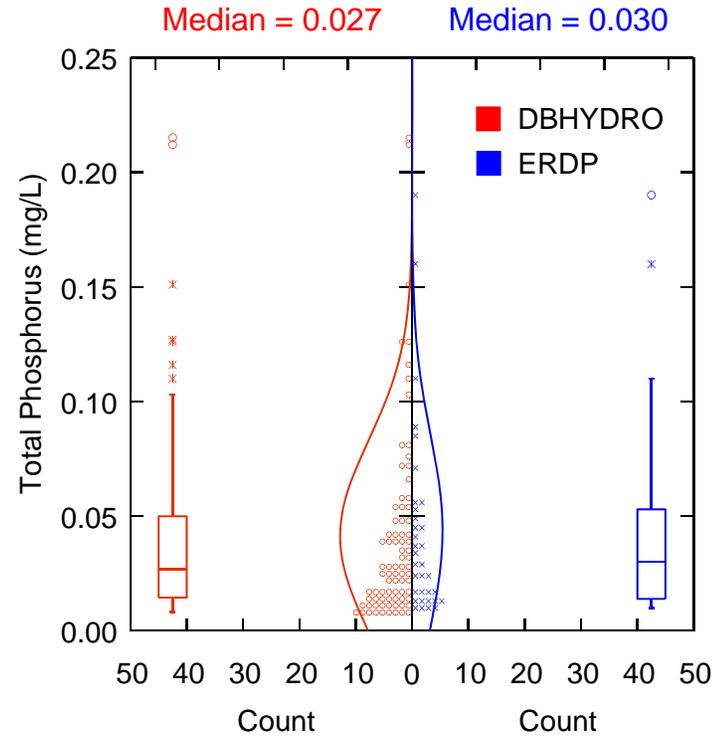
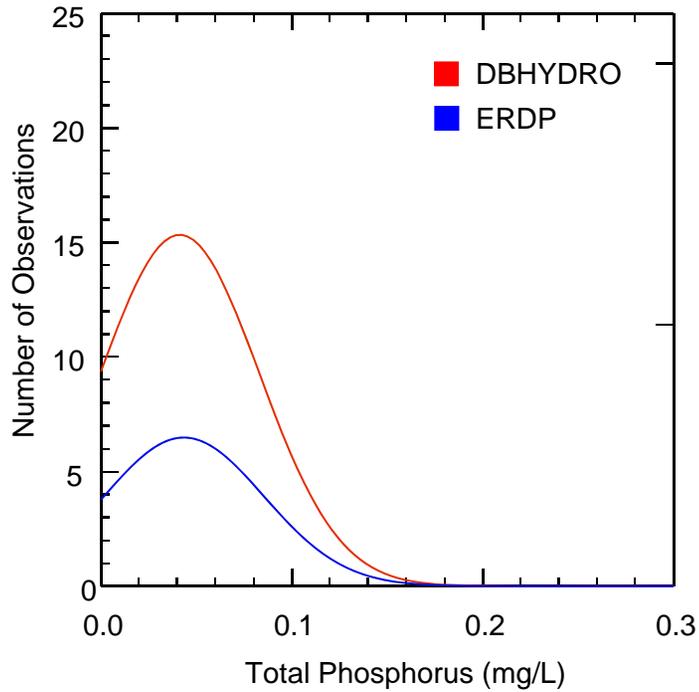
## **EVPA; Convert to Monthly Sampling**

- Portions of WCA-2A and WCA-3A are monitored biweekly under Settlement Agreement Project EVPA
- Other marsh monitoring projects are monthly
  - Refuge (compliance and expanded)
  - Everglades National Park
  - Threshold Research Stations
  - TP Rule sampling throughout the EPA

## Supporting Data

- Analysis of data sets from Everglades Research (monthly) and WQMD (biweekly), found no statistical difference for TP, SRP, TN and TKN at two common stations.

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## Mann-Whitney or Wilcoxon Rank Sum Test Results

Group	Number of Observations	Rank Sum
DBHYDRO	80	4519.5
ERDP	34	2035.5
Mann-Whitney U test Statistic		1279.5
Probability		0.618
Chi-square approximation		0.248842 with 1 df

## Two Sample t-Test Results

Group	Number of Observations	Mean	Standard Deviation
DBHYDRO	80	0.041	0.042
ERDP	34	0.044	0.042
Difference in Means		-0.002	
95% Confidence Interval		-0.019 to 0.015	
t-Statistic		-0.255	
Degrees of Freedom		112	
Probability		0.799	

**Request to modify  
EVPA marsh  
monitoring  
from biweekly  
to monthly**

## Summary

- Relocate station S38B, recode as NSID1, and sample only if discharging to WCA-2A
- Eliminate Cd, Cu, Zn, Color, and Hardness from S5A and S38B
- Transfer monitoring at CA215 to U3
- Reduce frequency of EVPA monitoring from biweekly to monthly

# Discussion