

Stream Flow, Geomorphic, and Aquatic Biological and Habitat Assessments of Big Cypress Creek, Texas

Status Report

7 Sept 2006

Objectives

1. Characterize segment and reach-scale channel geomorphologic features and sediment composition in Big Cypress Creek downstream of Lake O' the Pines in advance of prescribed releases.
2. Conduct baseline reach-based and synoptic biological status assessments of fish assemblages through the Big Cypress segment in advance of prescribed releases.
3. Establish instrumented cross-sections at non-gauged locations for continuous monitoring of stage, temperature, and discharge in advance of prescribed releases.

Deliverables

1. Present methods and results findings at June 2006 (now October 06) Caddo Environmental Flows Workshop.
2. Project status and summary in form of USGS Administrative Report or equivalent by September 30, 2006.

Completed Tasks

Site Reconnaissance (Oct 18-21, 2005)

1. Established sites and reaches for baseline assessment.
2. Discharge measurements taken, geomorph. and habitat evaluations, coordinates for reach boundaries, and site photos.

Instrumented Cross Sections (February 7-9, 2006)

1. Installed research benchmarks and pressure transducers at three study sites upstream of Jefferson and above Hwy 59.
2. Surveyed multiple cross-sections including one at the pressure transducer, and at least three more x-sections in support of developing a stage to discharge rating for the site.
3. Establish site benchmark coordinate and elevation accuracy via data from existing benchmark in Jefferson.

Data Downloads and Maintenance of Pressure Transducers (March 2006 – continuing)

1. Beginning in March 2006, Roy Darville and Gary Endsley began regular (2 to 3-week interval) data downloads and servicing of pressure transducers.

Fish Assemblage Surveys and Addition of New Site (April 24-27, 2006)

1. Completed reach-based fish assemblage surveys at four sites.
2. Used barge and cataraft electrofishing as principle survey equipment
3. Included equal-effort seining to supplement electrofishing.
4. Fish were identified to species in the field, photo-vouchered, and unidentified specimens or problematic IDs returned to the Austin for sorting and ID.
5. Installed pressure transducer at fourth site on Big Cypress Creek at location approximately one mile downstream of Jefferson.

Other

1. Fish assemblage data input and summarized (i.e., abundance and metrics calculated).
2. Surveyed cross-section data reviewed and plotted.

Tasks to Complete

1. Collection of reach and transect-based geomorph. and habitat assessments (scheduled for week of Sept 18th 2006).
2. Summary of geomorphology, habitat, flow, and biological (fish) data for Oct 2-4 Flows Workshop.
3. Summary and status report to CLI by Sept 30th 2006.