Restoring the Pecos, a Little at a Time

article by **AMY PORTER,** ***Upper Pecos Soil and Water Conservation District***

Through the years, the Pecos River and its watershed have seen more than their fair share of hardship. From recurring drought to salinity, to the increasing problems with invasive species, such as salt cedar or giant cane, the Pecos River watershed commonly faces natural resource issues that affect livestock, people and wildlife. Changes in available habitat and water resources are two such challenges being met head-on.

The Pecos River Ecosystem Project began efforts to address both habitat and water quality issues in 1999 by treating salt cedar with aerially applied herbicides. In six years of this project, 13,497 acres of salt cedar were treated throughout the watershed. Taking restoration efforts a step further was the Pecos River Basin Assessment Program. This program was funded by the Texas State Soil and Water Conservation Board to assess aquatic life and habitat in the river, quantify water savings resulting from salt cedar control, identify and characterize water quality in springs and tributaries across the watershed, and assess the salt sources impacting the Pecos River. Using information from these program components, the Pecos River Watershed Protection Plan (WPP) was developed, and it outlines a plan for restoring water quality in the Pecos River.

Photo by Bill Davis, Texas A&M Forest Service

PRESCRIBED BURNING can be used as a tool to remove salt cedar debris left following earlier treatments. It is recommended to wait three years following chemical application before disturbing treated salt cedar to allow the chemical to totally kill the tree.

Photo by Dr. Charlie Hart, Former TAES Range Specialist

AERIAL CHEMICAL application is the quickest way to kill large areas of salt cedar. Despite its high effectiveness rate, costs can be substantial and are the primary reason this tool is not more widely utilized.

With watersheds being nature's primary filter protecting in-stream water quality, the Pecos River WPP logically includes management recommendations that promote improved habitat through restoration and proper resource utilization. These management measures align with goals and objectives of many landowners throughout the watershed, who are voluntarily implementing management measures, including salt cedar control, debris removal, rotational grazing and establishment of alternative water supplies.

When implementation efforts began, landowners had the option of choosing between biological or chemical controls to reduce salt cedar and promote habitat restoration. Chemical application was completed in September 2011, when 2,642 acres were treated. Salt cedar leaf beetles are the biological control tool available in the watershed, and their populations are rapidly expanding. Through repeated defoliation, the salt cedar leaf beetles will eventually kill the trees and will suppress seed production each year they are defoliated.

Furthering habitat restoration is using prescribed burning to remove salt cedar debris left following salt cedar treatments. Not only does prescribed burning remove debris, but it prepares a good seedbed for vegetation reestablishment. Additionally, discussions are underway to establish native seed stock specifically for the Pecos River that will supplement natural revegetation efforts in these treated areas.

Technical and financial assistance focused more toward livestock producers is available through local soil and water conservation districts across the watershed. Using funds provided by the Texas State Soil and Water Conservation Board, the districts provide landowners requesting assistance help in developing water quality management plans for their farm or ranch. These plans provide an opportunity to enhance the value of their operation, while simultaneously achieving water quality goals for the watershed.

Collectively these efforts are restoring habitat and improving water quality in the Pecos River. For information on any of these programs, contact Amy Porter at (432) 445-3196 extension 3 or amy.porter@tx.nacdnet.net.

Photo by Amy Porter, Upper Pecos SWCD

VEGETATION RESPONSE can be great following chemical control and subsequent prescribed burning, if conditions are favorable. Burning helps prepare a good seedbed for vegetation and, with favorable moisture, can produce excellent cover in a short amount of time.

Photo by Amy Porter, Upper Pecos SWCD

BIOLOGICAL SALT CEDAR control has been used in the Pecos River Watershed since 2006 and is now expanding rapidly. Salt cedar leaf beetles and their larvae defoliate trees by feeding on the leaves and stems of the tree. This causes the tree's foliage to die, reduces or eliminates seed production, and stresses the tree. With repeated defoliation for multiple years, trees eventually succumb to the repeated stress, and die.

Photo courtesy of NRCS

VEGETATION rapidly responds to enhanced grazing management implemented through the development and application of a Water Quality Management Plan. These plans outline a suite of practices that are implemented by volunteering landowners to better utilize available resources, improve range conditions and produce clean water.

TWA CONSERVATION INITIATIVES: Pecos River Watershed

by **HELEN HOLDSWORTH**

TWA MEMBERS have a long history of working with landscape conservation and being a part of the solution for those issues which affect a broad area. One of those issues of concern is the Pecos River Watershed. The Pecos River Watershed encompasses over 44,000 square miles in New Mexico and West Texas. The river flows into the Rio Grande at Del Rio.

Long-time TWA Member and Director Dr. Michael McCulloch, D.V.M., of Midland has been deeply involved in the issue of salt cedar control on the Pecos for many years. His father implemented mechanical control on their property back in the 1950's.

Dr. McCulloch believes a comprehensive plan to control the salt cedar, which includes treatment, debris removal and re-vegetation is needed throughout the watershed. He initially opposed the introduction of the beetle for biological control, but after seeing the positive effects on the vegetation, he is pressing for additional releases.

Dr. McCulloch is also active in the start-up of the Trans-Pecos Native Plant Material Initiative. Although a separate project, it will have impacts on the Pecos River Watershed Protection Plan as native plants for re-vegetation are identified and made available to land owners and land managers.

Dr. McCulloch is a prime example of TWA members who care; educating others and creating conservation action to better our wildlife and natural resources for the future generations.