Pecos River Watershed Protection Plan Implementation

December 2012 Newsletter

Heliborne Electromagnetic Survey Project Funded on the Pecos River

Elevated levels of salinity in the Pecos watershed, especially between Coyanosa and Girvin, have had adverse impacts on the river's uses and its aquatic life. Fueled by the need to identify salt sources influencing salt loading to the river, the Pecos Heliborne Electromagnetic Survey Project was developed and recently received approval for funding from the Texas State Soil and Water Conservation Board and the Environmental Protection Agency.

The project will employ an aerial-based electromagnetic survey to produce electrical resistivity readings of the soil and water it contains from the surface to depths up to 200 m. These readings will be analyzed to yield a high-resolution, 3-D visualization of salinity levels in the soil and water profile, thus providing exceptional details of the area's hydrogeology. The distribution of brackish groundwater will be assessed and saline hotspots determined.

A request for bids is currently being developed to procure the services of a capable entity to deploy and operate the equipment necessary to collect needed data. Actual data collection will occur sometime in the future but will depend on contracting and flight planning timelines.

For further information about this project, please contact Lucas Gregory.

Technical and Financial Assistance Available

Through the Water Quality Management Plan (WQMP) Program, farmers and ranchers in the Pecos River Watershed are eligible to receive technical assistance and apply for cost-share to implement conservation practices. Each operating unit is eligible for up to $15,000 in cost-share. Conservation practices eligible for cost-share include:

- Fencing
- Livestock water development: water wells, pumping plants (wind, solar, or electric), pipeline, watering facilities
- Riparian buffers
- Range planting

Approximately $163,000 in cost-share funding is available through September 2013. At that point, any unused monies will return to the funding agency. Producers interested in participating in the WQMP Program and implementing the above mentioned practices are urged to contact Amy Porter.

Texas/New Mexico/Mexico Saltcedar Biological Control Consortium Meeting

The 8th annual meeting of the Texas/New Mexico/Mexico Saltcedar Biological Control Consortium was held on Oct. 30-31 in El Paso, Texas. This meeting brought together researchers and practitioners to discuss progress and challenges in the biological control of saltcedar in Texas, New Mexico and Mexico.

Beetle action is in full force across the state, and the Pecos River Watershed is no exception. During 2012, a total of 116,000 adult beetles were collected from and redistributed within the Pecos River watershed. Extensive defoliation of saltcedar along the Pecos and the Rio Grande by subtropical leaf beetles has been observed in 2012.

Saltcedar Debris Burning Update

Efforts to burn saltcedar debris along the river continue to progress. With winter weather finally here, fine fuels will dry much faster and should be within prescription allowing many more opportunities to burn. Also, a request for bids was released on Nov. 28 seeking prescribed burning service from eligible parties. Bids must be turned in by Dec. 19 and the winning bidder will be selected shortly thereafter.

Pecos River Information Management System

An interactive WPP implementation tracking tool called the Pecos River Information Management System (PRIMS) has been developed and is being continually updated by the Texas Water Resources Institute (TWRI) to illustrate general locations within the watershed where WPP implementation efforts have taken place. As new information is developed and implementation is completed, it is added to the viewer.

The database provides useful information to watershed managers and others wanting to spatially assess current management practices, such as chemical and biological treatment of riparian Saltcedar in the Pecos Watershed. The extent of chemical spaying of saltcedar from 1999-2011 and the extent of defoliation of saltcedar by beetles from 2010-2012 can be viewed. Additionally, information on water quality monitoring locations, irrigation turnouts, stream gages, water wells and other information can all be seen.

If you have any suggestions to improve the viewer or requests for information to add, contact Lucas Gregory. For assistance on manipulating the viewer, be sure to click on the question mark symbol for the user's guide. The map and user's guide for the viewer can be found at pecosbasin.tamu.edu/map/.

Funded through a Clean Water Act § 319(h) Nonpoint Source Grant from the TSSWCB and USEPA

New Compact Commissioner Appointed

Presidio County Rancher Rick Tate of Marfa has been appointed the new Pecos River Compact Commissioner for Texas by Gov. Rick Perry after former commissioner Rick Rylander resigned in June 2012 to take an appointment to the Texas Water Development Board. Commissioner Tate's appointment is effective through Jan. 23, 2017. Tate is a cattle rancher who received a bachelor's degree from the University of Colorado.

The Pecos River Compact Commission administers the Pecos River Compact established in 1948 between Texas and New Mexico. The Texas Legislature ratified the compact in 1949. Subsequently, the New Mexico Legislature ratified it, the U.S. Congress approved it, and the President signed the compact, making it both state and federal law. The compact, which applies to the Pecos River and its tributaries, protects the rights and interests of Texas by ensuring that New Mexico complies with the guidelines set forth in the compact.

Dissolved Oxygen Modeling and Monitoring Updates

The water quality model developed to simulate dissolved oxygen (DO) levels and other water quality parameters in the Pecos River from the river's confluence with Independence Creek up to Red Bluff Reservoir has been used to evaluate the effectiveness of various control measures and best management practices (BMPs) to improve instream DO levels. Based on water quality monitoring data, the Pecos River is presently considered impaired due to DO levels that occasionally go below the allowed standard of 3.0 milligrams per liter (mg/L). These low DO values are most common during the warmer months of late spring and summer and are a response to prolific attached algae beds along portions of the Pecos River. The photosynthesis/respiration cycle of algae results in high afternoon levels of DO and low DO levels in the morning prior to sunrise. These early morning DO levels are frequently lower than the minimum standard during warmer months.

The model has been applied to evaluate various BMPs considered potentially beneficial to the improvement of DO. These BMPs include 1) reduced salt content in the Pecos River as a result of the Malaga Bend project, 2) decreases in the nutrient levels in releases from Red Bluff Reservoir, 3) increases in river flow during the prime algal growing season of April–October, 4) decreases in algal biomass, 5) decreases in bottom sediment nutrients and 6) adding riffle areas along the river. Initial results indicate that no single BMP can achieve the goal of maintaining minimum DO levels above the 3.0 mg/L standard the needed 90 percent of the time. Several combinations of BMPs were found to theoretically achieve this goal.

A final report describing this modeling effort and its results is being developed and will be available next year.

Conservation efforts highlighted in *Texas Wildlife*

Two recently published articles in the December 2012 edition of the *Texas Wildlife*, the magazine of the Texas Wildlife Association, highlight restoration efforts in the Pecos River. The articles describe restoration activities and conservation initiatives including the chemical, biological and physical removal of saltcedar from the watershed, native plant revegetation efforts and water quality management plan development.

Need Information?

For information on project happenings and other meetings in and around the watershed, please visit our website at pecosbasin.tamu.edu or contact:

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