Interior Flows Success Story

The Seminole Tribe of Florida

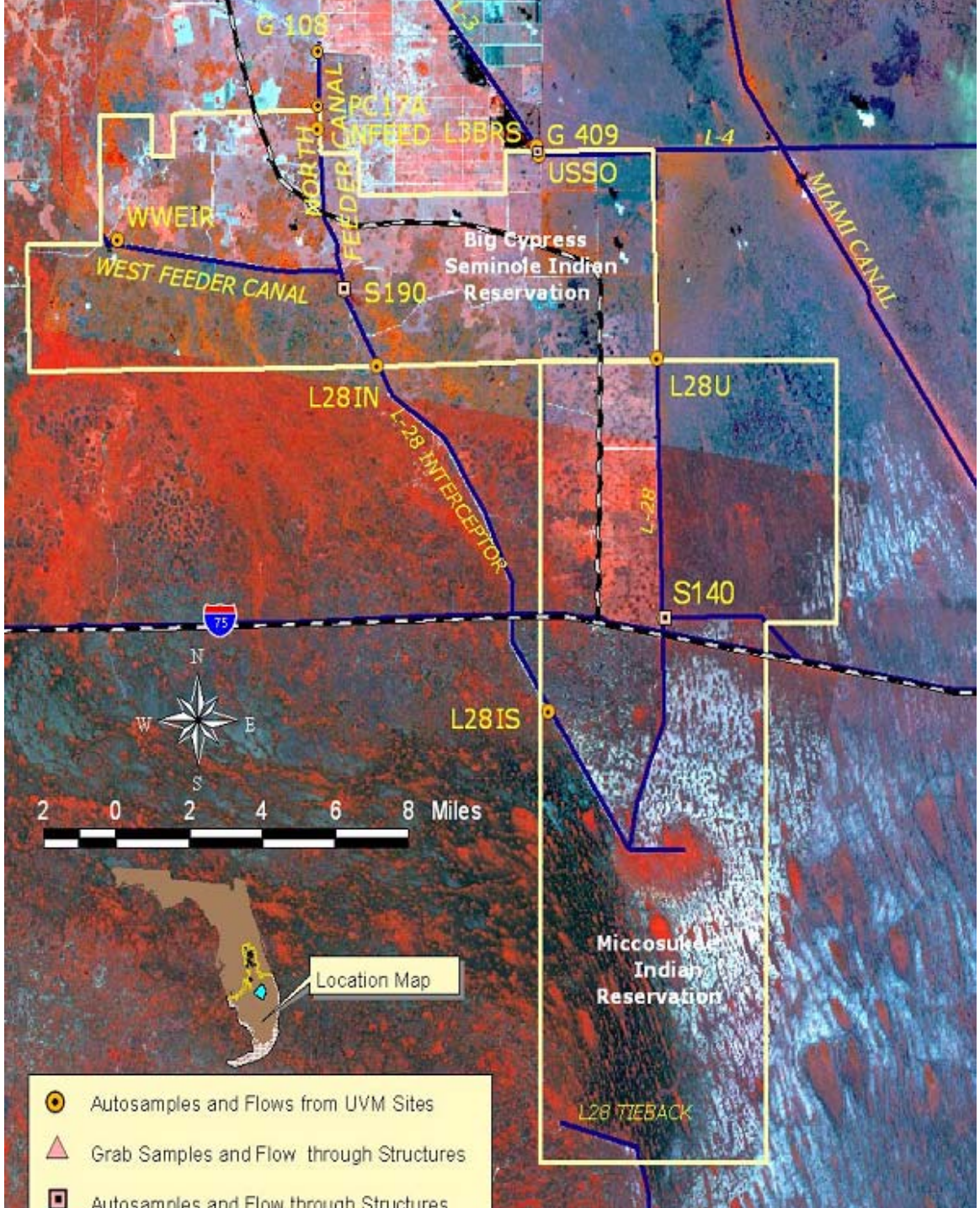
USGS
science for a changing world

History of Cooperation among the Seminole Tribe, USGS and SFWMD on Water Quality Monitoring

- 1996 Seminole/SFWMD entitlement Agreement for the Big Cypress Reservation required the Tribe to measure water quality leaving the Reservation
- SFWMD responsible for measuring water quality entering the Reservation
- Waters from State and Reservation lands commingle in North and West Feeder Canals north of S-190 and in the L-28 borrow canal
- The Tribe and SFWMD needed to determine how to measure water quality from each of these sources and needed verification of the sampling results
- The Tribe and USGS agreed to cooperate based on USGS expertise in using ultrasonic velocity meters to measure water flow and Tribe's desire for a disinterested party to analyze water quality samples (USGS laboratories)
- SFWMD agreed to participate with Tribe/USGS efforts to monitor water quality at major discharge points leaving the Reservation

Creation of Tri-Sovereign Working Group

- The Tribe, USGS and SFWMD established a working group to resolve technical issues concerning monitoring and sampling protocols
- The Working Group initially met monthly to develop the responsibilities for each entity and undertake the implementation process
- Over time, the Working Group institutionalized each entities role so that meetings are now held on a semi-annual basis
- Example of three sovereigns successfully integrating their processes for efficiency and mutual benefit

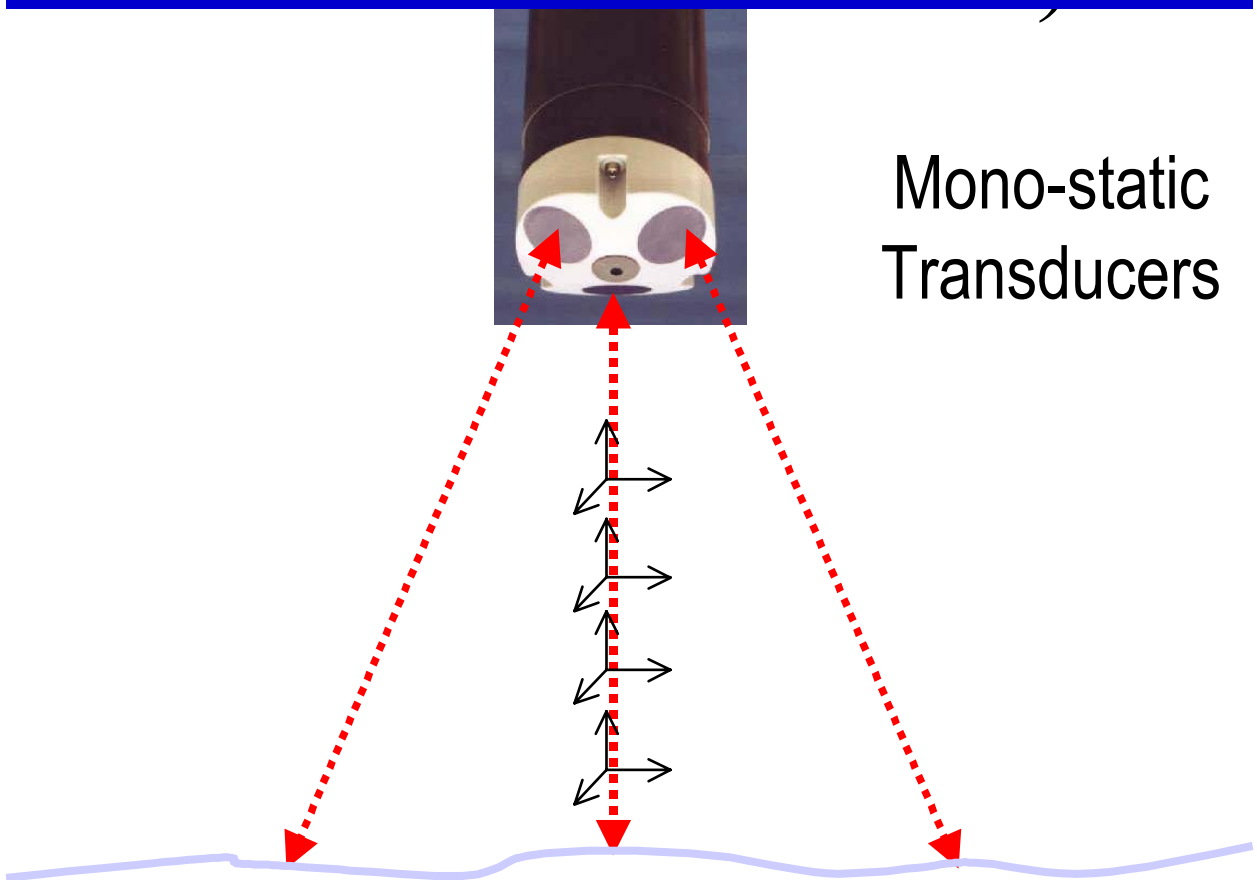

G 108
NORTH FEEDER CANAL
PC17A
INFEED L3BRS
G 409
USSO
I-4
MIAMI CANAL
WWEIR
WEST FEEDER CANAL
S190
Big Cypress
Seminole Indian
Reservation
L28IN
L-28 INTERCEPTOR
L28U
L-28
S140
75
N
W
E
S
L28IS
2 0 2 4 6 8 Miles
Location Map
Miccosukee
Indian
Reservation
L28 TIEBACK
Autosamples and Flows from UVM Sites
Grab Samples and Flow through Structures
Autosamples and Flow through Structures

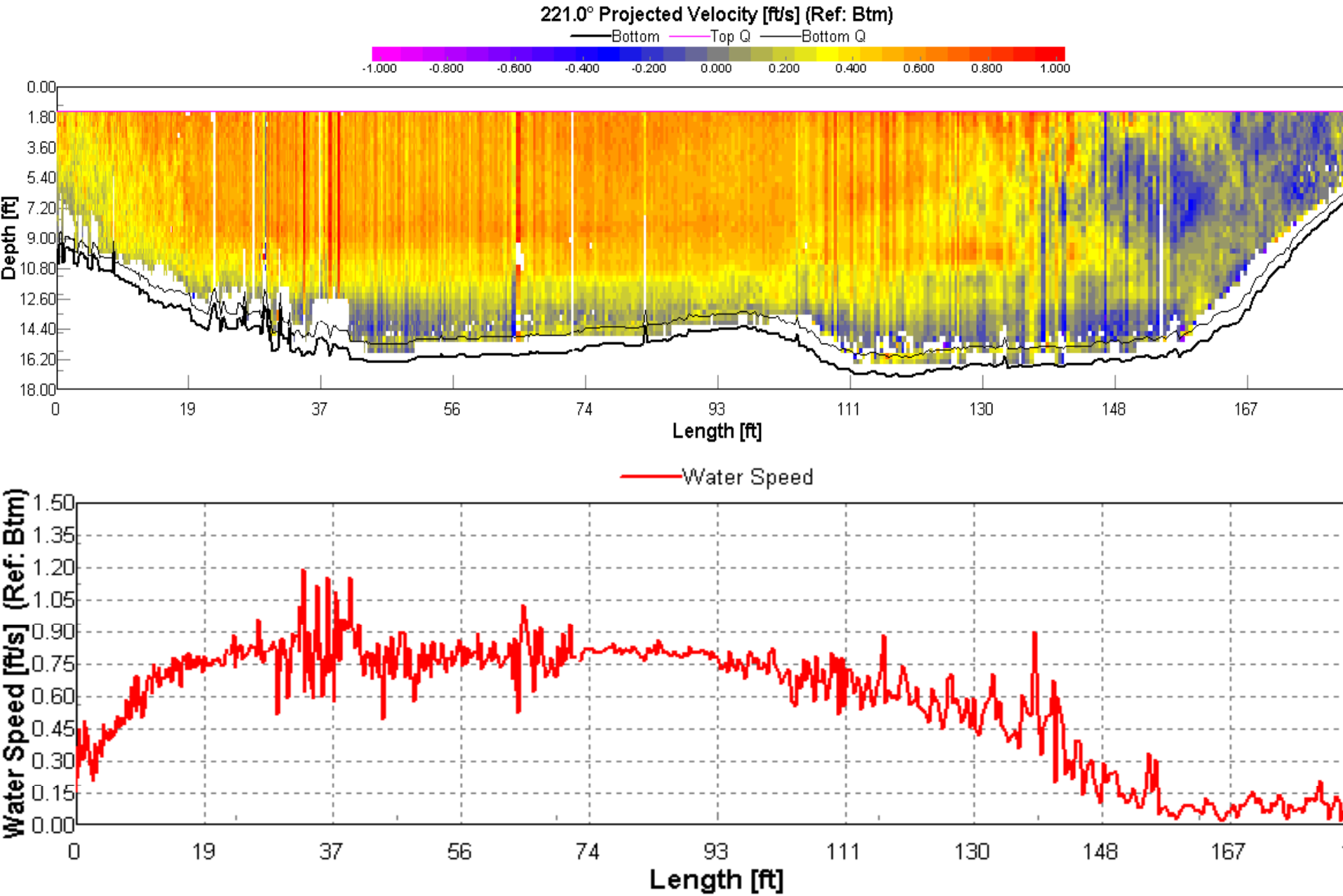
ADVM's

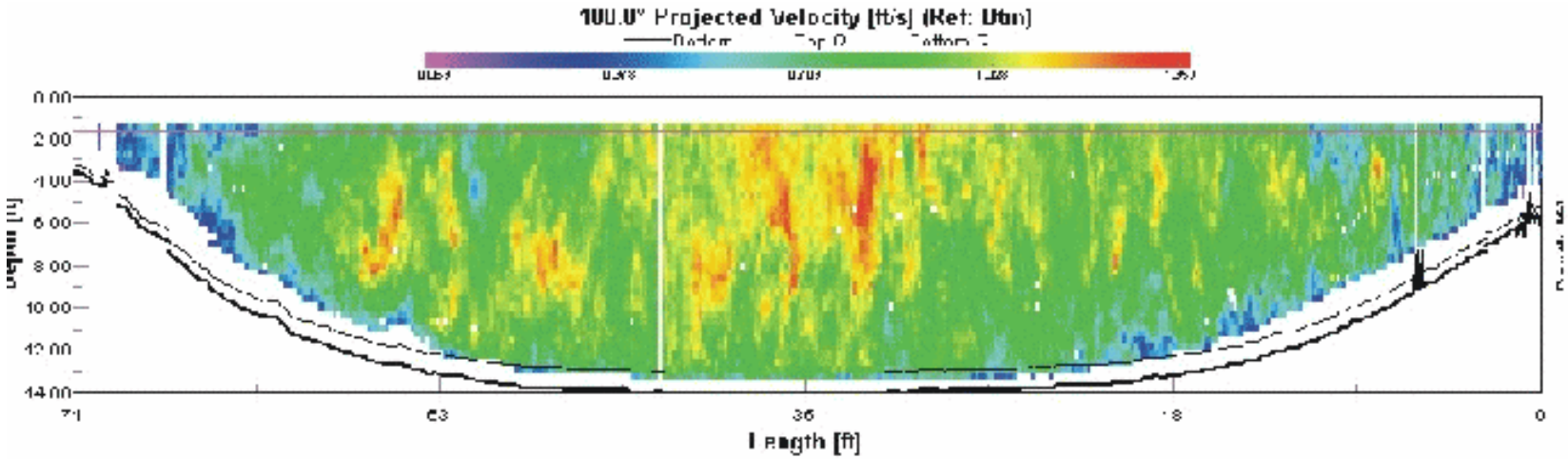
Use of trade or product names does not imply endorsement by the USGS

All information is provisional

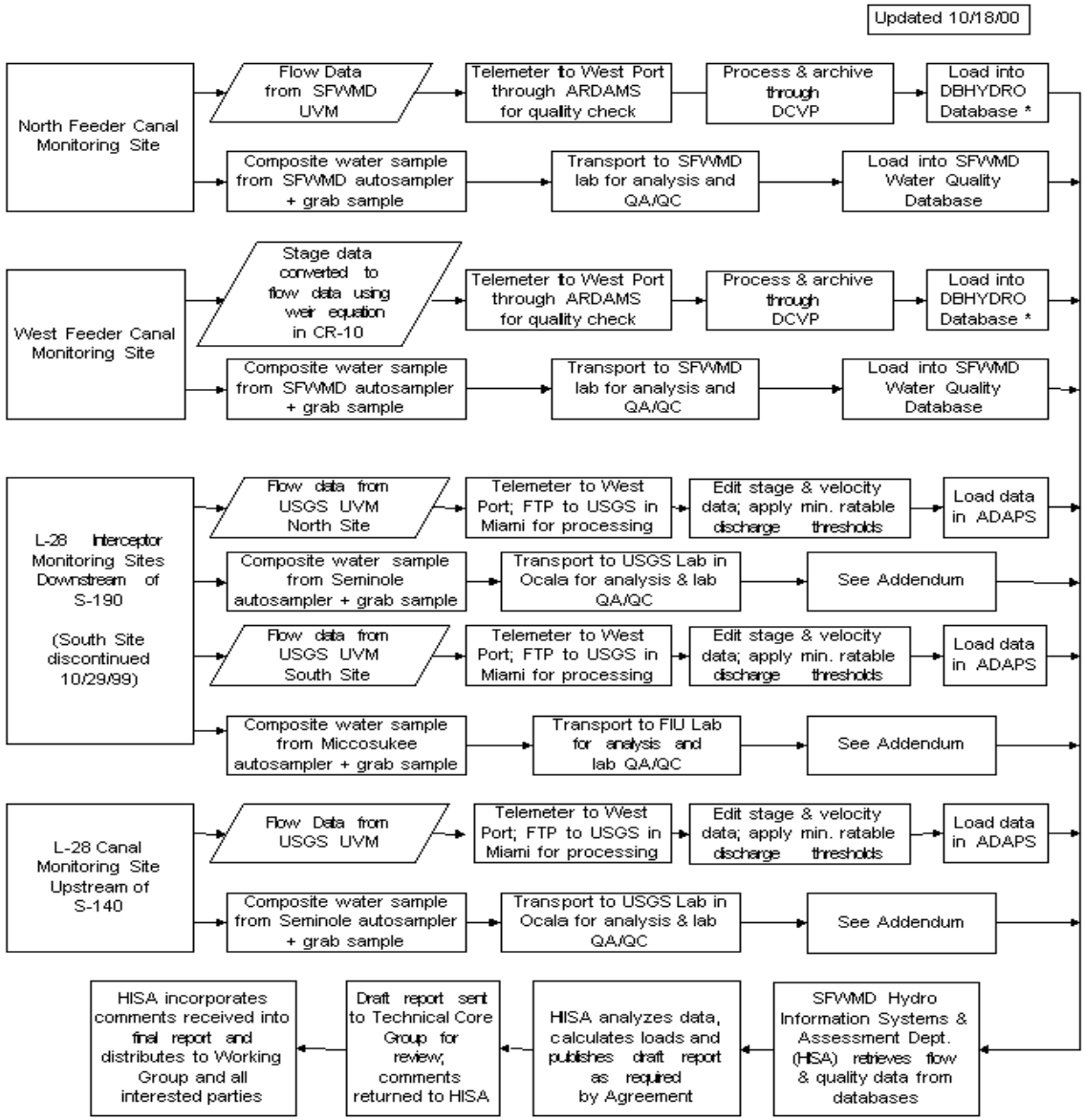
Acoustic Doppler Current Profiler (ADCP)



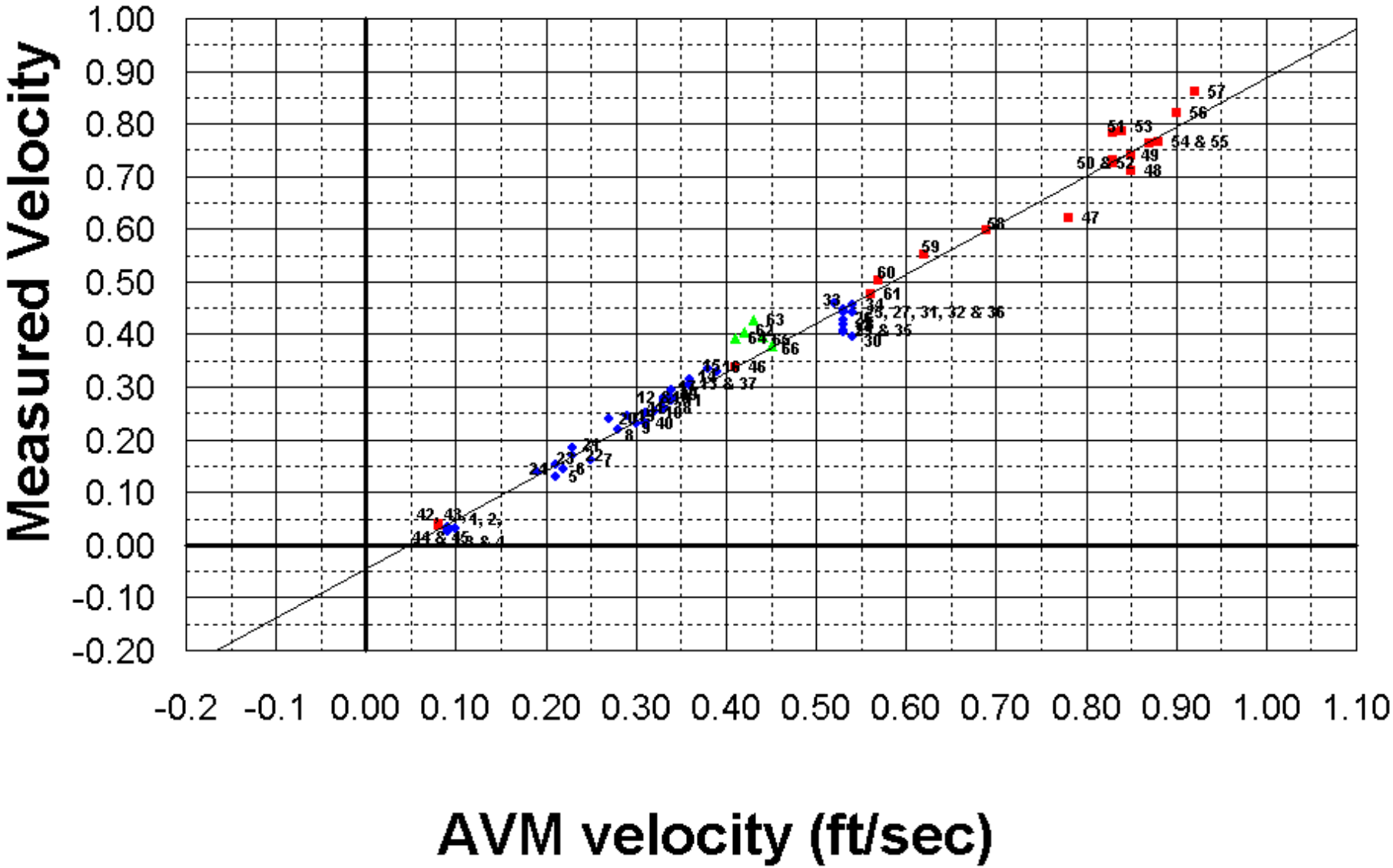

221.0° Projected Velocity [ft/s] (Ref: Btm)
Bottom
Top Q
Bottom Q
-1.000
-0.800
-0.600
-0.400
-0.200
0.000
0.200
0.400
0.600
0.800
1.000
Depth [ft]
0.00
1.80
3.60
5.40
7.20
9.00
10.80
12.60
14.40
16.20
18.00
0
19
37
56
74
93
111
130
148
167
Length [ft]
Water Speed
Water Speed [ft/s] (Ref: Btm)
1.50
1.35
1.20
1.05
0.90
0.75
0.60
0.45
0.30
0.15
0.00
0
19
37
56
74
93
111
130
148
167
Length [ft]

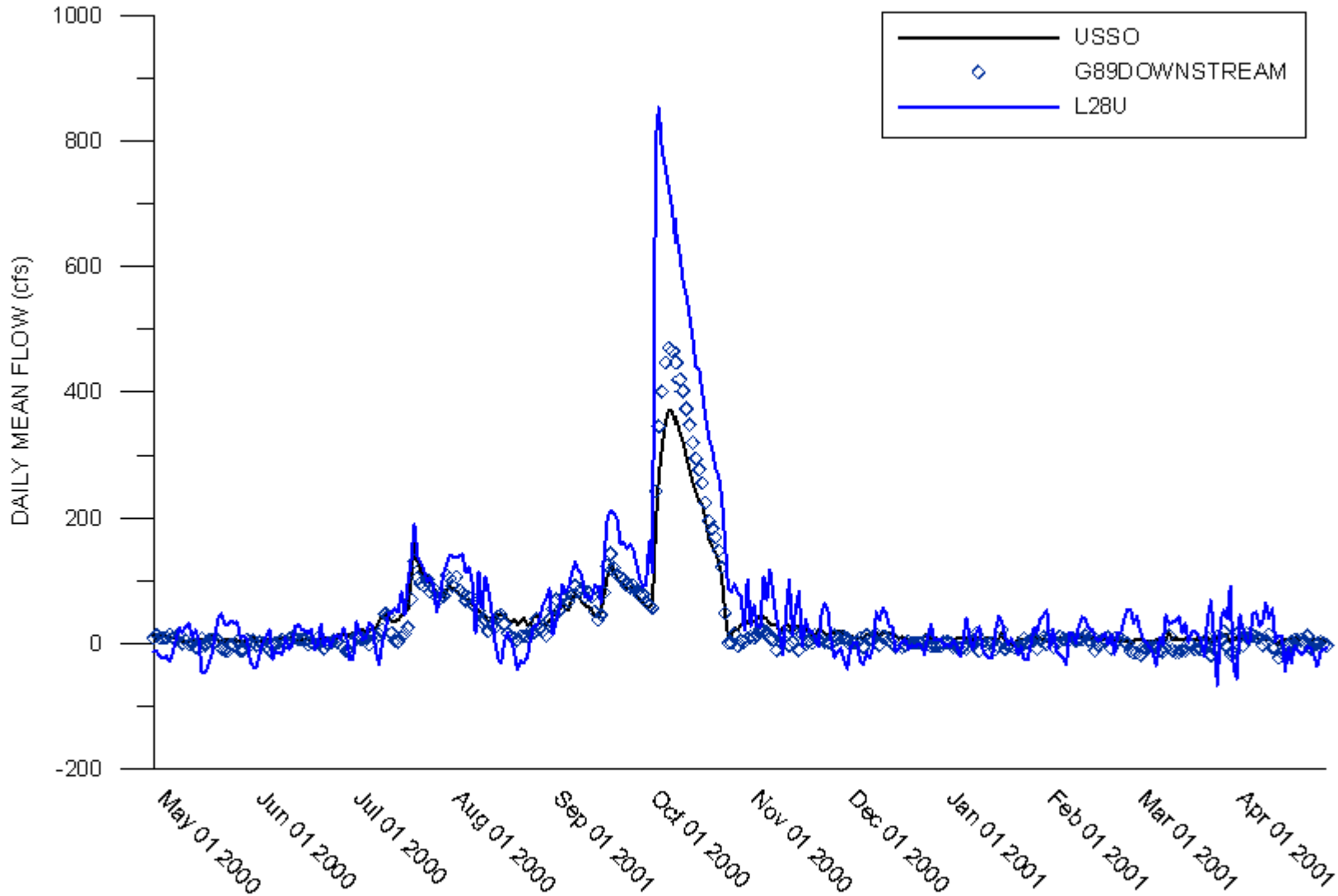

100.0° Projected Velocity [ft/s] (Ref: Utm)
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
63
36
0
Length [ft]

APPENDIX I. Flow Chart for Water Flow and Water Quality Data Collected for the SFWMD/Seminole Cooperative Agreement

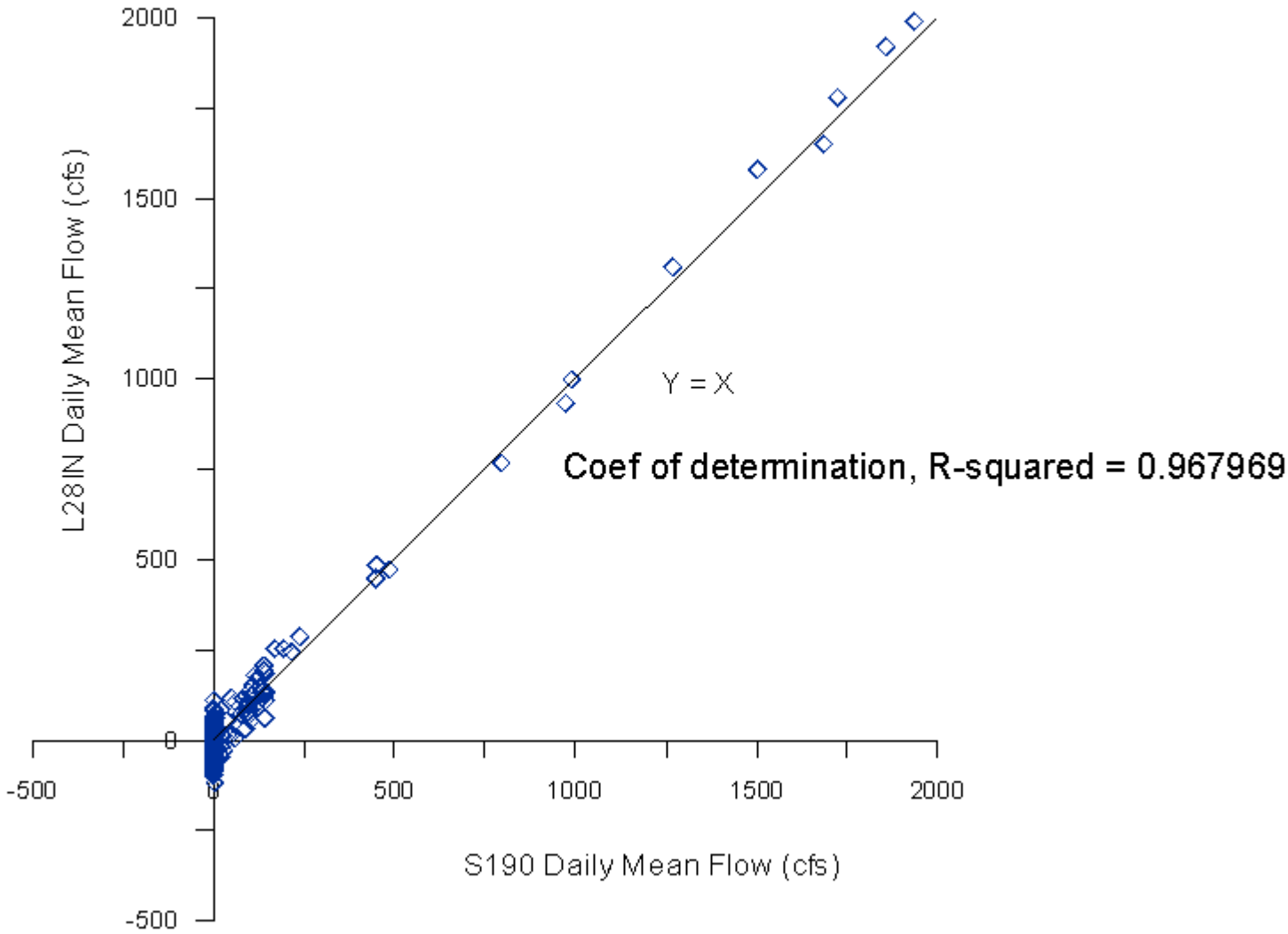


L28 CANAL ABOVE S-140

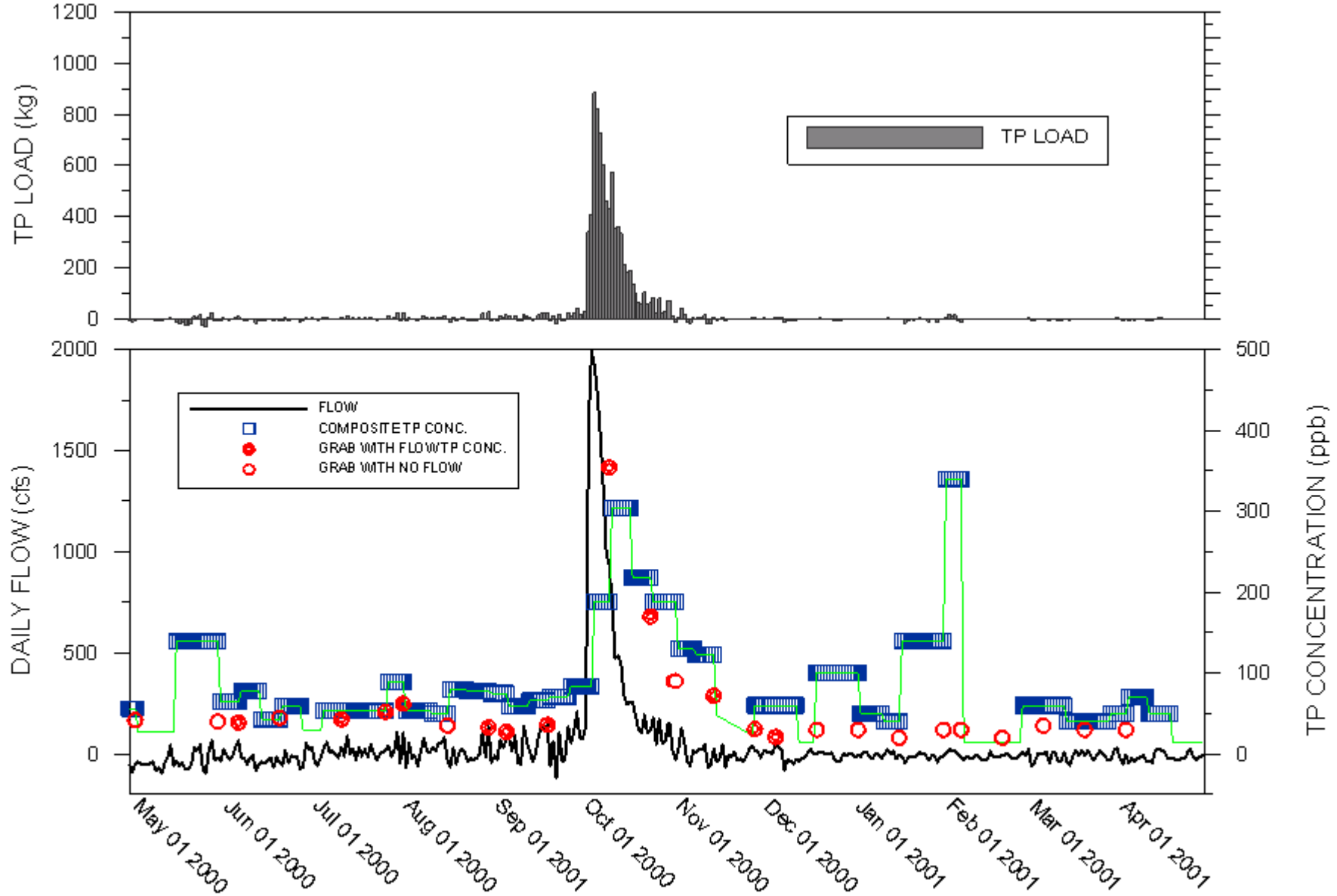




Comparison of flow at L28U with flows at USSO and G89 downstreasm



Comparison of flow at S190 with flow at L28IN.



Flow, total phosphorus (TP) concentration, and TP loads at L28IN.

Searching for something?

Go

Site Map

Help

Projects

by Title

by Investigator

by Region

by Topic

by Program

Products

Publications

Results

South Florida Restoration Science Forum

Synthesis

Information

Personnel

About SOFIA

Education

Upcoming Events

Data

Database

Data Exchange

Metadata

Internal Surface Water Flows

Principal Investigator: Mitch Murray

Project Personnel: Rick Solis

- Proposals and Project Summaries
- Data
- Metadata
- Publications

The objective of this project is to evaluate approaches for quantifying freshwater flows to and from Native American lands and to provide various hydrologic data to support other Federal and State hydrologic investigations. The implementation and development of strategically locating streamflow and water-quality gaging sites will provide information for determining future surface-water flow requirements. Subsequent studies based on accurate flow calibrations generated by these sites will be used for computation of nutrient loadings in the canal system. Providing continuous-flow data at selected impact points for internal basins will complement the eastern flow canal discharge network and allow for surface-water releases that are more accurately timed. The accounting of all significant hydrologic inflows and outflows to the Everglades ecosystem of the south Florida mainland is a key element of the South Florida Ecosystem Program.

Summary

The objective of this project is to evaluate approaches for quantifyir freshwater flows to and from Native American lands and to provide various hydrologic data t support other Federal an State hydrologic investigations.