Spring 2008

Tamarisk Update

KANSAS WATER OFFICE

Spring Brings a Renewed Need to Learn More About Tamarisk

Tamarisk (salt cedar) is a non-native invasive plant species that crowds out native vegetation, changes stream morphology, and affects both water quantity and quality. In Kansas, Tamarisk is present across the state, but is mainly located along western rivers and streams.

TAMARISK IN FLOWER. A MATURE TAMARISK CAN PRODUCE 1/2 MILLION SEED EACH YEAR.

Tamarisk can adapt to poor water quality and has an extensive, deep root system (up to 100 feet). Tamarisk utilizes salt to increase the osmotic potential of its root system, which allows it to draw water from greater depths than the native vegetation. Therefore, tamarisk tends to out-compete native vegetation during drought periods.

Tamarisk uses significant quantities of water. Actual water use by tamarisk depends on several factors, water availability, climate, water quality, population density, stresses, etc. However, it has been found that tamarisk will consume more water than some native vegetation in the same setting.

The purpose of this newsletter is to provide some information about Tamarisk, including current projects in Kansas and what you can do to control the spread of the plant. If you have any questions about an article or would like additional information, contact Susan Metzger, Kansas Water Office, at (785) 296-3185.

2008 Kansas Water Plan to Address Tamarisk

In February 2008, the state's 12 Basin Advisory Committees (BACs) began identifying water issues of greatest concern to their watersheds. The issues will be included in the 2008 Kansas Water Plan which will be completed by January 2009.

Two BACs, the Cimarron and Upper Arkansas, identified tamarisk infestation as high priority issues that need to be addressed in the watersheds. These basin priority issues will complement the Statewide Tamarisk 10-Year Plan that was developed in 2005.

Inside this issue:

Grant Provides Opportunity to Improve Turkey Habitat

Recently, the Kansas Department of Wildlife and Parks (KDWP), started an aggressive tamarisk control effort near Coolidge, KS. The area, known as Cottonwood Flats, is located adjacent to the south bank of the Arkansas River and is entirely restricted to the floodplain. The property was transferred to KDWP in 2001 by the Farm Services Agency.

According to KDWP Area Manager Tom Norman, much of the flats are infested with a nearly impenetrable growth of tamarisk. Cottonwoods and some native vegetation can be found, as well.

RESULTS OF TAMARISK CONTROL EFFORTS AT COTTONWOOD FLATS NEAR COOLIDGE. TAMARISK WAS REMOVED FROM THE UNDERSTORY OF THESE DORMANT COTTONWOODS.

Through a grant provided by the National Wild Turkey Federation, KDWP treated several acres of tamarisk with a goal of preserving the native vegetation and restoring turkey habitat. This year, KDWP plans to continue the effort, starting with the purchase of mechanical equipment for future tamarisk control by cutting and basal herbicide application.

Tamarisk Knows No Boundaries: The Value of Interstate Cooperation

Tamarisk infestation is not restricted within the borders of Kansas. In order to achieve true, long-term successful control, Kansas will need to actively coordinate with our neighbors. Working collaboratively will allow us to identify opportunities that make the most effective use of our collective resources.

With that in mind, several Kansas partners recently joined with stakeholders in Colorado to initiate a cooperative control project in the Arkansas River watershed.

The project seeks to build partnerships and develop local leadership so long-term control will be successful. Treating tamarisk infestation in the watershed will improve the limited streamflow and the interconnected alluvial and High Plains aquifers along the Arkansas River where tamarisk has become a significant problem.

TAMARISK INFESTATION ALONG THE ARKANSAS RIVER.

Beyond the interstate control project, the Kansas Water Office has also been cooperating with stakeholders in southeast Colorado to prepare a watershed-wide tamarisk control plan. In August 2007, a partnership was formed to develop a strategic plan for the Arkansas River's riparian areas impacted by tamarisk. This partnership, known as the Arkansas River Watershed Invasive Plant Plan (ARKWIPP), was initiated in Bent County, Colorado, through the leadership of the Southeastern Colorado Water Conservancy District (SECWCD).

Many state and federal agencies, local communities, private landowners, and non-governmental organizations are cooperating to prepare this plan.

Follow Up Treatment and New Control in Western Counties

In the fall of 2006, in cooperation with the Kansas Water Office, Kansas Department of Agriculture, and Finney County Weed Department, the State Conservation Commission (SCC) began treating Tamarisk in the Pawnee watershed and areas north of Garden City. A total of 135 acres were treated at an estimated project cost of $33,750.

MAP SHOWING A PORTION OF THE PAWNEE WATERSHED TAMARISK TREATMENT SITE.

According to Finney County Weed Director, Keith Foster, the county will be conducting follow up treatments this year in areas treated in 2006 with some additional new treatment elsewhere in the county.

Tamarisk located in the riparian areas and in several playas and small lakes were treated by helicopter with an herbicide recommended for tamarisk control, called Habitat®. Specifically developed for use in sensitive aquatic environments, Habitat® uses less active ingredient and breaks down quickly, yet is highly effective—even with just one application. The estimated treatment success was 95-99% control with the initial herbicide application.

Drawing on the success of the partnering effort between state and county agencies, more treatment is planned in 2008 for Hodgeman and Gray counties.

Want to learn more about Kansas Forest and Riparian Areas?

Check out the Kansas Forest Service Newsletter, the Kansas Canopy, at:

http://www.kansasforests.org/pubs/kscanopy/2008spring.pdf

More Control Projects Selected to Receive Grants

The Kansas Alliance for Wetlands and Streams (KAWS) identified additional landowners for receipt of a tamarisk control grant in the summer of 2008.

The goal of the grant is to educate landowners on the effectiveness and cost of various tamarisk control methods.

Recipients of this year's grant are located in Meade County and Clark County. Treatment methods on these projects will include cutting and basal bark application of an approved herbicide.

Through a cooperative grant with the U.S. Fish and Wildlife Service, KAWS has awarded $45,000 to landowners for tamarisk control since 2005. Long-term success on these sites will help restore the productivity of the native rangeland along the Cimarron River while also improving streamflow.

Tamarisk Research Symposium Announcement Coming Soon

The Tamarisk Coalition is busy planning the 2008 Tamarisk Symposium. Dates and locations will be announced soon.

Tamarisk Coalition

a non-profit alliance working to restore riparian lands

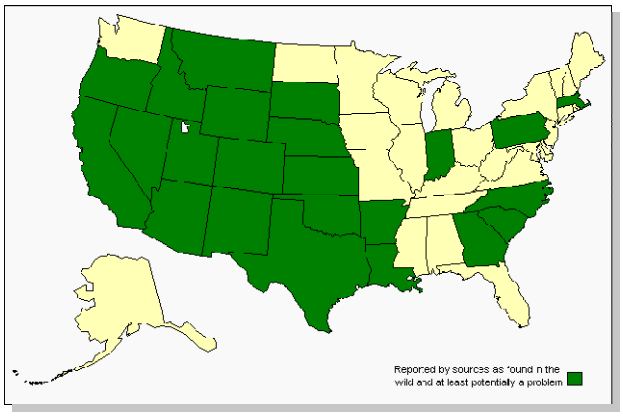
The purpose of the conference is to bring together tamarisk researchers to share their results with other scientists and western land managers so that future management will be guided by state-of-the-art science. The conference will promote dialogue between researchers and managers to identify future research needs for the development of effective policy and management decisions.

Keep checking the Tamarisk Coalition website at www.tamariskcoalition.org to stay informed of the meeting dates, location, and registration details.

Kansas Requests Funding Support for Tamarisk Control

On October 11, 2006, President George Bush signed HR2720 (The Salt Cedar and Russian Olive Control Demonstration Act), which authorized, through PL 109-320, $80 million for at least five major demonstration sites to address long-term management questions that the Secretary of Interior is mandated to address.

This bill potentially is a great step forward in controlling tamarisk and Russian olive in Kansas. However, the next step is to develop and fund the five demonstration projects authorized under PL 109-320. It is critical that the full authorized amount be allocated for Fiscal Year 2009.



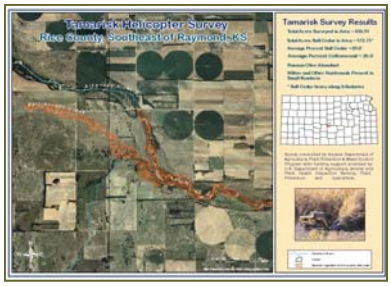
STATES REPORTING THAT TAMARISK INFESTATION IS POTENTIALLY A PROBLEM.

In February 2008, the Kansas Natural Resources Subcabinet demonstrated their support of funding for this bill during a trip to Washington D.C.

Many other states, including Colorado, expressed their interest in full authorization of the bill through letters and Congressional visits in the Capitol.

Treating Tamarisk in the Watershed: the Kansas WRAPS Approach

Generally, the control and treatment of tamarisk in Kansas is prioritized at a watershed-scale, especially those with high levels of infestation. The best solution for long-term control is to treat tamarisk in the upper tributaries to remove the upstream seed source and then continue downstream throughout the watershed.



There are many resources in Kansas that promote conservation and watershed ecosystem health, including the Kansas Watershed Restoration and Protection Strategies (WRAPS). These watershed partnerships can form coordinated approaches for long-term management of tamarisk and reestablishment of native vegetation.

Identifying active watershed programs or groups initiating WRAPS to encourage the inclusion of tamarisk control as part of their plans is a priority recommendation of the Statewide Tamarisk 10-Year Plan. Working within existing WRAPS groups may provide an opportunity for additional funding sources for tamarisk treatment.

For more information about the Kansas WRAPS program, contact Kerry Wedel, KDHE, at (785) 296-4195, or visit the Kansas Department of Health and Environment website at: www.kdhe.state.ks.us/nps.

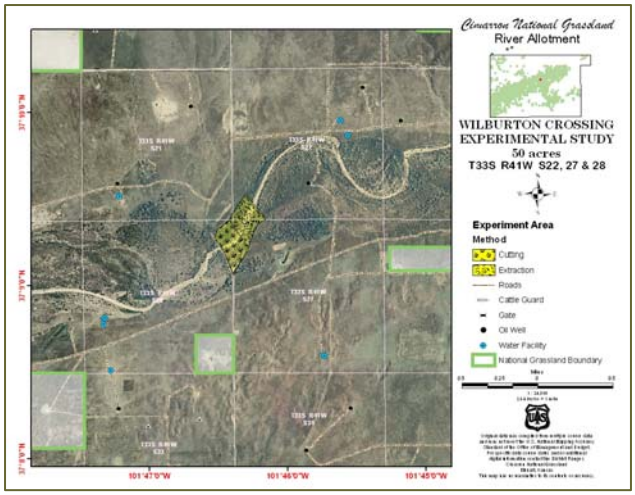
A WRAPS is being developed for the Upper Arkansas Watershed, including the river corridor from Coolidge to Raymond. "Both in identifying Critical Concerns and also in developing Goals for our WRAPS, Salt Cedar (Tamarisk) has been included," offered Bob Frisbie, Watershed Specialist. Invasive species removal is indentified in the Upper Arkansas WRAPS as part of a goal to protect riparian and buffer areas.

Goals of the Upper Arkansas WRAPS will be reviewed by a development committee this spring and summer. If you are interested in learning more or providing input on these goals, contact Bob Frisbie via e-mail at rfrisbie@ksu.edu or via phone at (620) 659-2149.

Grasslands Studies Two Mechanical Control Methods

The Cimarron National Grassland and Missoula Technology & Development Center recently completed the first phase of a tamarisk removal study. The overall goal of the study was to find the best way to remove tamarisk and minimize the use of chemical herbicides to treat re-growth.

Two mechanical control methods, cutting and extraction, were compared on a total of 50-acres of tamarisk infestation along the Cimarron River in Morton County. Extractions were conducted using a "Jawz" attachment, invented by John Lyddon of Starhill Jawz. The Jawz extracted the tamarisk plant by pulling it up out of the ground and severing the main tap root. Cuttings were conducted with a Brush Saw attached to a skid steer machine. The Brush Saw cut off the tamarisk plant at the base and left the underground portion of the plant undisturbed.



"JAWZ" ATTACHED TO A JOHN DEERE 250 SKIDSTEER MACHINE EXTRACTING A TAMARISK PLANT, WITH ROOT.

Neither study plot was chemically treated after extraction or cutting. The plots will be evaluated in the spring and for the amount of re-growth that has occurred, and then will be chemically treated as necessary.

Several observations were made during the study that will assist land managers in future tamarisk control. For example, the pulling operator on this project felt that the Jawz was more efficient than the cutting saw. Feedback from the operators was suggested related to improved machine mobility and mounting considerations. Ultimately, the study found that even though the extracting took more time to do, the end result may be there will be less re-growth and therefore less chemical needed.

For more information about this project or the Cimarron National Grasslands, contact Nancy Brewer via e-mail at nbrewer@fs.fed.us or via phone at (620) 697-3580.

Options for Controlling Tamarisk on Your Property

Many options are available for treating and controlling Tamarisk. However, a method that works with great success in one county may produce disappointing results in another county. Successful management also depends on changing the approaches based on experience and newer technologies becoming available.

Tamarisk can be managed using a variety of weed management techniques, including chemical, mechanical, and biological techniques.

To view a comparison of control methods, including costs and likelihood of success, visit the following website:

http://www.tamariskcoalition.org/tamariskcoalition/ControlMethods.php

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Riparian lands in Kansas have been seriously impacted by the infestation of non-native phreatophytes. Of greatest concern are the effects tamarisk (salt cedar) and Russian olive are having on our native riparian ecosystems. Tamarisk is a tenacious shrub/small tree that has a deep root system (up to 100 feet) and leaves a salt residue on the soil surface. Russian olive was introduced in Kansas for windbreaks and wildlife planting and has a tendency to spread rapidly. These characteristics enable it to quickly displace native vegetation, interfering with natural plant succession and nutrient cycling, and choking irrigation canals in Kansas. The resulting invasive thickets provide poor habitat for livestock and wildlife; increase fire hazards; decrease water quality, and generally use more water than native vegetation. Infestations in Kansas are roughly estimated to occupy greater than 50,000 acres.

For more information on tamarisk projects and planning in Kansas, view the "10-Year Strategic Plan for the Comprehensive Control of Tamarisk and Other Non-Native Phreatophytes" under "Reports and Publications" on the Kansas Water Office website.

Tamarisk Coalition Completes a Review of Funding Opportunities

The Tamarisk Coalition has completed a review of over 1,000 environmental funding sources and has summarized 178 grants that might be appropriate for addressing the tamarisk issue and riparian restoration. The tables, in PDF format, can be obtained by sending an e-mail request to cduncan@tamariskcoalition.org.

The tables are divided into Non-profit Foundations, Corporate, and Other Funding Sources; Federal Grants; and Congressional Chartered Foundations. State directed funding sources will be added at a later date. This list of grant opportunities can be used as a starting point for grant funding research. This list is not exhaustive and is designed to provide an overview of available grants.

The tables include organization name, website, geography (to direct the physical location the grantor emphasizes), award range, median grant, grants/year, and the categories funded by the grantor: Advocacy, Direct Action, Education, Policy, Research, and Start Up.