Program Name: Restoration Program: Water Quality, Habitat & Species
Project Name: **Lake Okeechobee Tributary Sediment Removal Pilot Project**
Project ID: 1709
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: SFWMD Ad Valorem; EPA 319

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Reduction in phosphorus loads from the Lettuce Creek drainage basin to Lake Okeechobee.

Project Synopsis: This project provides a direct comparison between two sediment removal technologies, namely, a continuous deflective separation (CDS) unit and a tributary sediment trap (TST) to determine if particulate phosphorus loading to Lake Okeechobee from Lettuce Creek drainage basin may be reduced using either of two pre-selected technologies. This project also examines the feasibility of sediment removal in a tributary as a method of reducing phosphorus loading to Lake Okeechobee. The effectiveness of the two technologies is being evaluated over a 12-month monitoring period. Initial monitoring results have indicated poor removal efficiencies for phosphorus by both units. Upon evaluation of the physical characteristics of the particles in the Lettuce Creek water, it was hypothesized that the settling velocities of the particles are too slow to allow capture of the particulate phosphorus within the relatively short residence times provided by the two units. Additional sediment management techniques are being investigated to examine if the effectiveness of these units can be improved by enhancing the settling velocity of the particles. The effectiveness of each system will be quantified using both a concentration-based and mass balance approach. The economic viability of each technology will be evaluated by comparing the present worth cost (20-yr) per kilogram of sediment and phosphorus removed by each system. If one of the tested sediment trap methods is found effective, landowners in the watershed will be encouraged to use it. The District will also use the technology wherever possible on District facilities. **This project has been completed.**

Cost:
Total
$440,000
Project Design (Phase I)
$93,728
Construction, Installation and Calibration of Monitoring Instruments (Phase II) $210,940
Post Sediment Removal Monitoring and Measuring Effectiveness of the Project (Phase III)$135,332

Project Schedule: Start Date: October 2000Completion Date: June 2004

	10/2000	08/2001	01/2002	04/2002	05/2002	06/2004
Project Design						
Construction and Installation						
Monitoring and Project Evaluation						

Detailed Project Budget Information ($1000)

	2000-2001	**2001-2002**	**2002-2003**	**2003-2004**	**Balance to complete**	**Total**
Federal EPA	59.5	87.1	23.4			170
State SFWMD	71	136.6	42.4	20		270
Total	**130.5**	**223.7**	**65.8**	**20**		**440**

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