Flow and Water Quality Monitoring at the S10A, S10C, S10D and S39 Structures

• Structure Information

S10A, C & D - gated spillways, 4 gates for each structure - manually operated by USACE

- S39 reinforced concrete spillway with 1 gate
 - manually or remotely controlled gate
 - diesel emergency power generator added on May 2002
 - operated by SFWMD

• Purpose of Structures

- Structures 10A, C & D
 - principal discharge from LNWR
 - principal source of gravity flow into WCA-2
- S39 principal release from LNWR
 - provides supply water needs to Hillsboro canal on dry season
 - discharge excess water from LNWR into WCA-2 and WCA-3

• Instrumentation at Structures

- S10A, S10C, S10D CR10 (solar panel)
- Head and tail water level data are collected and transmitted via satellite to COE.

USGS installed instrumentation and provides maintenance.

- S 39 remote digital head and tail water level recorders
 - gate opening remote digital recorder

(continued on other side)

• Data Collection for Flow Monitoring

S10A based on manual gate opening Head and tail water (CR-10 real-time break point data collection and satellite transmission)

S10C based on manual gate opening Head and tail water (CR-10 real-time break point data collection and satellite transmission)

S10D based on manual gate opening Head and tail water (CR-10 real-time break point data collection and satellite transmission)

S39 Head, tail water and gate opening done via telemetry

• Water Quality Sampling

S10A and S10C - sampled bi-weekly when flowing - no flow – no sample

S10D and S39 - sampled bi-weekly when flowing - sampled once a month if not flowing

• Flow Data

S10A uses S10A_H, S10A_T and gate opening (flow computed by COE) S10C uses S10C_H, S10C_T, gate opening (flow computed by COE) S10D uses S10D_H, S10D_T, gate opening (flow computed by COE)

S39 flow computed by SFWMD (S39_H, S39_T and gate opening)