

## ***Continuous Water Quality Monitoring on the Upper Pecos River-Segment 2311***

**Project Background:** Natural geologic deposits in the Pecos River watershed increase the concentration of chloride, sulfate, and dissolved solids to levels that are ten times higher than typical surface waters. The water quality criteria for chloride, sulfate and total dissolved solids in Segment 2311 are 7,000, 3,500, and 15,000, respectively.

In addition to these natural deposits, the salt cedar plant, (*Tamarisk* sp.), contributes to elevated salinity levels in the Pecos River. Salt cedar is a invasive, non-indigenous, salt tolerant species that increases salinity by transpiration of freshwater sources. The Pecos River Ecosystem Project (Texas A&M University) has completed the third year of aerial herbicide application to eradicate the salt cedar plant from the banks of the Pecos River. The Pecos River Ecosystem Project proposes to eliminate the plant and reintroduce native plants and grasses in it place. Preliminary estimates of water quality indicate that salt cedar removal will decrease the salinity and increase flow in the Pecos River.



The objective of this study is to employ existing technology capable of continuous monitoring and logging of conventional water quality parameters. The data generated will be used to monitor changes in salt concentrations (using specific conductance) and surface water flow (Doppler flow sensor) associated with salt cedar removal.

**Project Description:** Continuous measurements will be reported in real-time from two locations on the Upper Pecos River-Segment 2311.

These sites will report in-situ water quality measurements of specific conductance, temperature, pH, dissolved oxygen, and flow.

The sites were deployed and operational on September 23, 2004.

The project is being coordinated by Christine Kolbe, Aquatic Scientist, SWQM Team. The sites are operated and maintained by Greg Larson of TCEQ Region 7, Field Operations.

### **Sites:**

1. Pecos River at US 80/Bus IH-20 near Pecos, TX
2. Pecos River at FM 1776 near Coyanosa, TX