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Governor & Legislature

September 1, 2015

I am respectfully submitting this final report on behalf of the Riparian Vegetation Management Task Force, which held its final meeting as a body in 2012. With attachments included, this report provides an overall view of Task Force activities since its inception on May 1, 2007, when Legislative Bill 701 was signed into law.

In the past eight years, significant progress has been made on addressing riparian vegetation in our fully and over-appropriated river basins. Work groups created by the Task Force gathered information and data from a variety of resources in an effort to use the best information available in developing the policy recommendations found in this report. While the Task Force tackled important policy questions, a number of organizations utilized funding through various grant programs to remove invasive vegetation from the riverbeds.

Important partnerships were forged in this effort, including federal and state agencies, Weed Management Areas, Natural Resources Districts, County Weed Control Authorities and private citizens. It will be important for these partnerships to continue so that collectively we can maintain the good work that has been achieved in our riparian areas.

On behalf of the members of the Riparian Vegetation Management Task Force, thank you for the opportunity provided through LB 701.

Sincerely,

Greg Ibach, Director
Nebraska Department of Agriculture

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Riparian Vegetation Management Task Force Final Report

(Submitted by Nebraska Department of Agriculture on behalf of Task Force)

Task Force Overview and Status

The Riparian Vegetation Management Task Force (RVMTF) was created in statute to bring multiple partners and stakeholders together to address the concern of invasive plants obstructing Nebraska's fully and overappropriated river basins. The passage of LB 701 by the Nebraska Unicameral on April 26, 2007, and signed into law by Governor Dave Heineman on May 1, 2007, created the framework for the Task Force to address the riparian needs of the state.

Sections 1 and 2 of the legislative bill addressed the requirements for the Task Force, including the requirement for this final report. Sections 3 and 4 of the legislation created a separate grant program for management of riparian vegetation and tasked the Nebraska Department of Agriculture with management of this program.

The statutory section governing the Task Force officially terminated on June 30, 2015, after a legislative amendment extended the termination date from an original termination date of June 30, 2013. However, the last meeting of the group actually occurred in April 2012.

During the course of the Task Force existence, the group met 13 times and had five field tours in association with its meetings.

Meeting dates and locations included:

July, 2007.....	Franklin, Nebraska
October, 2007.....	Lexington, Nebraska
November, 2007.....	Grand Island, Nebraska
January, 2008.....	Lincoln, Nebraska
March, 2008.....	Lincoln, Nebraska
May, 2008.....	Gering, Nebraska
July, 2008.....	Franklin, Nebraska
September, 2008.....	Waterloo, Nebraska
January, 2009.....	Lincoln, Nebraska
July, 2009.....	Grand Island, Nebraska
September, 2009.....	Kearney, Nebraska
May, 2010.....	Alda, Nebraska
April, 2012.....	Grand Island, Nebraska

Seven work groups were created to assist the Task Force in identifying the fundamental needs to carry out the goals and objectives of the legislation. These groups also solicited input from non-Task Force members. However, any recommendations were delivered by the Task Force.

The work groups included:

- Goals, Objections and Reports
- Vegetation Management and Treatment
- Survey and Monitoring
- Education and Awareness
- Funding and Incentives
- Streambed Ownership
- Vegetation Water Use

Interim reports summarize the conversations and activities of the work groups and the full Task Force, particularly for actions in 2007 and 2008, and those reports can be found as an addendum to this document. The minutes from the May 2010 and April 2012 meetings also are attached as addendums to inform regarding the discussions that occurred during these final two meetings of the full body.

Ongoing Efforts/Grant Program

As noted above, sections 3 and 4 of LB 701 created a grant program for management of riparian vegetation and placed the responsibility for this program with the Nebraska Department of Agriculture (NDA). This served as a natural administrative location for the grant program as NDA already had an existing structure in place in association with its authority over the state Noxious Weed Program.

As per LB 701, the Legislature authorized a total of \$4 million for grants to manage invasive plants in and near rivers and streams; such funds were only to be disbursed to weed management entities, local weed control authorities, and Natural Resources Districts with fully or over appropriated river basins. While no final report to the Legislature was required for these grant dollars, the work of the groups who accessed the funds is summarized in the attached interim reports.

Additionally, in 2009 the Legislature amended the statute to instruct the Director of Agriculture to apply for grants from the Nebraska Environmental Trust and from the Natural Resources Conservation Service of the United States Department of Agriculture. The Director was awarded grants from both agencies. Funding from Nebraska Environmental Trust was utilized by local Weed Management Areas (WMAs) to continue their efforts, which were started using the LB 701 funding, in riparian areas. The Natural Resources Conservation Service grant was directly available to landowners in fully and overappropriated river basins as cost-share to apply practices to improve their riparian areas.

In addition to the Legislative directive in 2009, the WMAs have continued to seek funding from a number of sources to further advance the work that was started with the passage of LB 701. The Nebraska Environmental Trust has funded several of these projects.

Task Force Final Recommendations

At the April 2012 meeting, Task Force members voted unanimously to support four specific recommendations in its final report for consideration by the Governor and Legislature. These recommendations are:

1. Continued acknowledgment by the Governor and Legislature that noxious and invasive plants pose a serious threat to Nebraska's natural resources.
2. Create a long term funding source to allow each Weed Management Area to continue to improve and manage riparian areas.
3. Legislation needed to provide a clear understanding of permanent boundaries in streambeds.
4. Aggressive awareness campaign to inform landowners and managers of the serious threats that noxious and invasive plants pose to the economy.

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Addendums:

December 15, 2007 Interim Report

December 15, 2008 Interim Report

May 2010 and April 19, 2012 Task Force Meeting Minutes

RIPARIAN VEGETATION MANAGEMENT TASK FORCE

Interim Report
To Governor Dave Heineman
And the Unicameral

Due December 15, 2007



Overview

The following report is authored per the requirements outlined in Section 2 of Legislative Bill 701. LB 701 was passed by the Nebraska Unicameral on April 26, 2007, and signed into law by Governor Dave Heineman on May 1, 2007.

Sections 1 and 2 of LB 701 create the Riparian Vegetation Management Task Force (to be known as the Task Force throughout this report) and charge the Task Force with these activities:

1. Develop and prioritize vegetation management goals and objectives;
2. Analyze the cost-effectiveness of available vegetation treatment; and
3. Develop plans and policies to achieve such goals and objectives.

The legislation also requires the Task Force to make preliminary recommendations to the Governor and the Legislature by December 15, 2007, regarding funding and legislation needed to achieve its goals. The Task Force respectfully submits this report per the above requirement. It represents a summary of discussion during three Task Force meetings held since July 2007 and smaller work group meetings held in October and November.

The Task Force has been diligent in its work over the past five months; however, the group has collectively agreed there is much work yet to be done before it can offer responsible recommendations regarding additional funding and legislation needed for future riparian vegetation management objectives. That said, the information that follows in this report highlights several key issues that could influence future Task Force legislative recommendations.

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History

On May 1, 2007, Governor Dave Heineman signed into law LB 701, comprehensive water legislation that included riparian vegetation management activities originally included in a bill introduced by Senator Tom Carlson, LB 458. With an emergency clause attached, the legislation went into effect immediately. Sections 1 and 2 of the legislation created the Riparian Vegetation Management Task Force and assigned it specific responsibilities. This report reflects the requirements of Sections 1 and 2. Sections 3 and 4 of the legislation created a grant program for management of riparian vegetation, and stated the Legislature's intent to appropriate \$2 million annually for this purpose. A separate report on the grant program is included as an addendum.



Senator Tom Carlson, flanked by Governor Dave Heineman, addresses the audience during the May 1, 2007, signing of LB 701.

Photo Courtesy: Governor's Office

Creation of the Task Force

Governor Dave Heineman appointed the Task Force members on June 21, 2007. Per the legislation, Task Force membership includes:

- One surface water project representative from each river basin determined to be fully appropriated or designated overappropriated, including the Niobrara River Basin, Platte River Basin, and Republican River Basin;
- One representative each from the Department of Agriculture, Department of Environmental Quality, Department of Natural Resources, Office of the Governor, Game and Parks Commission, Office of the State Forester, Nebraska Environmental Trust and University of Nebraska;
- Two representatives nominated by the Nebraska Association of Resources Districts;
- Two representatives of the Nebraska Weed Control Association;
- One riparian landowner from each of the state's congressional districts; and,
- Any member of the Legislature who chose to serve.

Twenty-three members were named (see chart at right). The members bring a wide range of experience and technical knowledge to assist in accomplishing the goals and objectives outlined by the Task Force. Task Force members also play a vital role in communicating riparian vegetation management issues to the public. Members have actively participated at meetings and tours, and even volunteered additional time to serve on, and in some cases chair, small work groups.

In addition, the Task Force meetings have been attended by other interested parties, such as representatives of the Nebraska Department of Roads and the USDA Natural Resources Conservation Service.

Task Force Members

Kent Aden – Platte River Basin

Tom Thompson – Niobrara River Basin

Jim Miller – Republican River Basin

**Greg Ibach – Department of Agriculture;
Task Force Secretary/Treasurer**

**Mike Linder – Department of Environmental
Quality**

Ann Bleed – Department of Natural Resources

John Erickson – Governor's Policy Office

Kirk Nelson – Game and Parks Commission

Scott Josiah – State Forester

**Gloria Erickson – Nebraska Environmental
Trust**

Gary Cunningham – University of Nebraska

**Mike Clements – Nebraska Assoc. of Resources
Districts**

**Ron Bishop – Nebraska Assoc. of Resources
Districts**

**Charles Brooks – Nebraska Weed Control
Assoc.; Task Force Chairperson**

**Russ Shultz – Nebraska Weed Control Assoc.;
Task Force Vice Chairperson**

Mike Arps – First Congressional District

Rich Tesar – Second Congressional District

Mike Sarchet – Third Congressional District

Senator Tom Carlson

Senator Cap Dierks

Senator Deb Fischer

Senator John Harms

Senator Don Preister

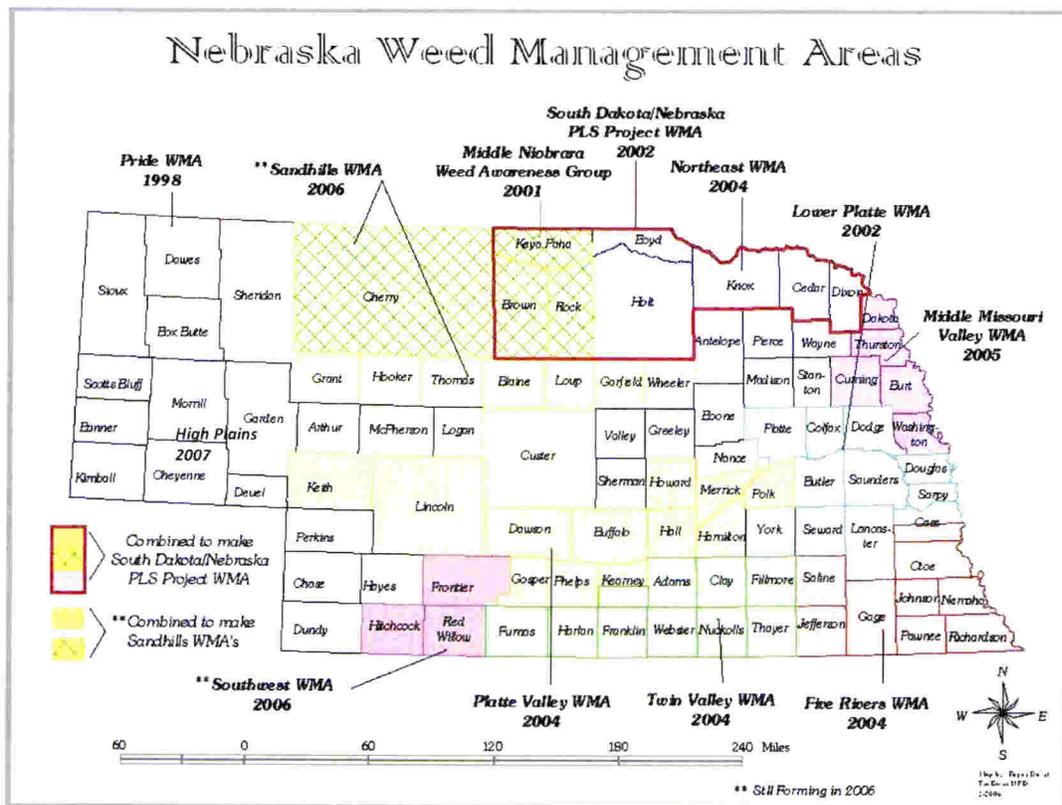
Per LB 701, the Nebraska Department of Agriculture (NDA) is administratively responsible for the Task Force. NDA received this assignment, in part, due to its experience administering the Noxious Weed Control Act.

The Act requires that each county employ a weed control superintendent. These individuals work hand-in-hand with NDA staff to monitor for the presence of noxious weeds and manage infestations through proper protocols.

Because of the magnitude of statewide weed management, NDA and county weed authorities also have worked to develop partnerships. For example, county weed authorities have organized themselves regionally into 13 weed management areas (WMAs), including almost every county in the state. This type of regional approach aids in more effective surveying and control efforts, and improves the opportunity to leverage grant dollars.

Additionally, NDA has engaged other partners who have an interest in weed management, including key entities like the natural resources districts (NRDs), wildlife and environmental organizations, irrigation districts, University of Nebraska officials, and other state and federal agencies.

While the Task Force collectively has the expertise to develop a solid riparian vegetation management plan, it will take a strong county weed control system, in cooperation with entities like those listed above, to ultimately make the Task Force successful. These entities have the hands-on experience, local knowledge, and appropriate relationships forged to aid in the implementation of the final riparian vegetation management plan.



Task Force Activities to Date

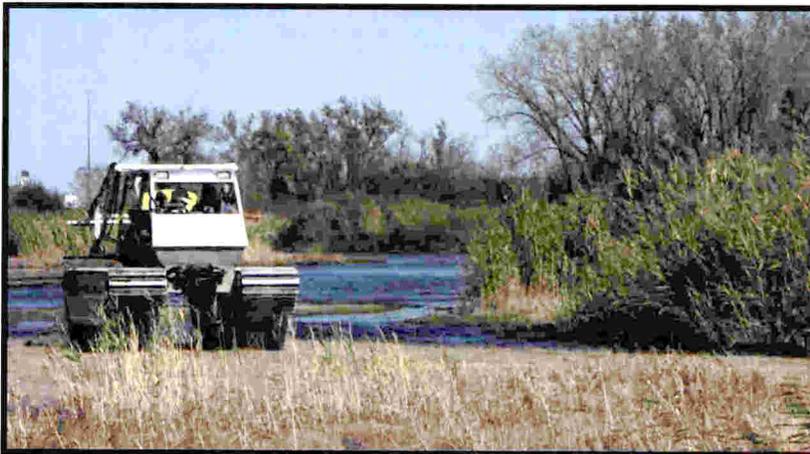
The Task Force has met three times and had two field tours in association with the Task Force meetings.

The first Task Force meeting was held July 26, 2007, in Franklin, Nebraska, and was devoted to organizing the group, electing officers, developing an operating agreement, and discussing proposed goals and objectives. The group was provided an opportunity to participate in an airboat tour of a section of the Republican River basin. This tour provided the members a chance to see firsthand the proliferation of invasive riparian vegetation - phragmites in particular, and some saltcedar - and the challenges associated with this vegetation.

The second meeting of the Task Force was held October 3, 2007, in Lexington, Nebraska. Task Force members discussed the need for small work groups to assist the Task Force in achieving its goals and objectives. Members supported the formation of seven work groups, including: Goals, Objectives, and Reports; Vegetation Management and Treatment; Survey and Monitoring; Education and Awareness; Funding and Incentives; Streambed Ownership; and Vegetation Water Use. Following the meeting, Task Force members were provided an opportunity to tour a section of the Platte River where phragmites had recently been treated utilizing ground application techniques.

The third meeting was held November 14, 2007, in Grand Island, Nebraska. Task Force members heard and discussed reports provided by the work groups. Highlights from those reports will be discussed later in this document. The group also adopted goals and objectives, which are outlined in the next section of this report.

Minutes from the three Task Force meetings can be found at www.agr.ne.gov under the Riparian Vegetation Management Task Force button. This web site also includes other important information regarding Task Force activities.



Left: Task Force member Senator Tom Carlson gets an up close view of phragmites on the Platte River near Lexington. Right: Task Force member Kent Aden, right, discusses invasive weeds with Task Force members during a Republican River tour.

Photo Courtesy: NE Department of Agriculture

Legislative Requirements/Goals and Objectives Developed

Per LB 701, the Riparian Vegetation Management Task Force, in consultation with appropriate federal agencies, is charged with:

1. Developing and prioritizing vegetation management goals and objectives;
2. Analyzing the cost-effectiveness of available vegetation treatment; and
3. Developing plans and policies to achieve such goals and objectives. Any plan shall utilize the principles of integrated vegetation management and sound science.

While work on items 2 and 3 is ongoing, Task Force members have adopted vegetation management goals and objectives. Those are:

1. Improve stream flow and riparian health in a manner that:
 - a. Removes streambed vegetation to improve and maintain channel conveyance in fully and over appropriated river basins;
 - b. Manages vegetation in riparian areas to improve and maintain ecosystem health; and
 - c. Does not have negative effects on water quality for recreation, aquatic and terrestrial life.
2. Maintain riparian health through:
 - a. Cooperative arrangements and education efforts that encourage voluntary landowners participation;
 - b. Federal, state and local government assistance and incentives; and
 - c. Legislative action as needed.
3. Measure the effectiveness of actions taken through:
 - a. Reporting of increased capacity of the streambed to handle flow;
 - b. Reporting of acres treated and managed in 2007 and 2008;
 - c. Calculation of estimates of water saved by vegetation management; and
 - d. Presentation of pictorial evidence of vegetation removal.

As work continues the Task Force may determine a necessity to revise these points, but at present believes this to serve as a solid base from which to develop appropriate plans and policies.

Highlights to Date

The seven work groups were created to aid the Task Force in identifying, and then framing, issues critical to meeting the goals and objectives. It was determined that work groups could solicit information from, and include in discussions, experts who are not Task Force members. Any final decisions, however, will be made solely by the Task Force.

Each work group has met once to date. Already these groups have highlighted several points that may very well figure into future policy development. These work groups will continue to meet, gather information, and make recommendations to the Task Force.

In addition to issues highlighted by the work groups, a number of key points also already have been discussed as part of general dialogue during full Task Force meetings. Included below are a few of these important issues. Much work is yet to follow.

1. The Vegetation Management and Treatment Work Group talked about the importance of, and difficulty of, framing a plan of attack on invasive riparian vegetation. The Task Force will need to determine which invasive species are addressed first, and while phragmites, saltcedar, and Russian olive have received a great deal of publicity to date, other species such as purple loosestrife may be important, depending on location. Equally important is determining how and in what order to address these invasive species. Should a specific species be a priority, or should the level of infestation determine the order? A best management plan may be the answer.

The Task Force members also have discussed various vegetation treatment methods, including chemical, mechanical, and biological. The group agrees that great care needs to be taken with chemical treatment, so the products used will not have a negative effect on aquatic or terrestrial habitat and wildlife.

It has been acknowledged that mechanical and biological methods of control need to be included as treatment protocol options. With an appropriate set of circumstances, mechanical removal of vegetation can be effective and financially feasible. As an example, Task Force members were briefed on the successful Nine Mile Creek project in western Nebraska. A coordinated plan was implemented to remove Russian olive trees from the riparian area. Mechanical removal was the main practice used, although some chemical follow-up was necessary.

In addition, the Task Force has talked about the importance of establishing a monitoring protocol so that treatment effectiveness can be measured.

2. The Streambed Ownership Work Group discussed the need for clear designation of ownership within the streambed, a point which is not clearly addressed within Nebraska law, and which is handled differently in various counties for tax purposes. The ownership issue takes on increased importance as the Task Force reviews potential treatment strategies and discusses whose responsibility it may be to conduct the treatment and then maintain the streambed/riparian areas following the activity.

The Task Force has talked a number of times about the importance of maintaining any riparian improvements so we do not find ourselves in a similar situation of streambed and riparian overgrowth a decade from now. No decision has been reached regarding whether this should be a landowner responsibility, a state responsibility, or some mixture of the two. However, the group feels emphasis needs to be placed on this issue to ensure the fiscal soundness of any state funds invested in riparian cleanup.

3. The Education and Awareness Work Group discussed the value of sharing information about successful riparian vegetation management activities with the public, and particularly with riparian land holders in areas that have yet to be treated. Satisfied landowners will be the best spokespersons.

This type of outreach has been modeled by both the Nine Mile Creek project and the Lower Republican Riparian Improvement Project. Both groups have conducted aggressive landowner education and outreach campaigns. For example, on the Lower Republican project, the efforts by the project coordinators have lead to 176 of the 180 landowners in the area agreeing to cooperate. It is hoped that this successful model can be duplicated in other riparian areas as programs and plans are made in the future.



In addition to direct landowner outreach, the Task Force has discussed the importance of involving the media in message distribution. While it will be key to deliver success stories in areas that will be directly impacted by riparian improvement projects, it may be equally important to share the message with greater Nebraska so there can be an understanding of why this issue is important to the state as a whole.

A filmmaker is documenting the work being done as part of the Eastern Republican Riparian Improvement Project. Coordinators hope that the documentary can be used as an educational tool.

Photo Courtesy: Eastern Republican Riparian Improvement Project

4. The Survey and Monitoring Work Group talked about how the identification of infestation location, composition, and extent, will critically impact other segments of the Task Force because survey information may be used to help prioritize future funding of vegetation control efforts. However, before this can happen, vegetation surveys and documentation of vegetation control efforts would need to be catalogued and integrated. Georeferencing vegetation control locations using global positioning (GPS) technology was identified as a potential component of any future funding criteria, not only for accountability, but for future quality assessment.

Various weed control entities already are surveying and monitoring invasive weeds, including weeds in riparian zones. These groups include Natural Resources Districts, the county weed authorities, the Weed Management Areas, University of Nebraska researchers, and/or private nonprofit natural resources organizations. The Survey and Monitoring Work Group discussed the importance of contacting these entities to review their existing information and make a determination regarding the quality and extent of the data. Survey and monitoring protocols could possibly be established and serve as a potential requirement for receiving state funding for future control efforts.

As an example of some advanced, existing riparian vegetation survey activity, a staff member from the U.S. Fish and Wildlife Grand Island field office shared with the Survey and Monitoring Work Group a presentation on the use of remote sensing (using imaging instrumentation from airplanes or satellites) to survey vegetation at a broad scale and at a fine resolution. Through a process that included the use of computer algorithms, the images were used to create detailed maps of vegetation cover for the big bend reach of the Platte River.

This work group will have a number of questions to consider as discussions continue, including to what scale should riparian weeds be surveyed and monitored, and how often do surveys need repeating.

- Perhaps the issue that has received the most discussion to date is the potential for quantifying water savings associated with riparian vegetation management. The Task Force has arrived at a discussion of this point several times, outlining questions about whether such quantification is possible and to what extent such quantification is required in relation to the riparian vegetation management sections of LB 701.

The grant portion of the law directs that funding shall be awarded for activities that have as their primary objective the improvement of conveyance of streamflow. Even though the legislation places an emphasis on conveyance, the Task Force has discussed water usage by riparian vegetation and whether, or to what extent, vegetative water use can be determined to affect that streamflow. This is a primary question that will be considered by the Vegetation Water Use Work Group. The

What is a Phreatophyte?

...published values of water use vary dramatically within and between plant groups (Johns, 1989)...

- variations amongst measurement methods
- variations between stand densities, vigor, and composition
- variations in scale of measurements

Common Name	Range of Annual Consumptive Use (inches)
Arrowweed	96
Cattail	35-198
Cottonwood	39.3- 92.7
Bermuda Grass	28.8- 73
Salt Grass	6.2- 48.8
Rush	20.8- 86.6
Russian Olive	18.6-114.6
Saltcedar (Tamarix)	11.8- 86
Willow	13.2- 47.8

This PowerPoint slide, taken from a presentation shared with the Task Force, highlights the variety of data regarding riparian vegetation water use.

Slide Courtesy: NE Department of Natural Resources

group already is taking a comprehensive look at existing and ongoing research that may help answer this question.

Whether or not an actual water savings can be determined, the Task Force has noted a number of times the other important benefits of riparian vegetation management, including flood control issues, recreation improvement, terrestrial and aquatic habitat improvement, and conveyance of streamflow, particularly in basins that are subject to an interstate compact or decree.

Next Steps

The Task Force is set to meet next on Monday, January 14, 2008, on the University of Nebraska-Lincoln campus. University researchers who are working on riparian invasive vegetation management issues will be reviewing their activities.

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Riparian Vegetation Management Grant Program

Overview

Legislative Bill 701 was signed into law by Governor Dave Heineman on May 1, 2007. Sections 3 and 4 of the bill authorized the Director of Agriculture to receive applications for grants and award funding for projects that manage vegetation within the banks of a natural stream or within 100 feet of the banks of a channel of any natural stream. The Legislature indicated its intent to appropriate \$2 million annually for this purpose.

While LB 701 did not specify any requirement for reporting on the progress of this grant program, the Nebraska Department of Agriculture felt it important to outline grant program activities to date due to the financial commitment of State funds and high level of interest in this program.



These pictures serve as an example of the problems to be addressed by the LB 701 Riparian Vegetation Management Grant Program. Both pictures were taken from the same perspective on the Platte River channel near Odessa. The photo on the left was taken in July 2001, while the photo on the right is from September 2007. Phragmites has overtaken the channel.

Photo Courtesy: U.S. Geological Survey, Nebraska Office

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History

The Nebraska Department of Agriculture (NDA) has for a number of years had in place a structure to award weed management grants through the Noxious Weed and Invasive Plant Species Assistance Fund. Prior to the passage of LB 701, this authority had only been used to distribute funds that NDA had been awarded from the Nebraska Environmental Trust. This existing structure and grant process, as well as NDA's involvement with weed management entities as part of the Noxious Weed Program, meant NDA was a logical place to locate the LB 701 Riparian Vegetation Management Grant Program.

Timeline

With the beginning of FY 2007-2008 in July, the \$2 million in grant program funds became available for disbursement. Given the high level of interest in the funds, and the June 2009 sunset date of the program, NDA felt it was necessary to begin the grant program immediately. Fall is the most effective time to treat for weeds, so if the grant program was not immediately



Rhizomes (horizontal stems) in the foreground show how phragmites can quickly spread in the streambed. This stand, on the Platte River near Lexington, has been treated.

Photo Courtesy: NE Department of Agriculture

started, that would have left only one treatment season (fall 2008) to use \$4 million in funding before the grant program sunset. Due to the existence of the Department's Environmental Trust grant program, NDA was able to utilize that framework to quickly implement the LB 701 grant program. The timeline used follows:

April 26, 2007: LB 701 passed by Legislature;

May 1, 2007: LB 701 signed by Governor Dave Heineman;

May 30, 2007: Call for grant proposals disseminated to all County Weed Control Authorities, Weed Management Areas, and Natural Resources Districts (NRDs) in fully or over appropriated river basins; call for proposals news release sent out;

July 1, 2007: Deadline for submission of proposals to the NDA;

July 9-13, 2007: Grant Review Team scores grant applications;

July 19, 2007: NDA awards grants for approved projects; work may begin.

Grant Selection

The Legislature was specific in direction of how the grant funds could be used and who could receive those funds. As outlined in LB 701, the grant dollars are to be used for the management of vegetation within the banks of a natural stream or within one hundred feet of the banks of a channel of any natural stream. Such funds can only be used to pay for "activities and equipment as part of vegetation management programs that have as their primary objective improving conveyance of streamflow in natural streams."

In addition, grants are only to be disbursed to weed management entities, local weed control authorities, and NRDs whose territory includes one or more fully appropriated or over appropriated river basins as designated by the Department of Natural Resources. Priority for the first year of grants was directed to fully appropriated river basins that are the subject of an interstate compact or decree.

The following is a summary of the four projects funded through the Riparian Vegetation Management Grant Program for fiscal year 2007-08:

Eastern Republican Riparian Improvement Project

Grant Award: \$772,500 to the Twin Valley Weed Management Area. This project continues and expands upon ongoing efforts to control invasive riparian plants around Harlan County Reservoir and along the Republican River and its tributaries within the eight counties of the Twin Valley Weed Management Area (TVWMA). Control efforts are to include a full range of mechanical, biological and chemical tools to control invasive plant species and control vegetation in stream channels to improve streamflow. Also, the project is designed to increase public awareness of the impact that invasive plants have on riparian areas of the Republican River and its tributaries, and the best management practices that can be used to properly manage and maintain riparian areas.



Vegetation growth in the Republican River basin has choked the stream channel.

Status Report: Prior to the grant award, TVWMA officials already were active in the project area, surveying infestations and conducting outreach with riparian landowners. Because of these efforts, project coordinators were able to start helicopter application to the streambed vegetation in September, with ground applications a week later in areas that were not accessible by helicopter. Primary vegetation being targeted was phragmites, willows, cattail, and reed canarygrass, using an aquatic herbicide guaranteed for 90 percent root kill three years after application. High winds and intermittent rain created time delays so the project took a month to complete. Follow-up monitoring indicates successful application. The helicopter sprayed 1,102 acres of river channel vegetation for a total of \$208,791. Ground spraying amounted to \$19,427.

Photo Courtesy: Eastern Republican Riparian Improvement Project



Ground treatment of invasive vegetation followed helicopter application as part of the Eastern Republican Riparian Improvement Project.

Photo Courtesy: Eastern Republican Riparian Improvement Project

The first week of October helicopter applications began on vegetation above Harlan Reservoir. They treated 769 acres in this leg of the project for \$130,909.

Because ongoing maintenance and monitoring is essential to project success, inspection equipment was purchased (half of the cost was paid for by the local natural resources district), including an all terrain vehicle with a 60-gallon tank and spray boom for follow-up applications.

Project coordinators are getting set for Phase II of the project, which involves mechanical removal of debris from the river. This will consist of removing numerous log jams and fallen timber from within

the river channel. Letters have been mailed out to adjoining landowners, again asking for their cooperation and to allow access across their property to affected areas.

Also, as part of this project, coordinators are planning to work with willing landowners to graze livestock along some sections of the riparian corridor. In addition, they are also going to be identifying a segment of the river channel to experimentally deep disc the existing islands to see what scouring effect occurs this upcoming year.

In November, a helicopter mapped the river channel from Harlan Lake to the Cambridge Diversion Dam to identify acres and vegetation for possible future treatment.

Western Republican Riparian Improvement Project

Grant Award: \$814,617 to the Southwest Weed Management Area. This project complements the work being done on the eastern section of the Republican River and extends invasive plant species control westward to the Colorado border. Control efforts will be done using the most appropriate and cost effective option, whether that is mechanical, biological or herbicide control. The project will include some mapping and surveying of invasive species, outreach to landowners on need for invasive control measures and the importance of maintaining improvements, and initial control measures, in cooperation with landowners. The primary targets of this project are saltcedar and phragmites control within the channel, and red cedar and Russian olive within the 100-foot corridor of the stream bank to improve wildlife habitat and grazing opportunities. Field days will be held in each county to educate the public and encourage landowners to maintain control efforts.

Status Report: In late August 2007, a helicopter was hired to map infestations in and along the Republican River. Maps were supplied to interested parties wishing to bid on herbicide applications and tree removal. A ground crew using an airboat began applications to streambed vegetation in October. Once on the river, they found phragmites located in Furnas, Red Willow, and Hitchcock counties. Additionally, a few small saltcedars were located and sprayed. Ground crews sprayed noxious weeds on the river from the diversion dam east of Cambridge until Culbertson, where they ran out of water.

This project purchased a 2008 Polaris to assist with "ground truthing" the river to assist in mechanical bids. This vehicle also will be used to help with maintenance on the river after the grant period has ended.

Bids for mechanical removal of vegetation will be taken in December and mechanical work will begin soon after and continue into the spring.

To date, the project has utilized \$62,966 of the grant award.

Lake McConaughy Saltcedar Control "Surround and Drown" Plan

Grant Award: \$347,883 to the West Central Weed Management Area. This project aims to control a significant saltcedar infestation that has inundated the lakebed as the lake receded due to drought. The project would treat targeted invasives, using chemical, mechanical, and biological control methods, in a designated area of the perimeter to prevent further spread of the vegetation. The invasives below the treated area would be contained until the lake refills, flooding and killing the remaining vegetation.

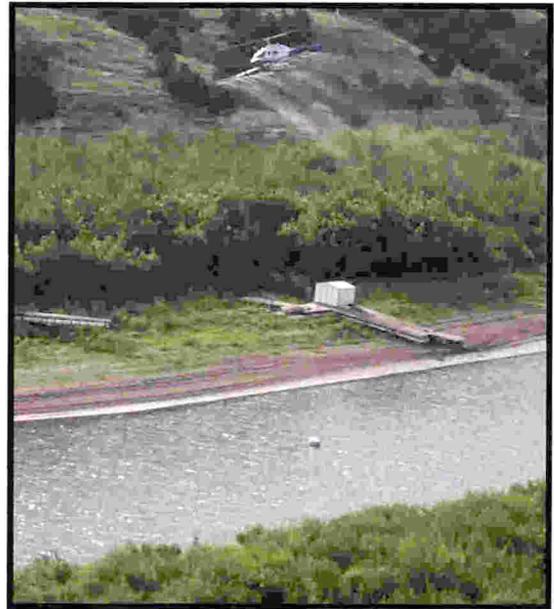
Status Report: The first phase of this project has been completed, which included herbicide treatment in late August of 2,010 acres of saltcedar and other woody vegetation on the 12,000 acres of exposed lakebed. The final phase of the project will be completed in the fall and winter of 2009/2010, which will include the removal of standing dead vegetation on 1,230 acres in three areas that have been determined to be beneficial for endangered species habitat and/or public recreational access.

Treatment was conducted by helicopter, and no applications were conducted with wind speeds in excess of 10 miles per hour to reduce the opportunity for spray drift. All applications were done with the use of GPS guidance systems and actual sprayed acres were mapped and recorded.

Effectiveness of these treatments will be monitored closely for the next three years as the product guarantee is for 90% root kill three years after application. Annual monitoring of the area for new infestations in new areas will be conducted, and appropriate control measures will be implemented.

Costs of the project to date are \$357,050 for herbicide and application and \$13,694 for administration and oversight. Funds used for project costs to date have been \$347,883 from the Noxious

Weed and Invasive Plant Assistance Fund, \$9,167 from the Nebraska Attorney General's Office, and \$13,694 from Central Nebraska Public Power and Irrigation District of in-kind services.



A helicopter applies chemicals to saltcedar infestation at Lake McConaughy.

Photo Courtesy: CNPPID

High Plains Invasive Species Project

Grant Award: \$65,000 to High Plains Weed Management Association. The High Plains project will educate landowners on invasive control strategies, survey riparian wetlands for invasive populations and initiate control measures, in cooperation with landowners in selected areas. Russian olive, saltcedar, and phragmites will be the primary targets of this project.

This project will specifically work to educate landowners about the need for a comprehensive regional invasive control strategy. An agreement was reached with the PRIDE Weed Management Area to share the cost of printing and distribution of an annual landowner newsletter that provides updated information on the newest, most effective control methods.

Status Report: Each weed control authority involved in this project has mapped known infestations of saltcedar, Russian olive, and phragmites in the North Platte River basin and have spot treated some infestations to date.

This project has treated 55 acres of saltcedar and Russian olive on five sites. The Cedar Canyon area consisted of a solid stand of saltcedar that has been aerial sprayed and will be the focus of a control program. Two areas on the North Platte River were treated by helicopter to control Russian olive, saltcedar and phragmites. One site will be utilized as a demonstration plot for future reference as the treated brush will be removed once the herbicide has controlled the root system. An additional site was aurally treated and the treated brush will be left in place and monitored for the length of time it will take for the dead brush and trees to fall down.

This project has utilized about \$26,000 of the grant award, including funding for aerial spraying and spot treatment of invasive vegetation, and newsletter publication and delivery.

Monitoring Efforts

NDA Noxious Weed Program staff members continue to participate in grant project meetings and monitor control efforts. All grant project coordinators have communicated well with department staff and appear to have good outreach to private landowners affected by the projects. NDA staff members have attended and participated in several public awareness meetings in each project area.

In addition to NDA's involvement in the grant program, LB 701 assigned the Nebraska Game and Parks Commission a role in assisting grant recipients with implementing grant projects. Game and Parks staff has helped review the grant applications and has provided written notification to project coordinators to assist them in understanding their responsibilities under the Nongame and Endangered Species Conservation Act. Game and Parks has helped identify which threatened or endangered species may be found in a specific project area and offered commission staff to assist if needed for surveys or recommendations regarding how not to disturb the species that may inhabit an area. Commission staff created a protocol to follow for each project area and provided contact information for the appropriate staff member for questions or assistance if needed.

There is a high level of interest in this grant program, so to aid in a successful outcome, numerous entities will be involved in the grant projects and the monitoring process. Collaboration is important for statewide weed management, and NDA has had the opportunity to work with regional weed management areas, natural resources districts, wildlife and environmental organizations, irrigation districts, University of Nebraska officials, and other state and federal agencies.

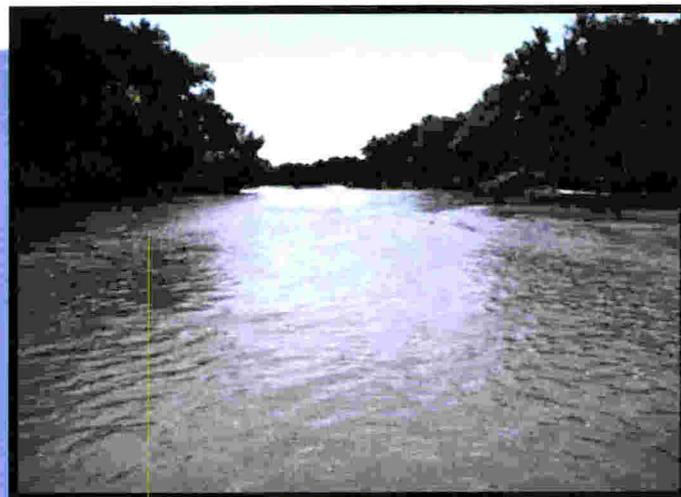
Of course, monitoring by NDA will be ongoing as these projects continue.

What's Next

As NDA maintains engagement in the existing grant projects, we also will begin to develop a timeline for the 2008-09 grant period. Current grant project coordinators will be asked to provide input regarding the grant process to enable the Department to better serve the needs of future applicants. In addition, NDA will take into account discussion that has taken place within the Riparian Vegetation Management Task Force.

Since July 1, 2007, these projects have made tremendous progress in attempting to deal with a huge problem. The volume of private landowners involved in these grant projects is overwhelming, so again, public awareness is a key component to ensure effective and stable control methods are applied and the results are beneficial to the river basin as a whole. Public support continues to be the most valuable tool available for a successful program.

RIPARIAN VEGETATION MANAGEMENT TASK FORCE



*Interim Report
To Governor Dave Heineman
And the Unicameral*



Due December 15, 2008



Overview

The following report is authored per the requirements outlined in Section 2 of Legislative Bill 701. LB 701 was passed by the Nebraska Unicameral on April 26, 2007, and signed into law by Governor Dave Heineman on May 1, 2007.

Sections 1 and 2 of LB 701 create the Riparian Vegetation Management Task Force (to be known as the Task Force throughout this report) and charge the Task Force with these activities:

1. Develop and prioritize vegetation management goals and objectives;
2. Analyze the cost-effectiveness of available vegetation treatment; and
3. Develop plans and policies to achieve such goals and objectives.

The legislation also requires the Task Force to make preliminary recommendations to the Governor and the Legislature by December 15, 2008, regarding funding and legislation needed to achieve its goals. The Task Force respectfully submits this report per the above requirement. It represents a summary of discussion during the five Task Force meetings held since December 2007. This is the second report required by LB 701. The first was submitted to Governor Heineman and the Nebraska Unicameral on December 15, 2007. A copy of the 2007 report can be found at www.agr.ne.gov under the Riparian Vegetation Management Task Force button.

The Task Force has been diligent in its work over the past 17 months; however, the group has collectively agreed there is much work yet to be done before it can offer responsible recommendations regarding additional funding and legislation needed for future riparian vegetation management objectives. That said, the information that follows in this report highlights several key issues that could influence future Task Force legislative recommendations.

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History

On May 1, 2007, Governor Dave Heineman signed into law LB 701, comprehensive water legislation that included riparian vegetation management activities originally included in a bill introduced by Senator Tom Carlson, LB 458. With an emergency clause attached, the legislation went into effect immediately. Sections 1 and 2 of the legislation created the Riparian Vegetation Management Task Force and assigned it specific responsibilities. This report reflects the requirements of Sections 1 and 2. Sections 3 and 4 of the legislation created a grant program for management of riparian vegetation, and stated the Legislature's intent to appropriate \$2 million annually for this purpose. A separate report on the grant program is included as an addendum.



Senator Tom Carlson, flanked by Governor Dave Heineman, addresses the audience during the May 1, 2007, signing of LB 701.

Photo Courtesy: Governor's Office

Creation of the Task Force

Governor Dave Heineman appointed the Task Force members on June 21, 2007. Per the legislation, Task Force membership includes:

- One surface water project representative from each river basin determined to be fully appropriated or designated overappropriated, including the Niobrara River Basin, Platte River Basin, and Republican River Basin;
- One representative each from the Department of Agriculture, Department of Environmental Quality, Department of Natural Resources, Office of the Governor, Game and Parks Commission, Office of the State Forester, Nebraska Environmental Trust, and University of Nebraska;
- Two representatives nominated by the Nebraska Association of Resources Districts;
- Two representatives of the Nebraska Weed Control Association;
- One riparian landowner from each of the state's congressional districts; and,
- Any member of the Legislature who chose to serve.

Twenty-three members were named (see chart at right). The members bring a wide range of experience and technical knowledge to assist in accomplishing the goals and objectives outlined by the Task Force. Task Force members also play a vital role in communicating riparian vegetation management issues to the public. Members have actively participated at meetings and tours, and even volunteered additional time to serve on, and in some cases chair, small work groups.

In addition, the Task Force meetings have been attended by other interested parties, such as representatives of the Nebraska Department of Roads and the USDA Natural Resources Conservation Service.

Task Force Members

Kent Aden – Platte River Basin
Jim Miller – Republican River Basin
Greg Ibach – Department of Agriculture;
Task Force Secretary/Treasurer
Mike Linder – Department of Environmental Quality
Brian Dunnigan – Department of Natural Resources
Neil Moseman – Nebraska Department of Energy (Governor's Office Representative)
Kirk Nelson – Game and Parks Commission
Scott Josiah – State Forester
Gloria Erickson – Nebraska Environmental Trust
Gary Cunningham – University of Nebraska
Mike Clements – Nebraska Assoc. of Resources Districts
Ron Bishop – Nebraska Assoc. of Resources Districts
Charles Brooks – Nebraska Weed Control Assoc.; Task Force Chairperson
Russ Shultz – Nebraska Weed Control Assoc.;
Task Force Vice Chairperson
Mike Arps – First Congressional District
Rich Tesar – Second Congressional District
Mike Sarchet – Third Congressional District
Senator Tom Carlson
Senator Cap Dierks
Senator Deb Fischer
Senator John Harms
Senator Don Preister
Senator Tom Hansen

Per LB 701, the Nebraska Department of Agriculture (NDA) is administratively responsible for the Task Force. NDA received this assignment, in part, due to its experience administering the Noxious Weed Control Act.

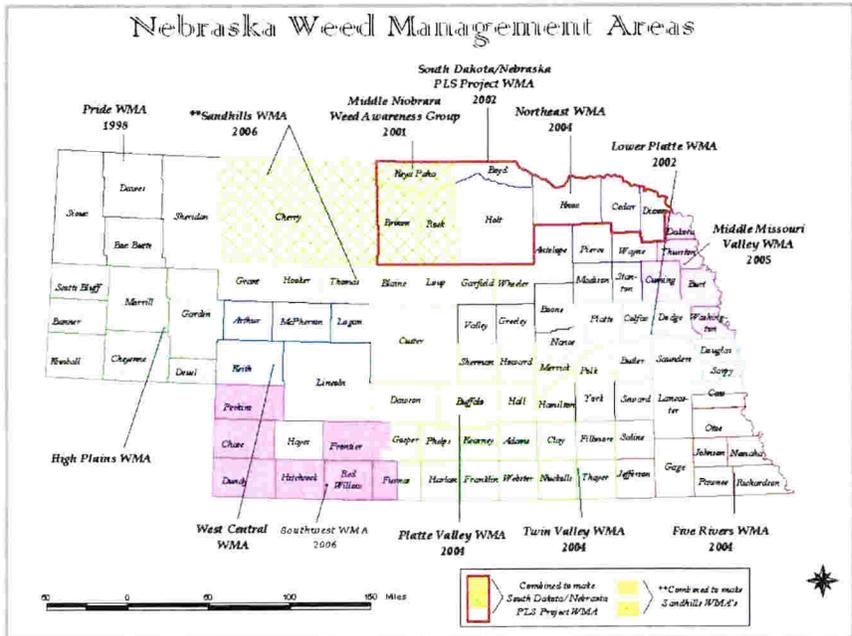
The Act requires that each county employ a weed control superintendent. These individuals work hand-in-hand with NDA staff to monitor for the presence of noxious weeds and manage infestations through proper protocols.

Because of the magnitude of statewide weed management, NDA and county weed control authorities also have worked to develop partnerships. For example, county weed control authorities have organized themselves regionally into 13 weed management areas (WMAs), including almost every county in the state. This type of regional approach aids in more effective surveying and control efforts, and improves the opportunity to leverage grant dollars.

Other partners who have an interest in weed management have been engaged in projects, including key entities like the natural resources districts (NRDs), wildlife and environmental organizations, irrigation districts, University of Nebraska officials, and other state and federal agencies. Landowners also play a key role in any efforts.

While the Task Force collectively has the expertise to develop a solid riparian vegetation management plan, it will take a strong county weed control system, in cooperation with entities like those listed above, to ultimately make the Task Force successful. These entities have the hands-on experience, local knowledge, and appropriate relationships forged to aid in the implementation of the final riparian vegetation management plan.

Weed Management Areas are an example of collaboration to encourage effective surveying and control efforts.



Task Force Activities to Date

Since its formation, the Task Force has met eight times and had five field tours in association with the Task Force meetings.

Meeting dates and locations include:

July 26, 2007	Franklin, Nebraska
October 3, 2007	Lexington, Nebraska
November 14, 2007	Grand Island, Nebraska
January 14, 2008	Lincoln, Nebraska
March 26, 2008	Lincoln, Nebraska
May 6, 2008	Gering, Nebraska
July 24, 2008	Franklin, Nebraska
September 17, 2008	Waterloo, Nebraska

Numerous Work Group meetings have been held on several occasions.

Minutes from all Task Force meetings can be found at www.agr.ne.gov under the Riparian Vegetation Management Task Force button. This web site also includes other important information regarding Task Force activities.



Task Force member Mike Clements (hand in air) explains vegetation control activities on the Republican River. Board members of the Nebraska Environmental Trust participated in this Task Force field tour.

Photo Courtesy: Nebraska Environmental Trust

Legislative Requirements/Goals and Objectives

Per LB 701, the Riparian Vegetation Management Task Force, in consultation with appropriate federal agencies, is charged with:

1. Developing and prioritizing vegetation management goals and objectives;
2. Analyzing the cost-effectiveness of available vegetation treatment; and
3. Developing plans and policies to achieve such goals and objectives. Any plan shall utilize the principles of integrated vegetation management and sound science.

While work on items 2 and 3 is ongoing, Task Force members have adopted vegetation management goals and objectives. Those are:

1. Improve stream flow and riparian health in a manner that:
 - a. Removes streambed vegetation to improve and maintain channel conveyance in fully and overappropriated river basins;
 - b. Manages vegetation in riparian areas to improve and maintain ecosystem health; and
 - c. Does not have negative effects on water quality for recreation, aquatic, and terrestrial life.
2. Maintain riparian health through:
 - a. Cooperative arrangements and education efforts that encourage voluntary landowners participation;
 - b. Federal, state, and local government assistance and incentives; and
 - c. Legislative action as needed.
3. Measure the effectiveness of actions taken through:
 - a. Reporting of increased capacity of the streambed to handle flow;
 - b. Reporting of acres treated and managed in 2007 and 2008;
 - c. Calculation of estimates of water saved by vegetation management; and
 - d. Presentation of pictorial evidence of vegetation removal.

As work continues, the Task Force may determine a necessity to revise these points, but at present, believes this to serve as a solid base from which to develop appropriate plans and policies.

Highlights to Date

Seven work groups were created to aid the Task Force in identifying, and then framing, issues critical to meeting the goals and objectives. It was determined that work groups could solicit information from, and include in discussions, experts who are not Task Force members. Any final decisions, however, will be made solely by the Task Force.

Each work group has met on several occasions. These groups have highlighted several points that may very well figure into future policy development. These work groups continue to meet, gather information, and make recommendations to the Task Force.

In addition to issues highlighted by the work groups, a number of key points also already have been discussed as part of general dialogue during full Task Force meetings. Included below are a few of these important issues. Much work is yet to follow.

1. The Vegetation Management and Treatment Work Group continues to address the importance of, and difficulty of, framing a plan of attack on invasive riparian vegetation. The Task Force will need to determine which invasive species are addressed first, and while phragmites, saltcedar, and Russian olive have received a great deal of publicity to date, other species, such as purple loosestrife, may be important, depending on location. Equally important is determining how and in what order to address these invasive species. A best management plan may be needed, and Work Group members agreed research is needed to develop such a plan.

The Task Force members, at the March 2008 meeting, supported a proposal by the Work Group to study various vegetation treatment methods, including chemical, mechanical, and biological, for their long-term effectiveness. Work Group members have partnered with appropriate researchers at the University of Nebraska – Lincoln for this integrated weed management applied research project. The treatment study will take place over four years. The Work Group received an Environmental Trust Fund grant for the first year of activities and is seeking additional funding for years two through four. The treatment study will focus on:

- Optimizing strategies for managing riparian invasive plant species over a range of growing conditions and to provide knowledge on how to adapt control methods to different ecosystems;
- Reducing the risks associated with invasive plant species competition with native plants and potentially reduce the loss of wildlife habitat;
- Determining the relationship between the land management practices and various control methods to improve acceptance of integrated weed management; and
- Strengthening involvement of several disciplines at the university, state, federal, county and private sector levels.

Project activities were initiated this summer in three locations on the Platte River between Brady and Kearney with herbicide, disking and mowing being done.

Preliminary results from herbicide treatments showed 65% or better control. Control is expected to improve with more time for chemical translocation through the plant. Disking was rated to be about 75% effective, which was expected, since it is an aggressive control method with noticeable decrease in plant populations. Re-growth is limited, but occurring. Mowing had the least amount of initial effectiveness, with a rating of 50% control. This was expected, and re-growth is more than half of the existing height of untreated populations. In all of the above, plant flowering was delayed in the test plots compared to the control plots.

Late season treatments were applied at all sites in September 2008, and monitoring of the effectiveness of various treatments is ongoing. An analysis of the results for 2008 treatments is scheduled for completion in early 2009.

2. The Streambed Ownership Work Group continues to discuss the need for clear designation of ownership within the streambed, a point which is not clearly addressed within Nebraska law, and which is handled differently in various counties for tax purposes. The ownership issue takes on increased importance as the Task Force reviews potential treatment strategies and discusses whose responsibility it may be to conduct the treatment and then maintain the streambed/riparian areas following the activity.

The Task Force has talked a number of times about the importance of maintaining any riparian improvements so Nebraska does not find itself in a similar situation of streambed and riparian overgrowth a decade from now. No decision has been reached regarding whether this should be a landowner responsibility, a state responsibility, or some mixture of the two. However, the

Streambed Ownership Work Group Survey of 22 Platte River Counties	
Does county have up-to-date streambed cadastral maps?	6 of 19 counties have up-to-date streambed cadastral maps; 3 of 16 counties have up-to-date accretion maps
Does county assess value and levy taxes on streambed?	17 of 19 counties tax accretion; 8 of 19 counties tax streambed
Can county provide 5-year updates on these maps?	3 of 16 counties indicated they could provide updates
Is county currently updating cadastral maps?	7 of 22 counties have or are in the process of updating streambed cadastral maps

group feels emphasis needs to be placed on this issue to ensure the fiscal soundness of any state funds invested in riparian cleanup.

To gain a better understanding of the issue of streambed ownership, the Work Group surveyed 22 Platte River counties regarding the matter. The survey concluded cadastral maps of the streambed are not current in most counties so ownership of these areas is questionable, making it difficult to assign responsibility for streambed

vegetation management. In Nebraska, ownership is assigned to the thread of the stream, which is capable of moving regularly, thereby creating additional management problems. Some counties do not tax or assess a value to the streambed; however, officials are starting to realize that these riparian areas are being developed and do have a value.

Based on the survey results, the Work Group has proposed additional actions, including: (1) determine county current status of cadastral information on the Platte River streambed and any planned actions to make this information available; (2) outline what is needed to make cadastral information available on all streambeds in the state; and (3) outline legislation needed to provide a clear understanding of permanent boundaries in streambeds.

The Work Group moved ahead with addressing these proposed actions by scheduling time on the agenda of the Nebraska Association of County Officials (NACO) annual meeting for discussion of streambed ownership. The Work Group plans additional educational outreach as they further evaluate the need for legislative action and develop recommendations for streambed management responsibilities.

As they continue their research efforts, the Work Group has offered suggestions for streambed ownership issues, including: (1) the recommendation that county assessors use existing cadastral maps until updated ones become available; (2) the recommendation that a Streambed Cadastral Mapping Program be created to assist counties; and (3) regarding permanent boundaries for establishing land ownership and for taxing purposes, the recommendation that a geographic centerline be used. Legislation may be needed to establish it for ownership purposes.

The Work Group intends to research options for assigning responsibility for streambed vegetation management.

3. The Education and Awareness Work Group continues to discuss the value of sharing information about successful riparian vegetation management activities with the general public and landowners, and has encouraged entities involved with LB 701 grant projects to pursue opportunities to educate through the media and in direct contact settings. The Work Group maintains its emphasis on outreach to riparian landowners, as satisfied landowners are the best spokespersons for implementation and maintenance of vegetation management.

Landowner outreach has been modeled through both the Nine Mile Creek project and the Eastern Republican Riparian Improvement Project. The groups responsible for these projects conducted aggressive landowner education and outreach campaigns. It is hoped that this successful model can be duplicated in other riparian areas as programs and plans are made in the future.

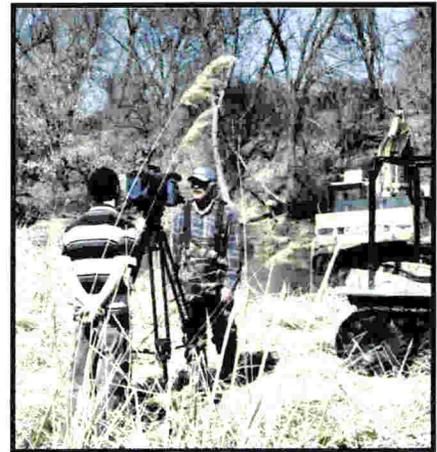
The Work Group acknowledges that the leaders of the LB 701 grant projects to date have provided valuable and timely public awareness within the project areas. These activities have continued to strengthen the goals and objectives of the Task Force.

The Task Force has discussed the importance of involving the media in message distribution. While it is key to deliver success stories in areas that will be directly impacted by riparian improvement projects, it may be equally important to share the message with greater Nebraska so there can be an understanding of why this issue is important to the state as a whole.

Numerous print and radio outlets have provided coverage of LB 701 grant projects and Task Force activities throughout the project areas and across the state. It is difficult to measure the effectiveness of media coverage to date. However, Task Force members continue to comment on the positive coverage that has taken place and have discussed the need for more education and awareness for the public outside of the current grant project areas, as the Task Force believes all citizens of Nebraska can and will benefit from these efforts. The Work Group has applied to the Nebraska Environmental Trust for grant dollars to enhance public awareness across the state regarding riparian vegetation management.

The Work Group also has discussed ongoing educational opportunities that could come in partnership with other entities interested in broader invasive species issues. Several entities are considering the formation of a unified invasive species management organization, and the Work Group has talked with some of these entities regarding possible future activities and collaboration in order to gain efficiencies and avoid redundancy. Discussions in this area are ongoing.

4. The Survey and Monitoring Work Group continues discussion about how the identification of infestation location, composition, and extent, will critically impact other segments of the Task Force because survey information may be used to help prioritize future funding of vegetation control efforts. However, before this can happen, vegetation surveys and documentation of vegetation control efforts would need to be catalogued and integrated. Georeferencing vegetation control locations using global positioning (GPS) technology was identified as a potential component of



A reporter from KHAS-TV interviews Project Coordinator Merle Illian, on location during debris removal on the Republican River.

Photo Courtesy: Nebraska Department of Agriculture

any future funding criteria, not only for accountability, but for future quality assessment.

Various weed control entities already are surveying and monitoring invasive weeds, including weeds in riparian zones. These groups include Natural Resources Districts, the county weed authorities, the Weed Management Areas, University of Nebraska researchers, and/or private nonprofit natural resources organizations. The Survey and Monitoring Work Group discussed the importance of contacting these entities to review their existing information and make a determination regarding the quality and extent of the data. Survey and monitoring protocols could possibly be established and serve as a potential requirement for receiving state funding for future control efforts.

This work group will have a number of questions to consider as discussions continue, including to what scale should riparian weeds be surveyed and monitored, and how often do surveys need repeating.

Remote sensing is able to show different types of plants through different visual "signatures" on infrared aerial photos. This mapping has advantages, such as the ability to show information that is comprehensive over an area, the ability to gather data from areas that aren't easily accessible on the ground, and over successive years, it can show the spread of plants or effectiveness of treatment. It also allows for more accurate measuring of infested areas, meaning better estimates for cost of treatment. There are limitations, including that a patch must be at least three square meters to be detectable, and that the cost of infrared photography can be somewhat expensive.

Task Force members talked about various remote sensing mapping projects that currently are being conducted. The U.S. Fish and Wildlife Service is doing some work in the Platte River critical habitat areas, and some surveying has been conducted on the Republican River.

The Work Group has applied for a Nebraska Environmental Trust grant to incorporate remote sensing and survey on fully and overappropriated river systems.

5. Perhaps the issue that has received the most discussion to date is the potential for quantifying water savings associated with riparian vegetation management. The Task Force has arrived at a discussion of this point several times.

The grant portion of the law directs that funding shall be awarded for activities that have as their primary objective the improvement of conveyance of streamflow. Even though the legislation places an emphasis on conveyance, the Task Force has discussed water usage by riparian vegetation and whether, or to what extent, vegetative water use can be determined to affect that streamflow. This is a primary question that will be considered by the Vegetation Water Use Work Group. The group already is taking a comprehensive look at existing and ongoing research that may help answer this question. To that point, several researchers from the University of Nebraska-Lincoln have shared with the Task Force work they are doing related to invasive riparian vegetation. Information shared included:

Table 4-1 Ranges of published values of annual consumptive use of water by common riparian and wetland vegetation as compiled by Johns (1989). Ranges of values of annual consumptive use for Phragmites calculated from published rates in Burba (1999) and Cummings (2007)

Common Name	Range of Annual Consumptive Use (inches)	Number of Studies	Study Locations	Methods
Arrowweed	96	1	AZ	Tank
Cattail	35-198	7	AZ, CA, CO, MI, MN, NM, UT	Tank, Water Balance
Cottonwood	39.3-92.7	7	AZ, CA, CO, KS, NM, Saskatchewan	Tank, Diurnal Fluctuation, Gravimetric, Water Balance
Bermuda Grass	28.8-73	1	CA	Tank, Water Balance
Phragmites	7.2-30.71	2	NE	Lysimeter, Energy Balance, Leaf Porometer
Salt Grass	6.2-48.8	11	CA, CO, NM, NV, UT, WA	Tank, Water Balance, Lysimeter, Diurnal Fluctuation
Rush	20.8-86.6	5	CA, CO, MI, Saskatchewan	Tank, Water Balance, Diurnal Fluctuation
Russian Olive	18.6-114.6	1	NM	Lysimeter
Saltcedar (Tamarisk)	11.8-86	16	AZ, CA, CO, KS, NM, NV, UT, WA	Tank, ET Tent, Lysimeter, Water Balance, Leaf Area Model, Energy Balance, Gravimetric
Willow	13.2-47.8	8	CA, KS, NM, NV, UT, WA, Saskatchewan	Tank, Water Balance, Diurnal Fluctuation, Gravimetric - Portable Chamber
Riparian Woodland	13.2-22.4	4	AZ	Water Balance

This chart catalogues research done on consumptive water use of riparian vegetation. It is included within a report prepared by the Nebraska Department of Natural Resources for the Task Force titled, Assessment of Resources Available to Quantify Non-beneficial Consumptive Water Use by Riparian Vegetation in Nebraska.

- A research project designed to look at the “Impacts of Riparian Vegetation on Water Quantity, Quality, and Stream Ecology” in the Republican River basin. The project has three main objectives: (1) measure evapotranspiration (ET) rates along a transect of the Republican River before and after exotic vegetation removal; (2) estimate ET savings of vegetation removal using a regional water balance model; and (3) determine how riparian vegetation removal affects water quality, stream function, and channel morphology.
- A research project designed to look at “Water Use of Invasive Species” in the Republican River basin. The primary components of this project are to: (1) measure baseline ET from riparian grasslands; (2) measure ET of Russian olive; (3) measure ET of red cedar; (4) measure ET of riparian systems using remote sensing; (5) integrate these measurements with physically based models; (6) survey species composition across the basin; and (7) measure ET across the basin. This project has four sites, including two near Benkelman, one near Bartley, and one near Franklin.
- A research project to calculate plant transpiration, which is a component of ET, using the sap flow method. The outcome of this research will be to

quantify water consumption in riparian invasive species at different developmental stages. Three species will be studied as a part of the research: cottonwood, red cedar, and Russian olive.

- A research project designed to look at satellite remote sensing-based estimation of land surface ET. The objectives of this project are to: (1) quantify spatial distribution and seasonal variation of ET in Nebraska; and (2) modify remote sensing energy balance models for improved prediction of daily and seasonal ET.

Through existing work, it has been determined that several challenges need to be addressed, including calibration of the models against measurements over dry-land and irrigated conditions, testing sub-models to estimate things like soil heat flux under various agro-meteorological conditions, and scaling methods to extrapolate instantaneous ET to daily and seasonal ET.

Several conclusions have been reached, including that land surface energy balance models can be a viable tool for quantifying daily and seasonal ET at a regional scale, and that beyond quantification, there is another level of analysis necessary to describe the relative effects on the water balance at any location and on streamflow.

The Nebraska Department of Natural Resources has prepared a report for the Task Force titled, *Assessment of Resources Available to Quantify Non-beneficial Consumptive Water Use by Riparian Vegetation in Nebraska*. This report is available for review at www.dnr.ne.gov/docs/studiesandresearch.html. The Task Force had not discussed the report as of this writing.

Regardless of water savings associated with vegetation removal, the Task Force has noted a number of times the other important benefits of riparian vegetation management, including flood control issues, recreation improvement, terrestrial and aquatic habitat improvement, and conveyance of stream flow, particularly in basins that are subject to an interstate compact or decree.

Next Steps

The Task Force is set to meet next on Monday, January 6, 2009, at the Nebraska Department of Agriculture.

On the agenda for that meeting will be Task Force member Senator Tom Carlson. He has indicated he plans to introduce legislation during the 2009 Unicameral session to extend the Riparian Vegetation Management Grant Program portion of LB 701, with possible funding for an additional two years.

Senator Carlson already has begun to publicly frame the discussion regarding the value of investing additional funding into the LB 701 riparian vegetation grant program. At a meeting of the Nebraska Water Resources Association in late November, he presented a report that included estimates of the water saved within the Republican River streambed due to the LB 701 vegetation control work in the 2007-2008 fiscal year. He figured removal of phragmites and invasive woody vegetation saved, conservatively, 46,760 acre feet of water, at a cost of \$1.2 million, for a per acre foot of water cost of \$27. By comparison, the State of Nebraska in 2007 purchased 32,000 acre feet of surface water from irrigators at a cost of \$10 million, for a per acre foot of water cost of \$312.

To arrive at his calculations, Senator Carlson took into consideration measurements from a study conducted by Anne Cummings at the University of Nebraska – Kearney in 2007. He adjusted her study data to reflect higher phragmites plant population and 180 growing days, and the water savings he arrived at with these changes was between 35,000 acre feet and 105,000 acre feet. Senator Carlson's full Power Point report further details how he arrived at his calculations. It can be viewed on the Riparian Task Force website at www.agr.ne.gov under the blue Riparian Task Force button.

RVMTFreport121508.doc

Riparian Vegetation Management Grant Program

Overview

Legislative Bill 701 was signed into law by Governor Dave Heineman on May 1, 2007. Sections 3 and 4 of the bill authorized the Director of Agriculture to receive applications for grants and award funding for projects that manage vegetation within the banks of a natural stream or within 100 feet of the banks of a channel of any natural stream. The Legislature indicated its intent to appropriate \$2 million annually for this purpose.

While LB 701 did not specify any requirement for reporting on the progress of this grant program, the Nebraska Department of Agriculture (NDA) felt it important to outline grant program activities to date due to the financial commitment of State funds and high level of interest in this program.

This report summarizes the results of the 2007-2008 fiscal year grants and provides background on, and a status report of, the 2008-2009 fiscal year grants.



The picture on the left is the Arikaree River at the confluence of the Republican River before invasive tree removal. The picture on the right is the same area after removal of saltcedar and Russian olive.

Photo Courtesy: Southwest Weed Management Area

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History

NDA has, for a number of years, had in place a structure to award weed management grants through the Noxious Weed and Invasive Plant Species Assistance Fund. Prior to the passage of LB 701, this authority had only been used to distribute funds that NDA had been awarded from the Nebraska Environmental Trust. This existing structure and grant process, as well as NDA's involvement with weed management entities as part of the Noxious Weed Program, meant NDA was a logical place to locate the LB 701 Riparian Vegetation Management Grant Program.

Timeline

NDA used the framework it had developed for disbursement of Environmental Trust grant program dollars as a basis for distributing the LB 701 grant dollars. The timeline for both grant cycles follows:

- April 26, 2007:** LB 701 passed by Legislature;
- May 1, 2007:** LB 701 signed by Governor Dave Heineman;
- May 30, 2007:** Call for grant proposals for 2007-2008 dollars disseminated to all County Weed Control Authorities, Weed Management Areas, and Natural Resources Districts (NRDs) in fully or overappropriated river basins; call for proposals news release sent out;
- July 1, 2007:** Deadline for submission of FY 07-08 proposals to the NDA;
- July 9-13, 2007:** Grant Review Team scores grant applications;
- July 19, 2007:** NDA awards FY 07-08 grants for approved projects; work begins;
- March 14, 2008:** Call for grant proposals for fiscal year 2008-2009 dollars disseminated to all County Weed Control Authorities, Weed Management Areas, and NRDs in fully or overappropriated river basins; call for proposals news release sent out;
- March 19, 2008:** Information meeting held in Grand Island for potential applicants;
- April 7, 2008:** Deadline for submission of FY 08-09 proposals to the NDA;
- April 14-18, 2008:** Grant Review Team scores grant applications;
- May 6, 2008:** NDA awards FY 08-09 grants for approved projects;
- July 1, 2008:** Work on FY 07-08 projects must be completed; work may begin on FY 08-09 projects.

Grant Selection

The Legislature was specific in direction of how the grant funds could be used and who could receive those funds. As outlined in LB 701, the grant dollars are to be used for the management of vegetation within the banks of a natural stream or within 100 feet of the banks of a channel of any natural stream. Such funds can only be used to pay for "activities and equipment as part of vegetation management programs that have as their primary objective improving conveyance of streamflow in natural streams."

In addition, grants are only to be disbursed to weed management entities, local weed control authorities, and NRDs whose territory includes one or more fully appropriated or overappropriated river basins as designated by the Department of Natural Resources. Priority for the first year of grants was directed to fully appropriated river basins that are the subject of an interstate compact or decree.

The following summarizes the projects funded through the Riparian Vegetation Management Grant Program. It's important to note that activities related to the FY 2008-2009 grants are ongoing.

Eastern Republican Riparian Improvement Project

Overview: This project is being led by the members of the Twin Valley Weed Management Area (TVWMA). It has received grant dollars in both funding cycles to control invasive riparian vegetation around Harlan County Reservoir and along the eastern Republican River and its tributaries within the eight counties of the TVWMA. Control efforts to date have included a full range of mechanical and chemical tools to control invasive plant species and control vegetation in stream channels to improve streamflow. Also, the project has been designed to increase public awareness of the impact that invasive plants have on riparian areas of the Republican River and its tributaries, and the best management practices that can be used to properly manage and maintain riparian areas.

Status Report: Prior to the FY 07-08 grant award, TVWMA officials already were active in the project area, surveying infestations and conducting outreach with riparian landowners. Because of these efforts, project coordinators were able to start helicopter applications to the streambed vegetation in September 2007, with ground applications a week later in areas that were not accessible by helicopter. Primary vegetation being targeted was phragmites, willows, cattail, and reed canarygrass, using an aquatic herbicide guaranteed for 90 percent root kill three years after application. The helicopter sprayed 1,102 acres of river channel vegetation, followed in October 2007 by helicopter treatment of 769 acres of vegetation within Harlan Reservoir lakebed.



Deep disking of high sandbars on the Republican River has increased the scouring effect during high stream flows.

Photo Courtesy: Twin Valley Weed Management Area

Mechanical work also was included as part of the FY 07-08 grant project. Excavators were used to remove woody debris and logjams from 52 miles of river channel below Harlan County Reservoir. In two experimental projects, heavy equipment was brought in to deep-disk invasive plant matter on 24 acres just west of the Red Cloud Bridge, and four islands loaded with invasive plant matter were burned in a quarter-mile segment of the river. Both of these experiments were an attempt to improve the scouring effect on sandbars during high water flows, and project partners said they believe the deep-disking proved to be a more effective treatment than burning.

The FY 07-08 grant work also included implementation of six fencing contracts with landowners who have riparian areas adjoining the river in order to facilitate vegetation management through grazing.

Phase two of this project, utilizing FY 08-09 grant funding, involves a 56-mile stretch of the river upstream from Harlan County Reservoir to the Cambridge Diversion Dam. Some work has started, including application of an aquatic herbicide on 98 acres of phragmites. Mechanical removal of debris and deep-disking are planned for later this winter.

Outreach and education to landowners and other interested parties has been an important part of both phases of this project. Five landowner information meetings have been held, as have been numerous public presentations to a variety of groups. Phase one involved the properties of 180 landowners, and all but one signed the easement agreement necessary to work on their property. Phase two has had similar success, with all but 4 of the 110 affected landowners signing the appropriate paperwork.

LB 701 funds spent per fiscal year:

FY 07-08	\$605,612
FY 08-09	\$244,908 (As of December 15, 2008)

Western Republican Riparian Improvement Project

Overview: This project is being led by the members of the Southwest Weed Management Area (SWMA). It has received grant dollars in both funding cycles for work that complements the activities being done on the eastern section of the Republican River. Vegetation control efforts include both chemical and mechanical tools in appropriate areas in and along the river west of the Cambridge Diversion Dam to the Colorado border. The primary targets of this project are saltcedar and phragmites control within the channel, and red cedar and Russian olive within the 100-foot corridor of the stream bank to improve wildlife habitat and grazing opportunities.

Status Report: Utilizing FY 07-08 funds, in the fall of 2007 project coordinators conducted mapping and surveying of invasive vegetative species, outreach to landowners on need for invasive control measures and the importance of maintaining improvements, and initial, limited chemical control measures. The bulk of this project included the mechanical removal of vegetation. Phragmites was treated on 40 miles of river during the first half of FY 07-08. From late winter through the end of the FY 07-08 grant period, 1,064 acres of invasive vegetation were removed from within the channel and the 100-foot riparian area of the channel on the Republican River and some of its tributaries.

The FY 08-09 grant dollars are being used to continue the progress made with the first-year grant dollars. Since the grant period began, through October 31, 2008, 849 acres has been cleared of invasive riparian vegetation, with efforts focused in Red Willow, Hitchcock and Dundy Counties. Spot treatment and monitoring of tree re-growth from earlier treated areas has been initiated and will continue to ensure adequate control. This mechanical work will be continued through the remainder of the grant period depending on available funds.

Landowner education and outreach also has been an important component of this project. SWMA leaders late this summer hosted a landowners' workshop designed to educate individuals on the variety of tools available for maintaining land improvements.

LB 701 funds spent per fiscal year:

FY 07-08	\$814,616
FY 08-09	\$663,432 (As of December 15, 2008)

Lake McConaughy Saltcedar Control "Surround and Drown" Plan

Overview: This project was led by members of the West Central Weed Management area. It received funding in the FY 07-08 grant cycle. The goal of this project was to control a significant saltcedar infestation that had inundated the lakebed as the lake receded due to drought. The project treated targeted invasives using chemical, mechanical, and biological control methods, in a designated area of the perimeter to prevent further spread of the vegetation. The invasives below the treated area were to be contained until the lake refilled, flooding and killing the remaining vegetation. While project leaders knew this uncontrolled vegetation would continue to use water, they felt it would be most efficient use to allow this vegetation to flood since Central Nebraska Public Power and Irrigation District projected winter flows would raise the water level nine feet. This approach meant 3,000 acres of vegetation was killed without treatment.

Status Report: The first phase of this project was completed during 2007, and included herbicide treatment in late August of 2,010 acres of saltcedar and other woody vegetation on the 12,000 acres of exposed lakebed. During 2008, project partners monitored the effectiveness of the spraying. Initial observations indicate a very high control rate; however, final determination of control will not take place until the end of the growing season in 2010. Effectiveness of these treatments will continue to be monitored closely as the chemical product guarantee is for 90% root kill three years after application. Annual monitoring of the area for new infestations will be conducted, and appropriate control measures will be implemented.

An additional 115 acres of saltcedar were treated during 2008 in areas that were not treated or were missed in 2007. This additional work was conducted with funds from the Nebraska Attorney General's Office and other partners. The mechanical removal of 162 acres of dead woody vegetation in the Martin Bay area was to be done in early December 2008, with funds from these same sources. The removal of vegetation on two other areas that are used for nesting by Interior Least Tern and Piping Plover is scheduled to take place after the growing season of 2009.

The final phase of the project will be completed in the fall and winter of 2009-2010, which will include the removal of standing dead vegetation on 1,230 acres in three areas that have been determined to be beneficial for endangered species habitat and/or public recreational access.

LB 701 funds spent:

FY 07-08\$347,833

High Plains Invasive Species Project

Overview: This project is being led by members of the High Plains Weed Management Association (HPWMA). It has been awarded funds in both funding cycles. In FY 07-08, project leaders focused on education and awareness to landowners on invasive plant control strategies, survey work on riparian wetlands for invasive populations, and some control measures in cooperation with landowners in selected areas. Russian olive, saltcedar, and phragmites were the primary targeted species. For FY 08-09 HPWMA was awarded funding for invasive vegetation control in the channel of the north Platte River from the Wyoming border to the Garden/Keith County line.

Status Report: During FY 07-08, project partners treated 55 acres of saltcedar and Russian olive on five sites. One location will serve as a demonstration site, and the treated brush will be removed once the herbicide has controlled the root system. At an additional location, the treated brush will be left in place and monitored to determine the length of time it will take for the dead brush and trees to fall and naturally disperse.

During FY 08-09, HPWMA was awarded funding to address invasive plant species in the channel of the North Platte River. Targeted species include Russian olive, saltcedar, and phragmites. The proposed treatment area covers approximately 125 river miles. Control tactics include aerial application of an aquatic herbicide utilizing a helicopter service to treat 378 acres of phragmites and saltcedar, and ground application in specified areas to complement the aerial application was completed on 14 acres. Weather factors this fall, including an early frost, limited aerial and ground applications.

LB 701 funds spent per fiscal year:

FY 07-08\$55,087

FY 08-09\$133,503 (As of December 15, 2008)



An aquatic vehicle spot-treats invasive plants in the North Platte River channel near the Wyoming/Nebraska border.

Photo Courtesy: High Plains Weed Management Association

Invasive Species Control in the Central Platte River

Overview: This project is being led by members of the Platte Valley Weed Management Area (PVWMA), consisting of 11 counties in south-central Nebraska. PVWMA was awarded funding for FY 08-09 to combat invasive vegetation in the Platte River channel from the Lincoln/Dawson County line working downstream to Elm Creek. Prior to FY 08-09, PVWMA hosted seven public meetings to inform the landowners about phragmites, control techniques, and grant opportunities and to garner the landowner support for control efforts. Project leaders indicate these meetings were well attended and had positive feedback from the landowners with regards to the planned control efforts. PVWMA also secured \$100,000 from the Central Platte NRD and \$13,750 from Ducks Unlimited for mechanical work to remove downstream choke points, improve water conveyance, and increase wildlife habitat.

Status Report: In August, a photo-point monitoring plan was implemented using a GPS-enabled digital camera from aerial flights to document infestations of phragmites along the river system. Aerial aquatic herbicide application was conducted in September. A total of 1,938 acres of phragmites was treated along 45 river miles. Highway bridge approaches were treated using ground application where aerial application was not feasible.

A follow-up flight, using the GPS-enabled camera to document results of the project, is scheduled for spring 2009.

PVWMA is also involved in a research project being conducted by the University of Nebraska – Lincoln to develop best management options for controlling phragmites. Results of this project may be used to develop future management practices applicable throughout the state.

LB 701 funds spent:

FY 08-09 \$268,944 (As of December 15, 2008)

Platte River Restoration Project

Overview: This project is being led by members of the West Central Weed Management Area (WCWMA) consisting of five counties. WCWMA received funds in FY 08-09 to treat invasive vegetation in sections of the North Platte, South Platte, and Platte River systems. Project leaders identified three priority areas that needed immediate attention: Platte River, Diversion Dam to Lincoln/Dawson County line; North Platte River, Diversion Dam to Hershey; and South Platte River, Diversion Dam to five miles west of the Highway 83 Bridge. These priority areas were all identified as choke points in the river, which reduced conveyance of water during normal and high river flows.

Status Report: Invasive vegetation on a total of 56 river miles was treated in September. Aerial application of an aquatic herbicide was made to 2,694 acres in the river channel in the three priority areas. Because of the high number of river bridges (interstate, highway, county, railroad and city), more precise application was required to complete the project so Lincoln County Weed Control provided staff and equipment to treat areas that could not be reached using aerial applications.

WCWMA included an education component to this project. Project leaders hosted two landowner meetings within the treatment area, where they answered questions and addressed issues or concerns from landowners.

LB 701 funds spent:

FY 08-09\$363,613 (As of December 15, 2008)

Monitoring Efforts

NDA Noxious Weed Program staff members continue to participate in grant project meetings and monitor control efforts. All grant project coordinators have communicated well with Department staff and appear to have good outreach to private landowners affected by the projects. NDA staff members have attended and participated in several public awareness meetings in each project area.

In addition to NDA's involvement in the grant program, LB 701 assigned the Nebraska Game and Parks Commission a role in assisting grant recipients with implementing projects. Commission staff has helped review the grant applications and has provided written notification to project coordinators to assist them in understanding their responsibilities under the Nongame and Endangered Species Conservation Act. Game and Parks has helped identify which threatened or endangered species may be found in a specific project area and offered commission staff to assist if needed for surveys or recommendations regarding how to avoid disturbing the species that may inhabit an area. Commission staff created a protocol to follow for each project area and provided contact information for the appropriate staff member for questions or assistance if needed.

There are high levels of interest in this grant program, so to aid in a successful outcome, numerous entities have been involved in the grant projects and the monitoring process. Collaboration is important for statewide weed management, and NDA has had the opportunity to work with regional weed management areas, natural resources districts, wildlife and environmental organizations, irrigation districts, University of Nebraska officials, and other state and federal agencies.

Of course, monitoring by NDA will be ongoing as these projects continue.

What's Next

NDA will continue to work with and monitor existing grant projects through the end of the fiscal year. The Riparian Vegetation Management Grant Program is funded through June 30, 2009. NDA will be prepared to continue its efforts should new funding become available for FY 09-10.

Since July 1, 2007, these projects have made tremendous progress in attempting to deal with a huge problem. The volume of private landowners involved in these grant projects is enormous, so again, public awareness is a key component to ensure effective and stable control methods are applied and the results are beneficial to the river basins as a whole. Public support continues to be the most valuable tool available for a successful program.

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**Riparian Vegetation Management Task Force
Meeting Minutes
May 19, 2010
Nebraska Nature & Visitor Center
Interstate 80, Exit 305
Alda, Nebraska**

1. Call to order – Chairman Charles Brooks called the meeting to order at 9:00 a.m. Roll call was taken. Task Force members present:

Gloria Erickson
Dr. Scott Josiah
Senator Cap Dierks
Ron Bishop
Charles Brooks
Kirk Nelson
Senator Ken Haar

Kent Aden
Mike Clements
Senator Tom Carlson
Russ Shultz
Rich Tesar
Senator Mark Christensen
Greg Ibach

Task Force members absent:

Brian Dunnigan
Jim Miller
Mike Linder
Senator Deb Fischer
Senator Scott Price

Senator Tom Hansen
Neil Moseman
Mike Sarchet
Senator John Harms
Mike Arps

Guests:

Bob Bettger for Brian Dunnigan
Dave Dingman for Neil Moseman
Jennifer tenBensel
Rick Hedke
Kristi Paul
Larry Gibbens

Frank Albrecht
Rod Stolcpart
Tim Smith
Merle Illian
Bruce Rumsey
John Thorburn

NDA Staff:

Mitch Coffin

2. Brooks announced the meeting is being recorded.
3. Brooks noted the availability of a copy of the Nebraska Open Meetings Act. He noted for the record that notice of today's meeting was published in the *Omaha World Herald*, *McCook Daily Gazette*, and the *Kearney Hub*.

4. Brooks opened discussion on the minutes of the September 21, 2009, meeting minutes. Brooks asked if there were any corrections or additions. There being no corrections or additions, Senator Carlson made a motion to approve the minutes. Senator Dierks seconded the motion.

Roll call vote: In support of motion – Aden, Clements, Bishop, Brooks, Shultz, Tesar, Josiah, Nelson, Erickson, Senator Carlson, Senator Dierks, Senator Hansen, Senator Christensen and Senator Haar. Voting against the motion – none.

5. Old Business:

There is no old business to discuss.

6. New Business:

Weed Management Area Reports

Kristi Paul reported on behalf of Panhandle Research Integration for Discovery Education (PRIDE). They have focused since 1998 on leafy spurge, houndstongue, Scotch thistle, and Canada thistle. PRIDE has worked closely with NRCS developing an intensive grazing of invasive weeds and restoration using competitive grasses. Other activities have included Russian olive removal and publication of *Weed Watch* that is delivered to households in the project area.

Larry Gibbens reported on behalf of the Sandhills Weed Management Area. They have mainly worked on upland sites but will be surveying the Loup River system this year and inventory problem areas in riparian areas that need to be treated. This group continues to manage a number of leafy spurge biocontrol sites for redistribution.

Rod Stolcpart reported on behalf of the Middle Niobrara Weed Awareness Group (MNWAG). Their focus has been in preserving 76 miles of the Niobrara River extending out one mile on either side of the river. They have utilized numerous grant sources to fund mapping and treatment of purple loosestrife, saltcedar and leafy spurge. MNWAG has also provided some cost-share to landowners to increase control as well as awareness regarding the benefits of invasive weed control. They have been involved with a purple loosestrife rearing garden whereby biocontrol agents are reared in a controlled setting and released in the wild.

Russ Shultz reported on the activities of the Lower Platte Weed management Area. Russ reported that Landowners are the key to getting invasive weeds controlled on the Platte River. Awareness and treating small patches is critical

before infestations become well established and difficult to control. While river survey and maintenance continues, efforts have been diverted to upland phragmites infestations. Rich Tesar commented they plan to mulch treated brush on islands then deep disk the mulched areas. He also noted that the three NRD's in that stretch of the river have committed \$60,000 each.

Merle Illian reported on behalf the Twin Valley Weed Management Area (TVWMA). He reported that three years ago 350cfs caused lowland flooding below Harlan Reservoir. Funds used to date equals \$1,218,202.00 and \$230,176.00 in-kind services. Helicopter spraying of the exposed lakebed and below the dam has been completed. Debris removal and deep disking below the dam is ongoing. CCPI contracts are in place for brush removal and pruning, controlled burns and fencing. Merle reported they are in the process of how best to treat the Franklin pinch point.

Kent Aden reported on behalf of the Platte Valley & West Central Weed Management Areas. Their current phragmites management consists of spray, burn if conditions allow, flooding and/or biomass removal. Helicopter applications will continue to treat where access is allowed and airboat treatments will be used in spot spray situations. Kent reported that continuous grazing appears to suppress phragmites stands. To date 14,000 acres have been treated by helicopter and another 1,500 acres is scheduled to be treated this year. WMA members are documenting infestations and controlled areas using a GPS camera and a voice activated laptop for aerial surveys. They report that 92% of funds received have been used for aerial applications and biomass removal. Kent stressed that counties need to pressure landowners into maintaining treated areas as well as infested areas off the river.

Lucas Negus reported on behalf of the Northeast Weed Management Area. This group has focused on leafy spurge, Canada thistle, and spotted knapweed but most recently has increased their biocontrol efforts for purple loosestrife along with leafy spurge. Have seen success using a combination of herbicides and biocontrol for purple loosestrife control. Have done some fixed wing and helicopter applications on purple loosestrife. Partners have participated in a saltcedar search and destroy mission on the Missouri River.

Tim Smith reported on behalf of the Southwest Weed Management Area. Tim stated that the Republican River is a seasonal dry river consisting very narrow stretches to braided channels. They have been dealing with 100% canopy cover in many areas of the river. Landownership has complicated some areas but overall 70% of the landowners are onboard and supportive. Majority of the control activities have involved Canada thistle, Russian olive, eastern red cedar, saltcedar and phragmites. CCPI contracts have been utilized by many landowners. Students from Trenton High School hosted a Swanson Lake cleanup which was well received by the public. Awareness and public outreach

continues to be a challenge throughout the project area. Landowners report that wildlife has increased in treated areas.

7. Work Group Reports

Streambed Ownership – Russ Shultz reported a survey was sent to 1,837 landowners with 32% responding. The full report is displayed at the end of the minutes.

Vegetation management and Treatment - Kent Aden reported that studies continue regarding the best timing for phragmites applications. Researchers are collecting data at this time.

Survey and Monitoring – This was covered in the Streambed Ownership report.

Education and Awareness – Mike Clements reported that his work group is working with Carla Hoops to develop a program.

Funding and Incentives – No report.

Goals, Objectives and Reports – Senator Carlson reported that his work group is pleased with the progress that has been accomplished in less than three years. There had not been any negative effects on what has been completed to date. WMAs have done an excellent job of completing tasks in riparian areas.

Vegetation Water Use – Ron Bishop reported that Central Platte NRD is participating in a water use study and data should be available in the future.

8. Open Comment Period

Senator Dierks said he is pleased with the progress the task force has made in such a short time.

Dr. Scott Josiah reported that black walnut products are not allowed from other states into Nebraska by order of the Nebraska Department of Agriculture.

Mitch Coffin reported that NRCS will no longer cost share on the planting of Russian olive.

9. Meeting Adjourned

Streambed Ownership & Responsibility

- Riparian Landowner input – Riparian Landowner Survey
- Updating noxious weed control approach
- Early Detection & Rapid Response
- Updated Nebraska Weed Management Association Online Weed Management System
- Preliminary thoughts on Streambed Ownership & Responsibility

Riparian Landowner Survey Summary for 501 Responses

- 32% response to survey 589 of 1837
- General questions
 - Type of landowner
 - Farmer/rancher - 56%
 - Recreational - 22%
 - Out of state - 6%
 - Other - 15%
 - 60% had vegetation treatment performed by a WMA
 - 65% favorable reactions, 27% neutral reactions & only 8% unfavorable reactions
 - 69% benefited from treatments
 - 67% were aware of NRCS programs with 23% making applications

Streambed Vegetation Management

- 86% for a long term maintenance program
- 75% would voluntarily participate
- 48% for legislated responsibilities
- Monitoring of streambeds
 - Landowner 31%
 - WMA 34%
 - Other 35% (mostly NRD)

Streambed Ownership

- Legislated definition of streambed ownership
 - 17%-Thread of the stream
 - 41%-Geographic centerline
 - 20%-Geographic centerline w/ access to thread
 - 12%-Don't know *care*
 - 10%-Other

Streambed Vegetation Management Preliminary Conclusions

- WMA treatments well received
- Almost all believe long-term maintenance is needed
- Some less would voluntarily participate
- Almost 1/2 agree with legislated responsibility
 - Much higher than expected
 - Comments need to be evaluated to arrive at recommendations
- Long-term maintenance fairly evenly split between
 - Landowners
 - WMAs
 - NRDs

Streambed Ownership Preliminary Conclusions

- 73% prefer legislated geographic centerline or have no preference
- Only 17% indicated the thread of the stream
- Is it time for Nebraska to make their own definition of streambed ownership rather than being only one of 5 states that revert back to British common law

New Approaches to Noxious Weed Control

- Presently
 - Designates plants as noxious when well established in the state
 - No species specific
 - prevention,
 - control and management strategies by invasion stage

New Approach

- Reaction to invading plants early when eradication is still possible
 - Strategy to exclude plant invasions
 - Response to new invasive plants as they occur
 - Appropriate control and prevention strategies for established infestations
- Change in operations and criteria per NWCA recommendations w/o legislation or rule revisions.

Changes

- Alert List (Potential Noxious Weeds)
 - Potential and new invaders
 - Potential significant economic or environmental impacts
 - Not yet been reviewed for designation as a noxious weed
 - Use weed risk assessment to determine risk of invasion, potential to spread and cause harm
 - Designating noxious weeds
 - Early in invasion process
 - Implement eradication as soon as detected

If in Place 10 Years ago

- Phragmites would have been dealt with at the early stages of its invasion
- Strategy would have been in place to eradicate or kept it in check
- At a small fraction of the cost that is required now

Potential New Invaders

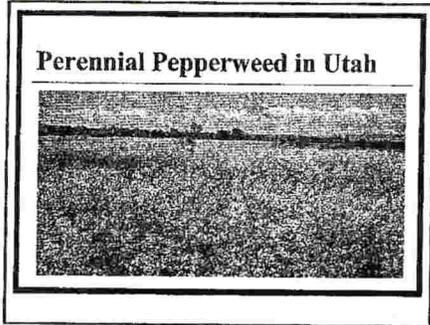
- *Perennial Pepperweed*
- *Japanese knotweed*
- *Giant Reed*

PERENNIAL PEPPERWEED

- Noxious weed in 15 states including CO, WY & SD
- Detected in 6 NE counties
- Highly invasive perennial invader
 - Riparian areas
 - Wetlands
 - Floodplains
 - Adapts readily to natural and disturbed wetlands
 - Plants create large monospecific stands

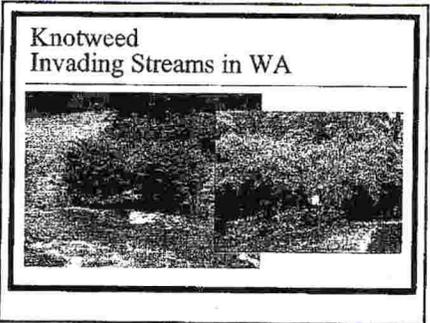


100 worst
weed



JAPANESE KNOTWEED

- Aggressive, hard to control plant invades streams & wet areas
- Wild & ornamental plants in Omaha and Lincoln areas
- Noxious weed in 9 states & found in all surrounding states. Already considered to be beyond control in Ames, IA area



GIANT REED

- Sightings in Denver and southern part of the state: Zone: 5
- Highly invasive grass-like plant that likes streambanks
- 15+ feet tall and has a hollow stem
- For sale as "Versicolor" Variegated Giant Reed Zone: 6
- Noxious weed CA, NV, TX



Early Noxious Weed Designations

- Will create awareness
- Increase chances of early detection
- Provide opportunity to develop control strategies
- Stop the sale of plants
- Allow for eradication of small sites early in the invasion process
- Prevent recurrence of a phragmites like experience

Early Detection & Rapid Response

- An EDRR Coordinating Committee is being formed by the Nebraska Invasive Species Council
 - Increased awareness and participation
 - Increased chances of detecting new invaders
 - Mapping & sharing of information w/ responsible agencies
 - Increase the opportunity of rapid response and eradication
- First steps
 - Preparing preliminary alert list
 - Developing detection & reporting protocol
 - Implementing use of weed risk assessment on Japanese knotweed as a part of the noxious weed designation process



- Noxious & invasive weed mapping program
 - County weed control authorities
 - On-line entry of inspection information and mapping
 - A tool for working with landowners
 - Mapping and some information may be viewed by the public

Updating NWCA Mapping Program

- Nebraska GIS Council is assisting
- State-of-the-art improvements
 - Polygon instead of point data
 - Linking to photos taken by GPS cameras
 - Improve usability by weed control authorities
 - Adding layers to broaden use in weed control
- Funding opportunities
 - APHIS (Farm Bill)
 - Nebraska Environmental Trust

Adding Layers as Needed

- NDA Aerial survey of Platte and Loup Rivers for phragmites funded by NET
- Early detection/rapid response layer to record and track locations of invading plants in NE & surrounding states

Work Group Planned Actions

- Riparian Landowner Survey
 - Complete summary and evaluation of responses
 - Distribute to RVMTF & workgroup members
- Work Group meeting
 - Prepare preliminary recommendations and possible legislation on
 - Noxious weed control
 - Streambed ownership
 - Streambed responsibilities

Recommendations/Requests

- Letter of support for Newweedmapper update
- Support of Nebraska Invasive Species Council creation of EDRR coordinating committee

**Riparian Vegetation Management Task Force
Meeting Minutes
April 19, 2012
Central Platte NRD
Grand Island, Nebraska**

1. Call to order – Chairman Charles Brooks called the meeting to order at 9:00 a.m.
Roll call was taken. Task Force members present:

Gloria Erickson
Dr. Scott Josiah
Senator Tom Carlson
Charles Brooks
Senator Tom Hansen

Kent Aden
Mike Clements
Bruce Rumsey
Rich Tesar

Task Force members absent:

Brian Dunnigan
Jim Miller
Mike Linder
Senator Deb Fischer
Senator Scott Price
Greg Ibach
Senator Ken Haar

Mark Matulka
Ron Bishop
Mike Sarchet
Senator John Harms
Mike Arps
Senator Mark Christensen
Kirk Nelson

Guests:

Bob Bettger for Brian Dunnigan
Rich Walters
Kristi Paul
Justin Relka
Milt Moravek for Ron Bishop
Marty Hein
Jay D Tetschner
Karie Decker
Mark Brohman
Barbara Good-Small

Frank Albrecht for Kirk Nelson
Merle Illian
Brian Crabtree
John Thorburn
Mike Reed
Rob Schultz
Doug Mulligan
Jed Wagner
TJ Walker
Lucas Negus

NDA Staff:

Mitch Coffin

2. Brooks noted the availability of a copy of the Nebraska Open Meetings Act. He noted for the record that notice of today's meeting was published in the *Omaha World herald*, *McCook Daily Gazette*, and the *Kearney Hub*.
3. Brooks opened discussion on the minutes of the May 19, 2010, meeting minutes. Brooks asked if there were any corrections or additions. There being no corrections or additions, Clements made a motion to approve the minutes. Aden seconded the motion.

Roll call vote: In support of motion – Aden, Clements, Brooks, Rumsey, Tesar, Josiah, Erickson, Senator Carlson, Senator Hansen. Voting against the motion – none.

4. Old Business:

There is no old business to discuss.

5. New Business:

Elect Vice-Chair:

Aden nominated Bruce Rumsey, Senator Carlson moved nominations cease.

Roll call vote: In support of motion – Aden, Clements, Brooks, Rumsey, Tesar, Josiah, Erickson, Senator Carlson, Senator Hansen. Voting against the motion – none.

Weed Management Area Reports:

Merle Illian reported on the activities of the Twin Valley Weed Management Area. Continue to conduct broadcast spraying in certain areas. Deep disking has been successful in reducing vegetation and allowing sandbars to scour and move. Working being done in pinch point areas to remove logjams to improve the conveyance of water which has improved downstream flow. They continue to work on CCPI contracts to remove Russian olive and cedar. Working on tributaries of the Republican River clearing logjams to improve stream flow.

Tim Smith, Southwest Weed Management Area provided a written report.
(Attached A)

Karie Decker gave an update on the activities of the Nebraska Invasive Species Council. The group has just finalized the Nebraska Watch List for invasive plants. She reports that several council members had been working on this list. The watch list will be used to identify and track possible new invasive plants. Karie reported that the Nebraska Weed Control Association members have been using some type of watch list since 2002. The current list has been expanded and will be available to other groups and can be found on the Councils website.

Justin Relka, High Plains Weed Management Area. They have been working on 23 miles of the North Platte River and 17 miles of the South Platte River. Most work has focused on invasive tree removal in riparian areas with Russian olive being the major problem. They know that the Nine Mile Creek project has been a success with the increased water flow and use this as a model. They use this and other projects as a public awareness tool and are trying to focus on more educational opportunities.

Rich Walters, Platte Valley & West Central Weed Management Areas reported on their activities on the Platte River. (Presentation attached B)

Mike Reed, Lower Platte Weed Management Area reported their original focus was purple loosestrife, but discovered phragmites and saltcedar as they began surveying. The NRD's have been instrumental in assisting with funds for phragmites control. They are currently locating upland phragmites stands and will conduct a Russian olive survey this season. They plan to collect phragmites seed heads to test for seed viability.

Working Lunch – Members viewed video developed by Wyoming regarding invasive plants on the North Platte River.

Dr. Scott Josiah, State Forester gave a PowerPoint presentation on Riparian Forests in Nebraska. (Attached C)

Kristi Paul, Panhandle Research Integration for Discovery Education (PRIDE) Gave a PowerPoint presentation. (Attached D)

Jay D. Tetschner and Barbara Good-Small gave a PowerPoint presentation on the activities of the Sandhills Weed Management Area. (Attached E)

Lucas Negas reported on the activities of the Northeast Nebraska Weed Management Area. (Attached F)

Brooks read a report submitted by the Middle Missouri Weed Management Area. (Attached G)

Work Group Reports:

Senator Carlson feels that so much has been accomplished in such a short time. He believes the 4 million dollars appropriated by the Legislature has been used wisely. He is happy to report to the Legislature on the success of the program and believes the state should invest again and support a statewide Weed Management Area program and coordinator.

Rich Tesar likes the idea of using GIS to map and track the activities as projects move forward. This will aid projects in planning new work and continue with follow-up treatments that may be needed.

Mike Clements states education and awareness is a key component to educating landowners in project areas. This also applies to new areas so invasive weed problems can be identified and dealt with early on.

Final Report Recommendations:

Senator Carlson opened discussion stating he is pleased with the amount of work that has been accomplished since the passage of LB 701. He suggested that the Task Force make the following recommendations in the Final Report to the Governor and Legislature;

- Continued acknowledgment by the Governor and Legislature that noxious and invasive plants pose a serious threat to Nebraska's natural resources.
- Create a long term funding source to allow each WMA to continue to improve and manage riparian areas.
- Legislation needed to provide a clear understanding of permanent boundaries in stream beds.
- Aggressive awareness campaign to inform landowners and managers of the serious threats that noxious and invasive plants pose to the economy.

Senator Hansen commented that he agreed with these recommendations and appreciates all the cooperation that has taken place. He also stated that he hoped that this type of work could continue.

Aden made a motion to except the recommendations submitted by Senator Carlson. Rumsey seconded the motion.

Roll call vote: In support of motion – Aden, Clements, Brooks, Rumsey, Tesar, Josiah, Erickson, Senator Carlson, Senator Hansen. Voting against the motion – none.

Open Discussion:

Gloria Erickson believes we need to get students involved as much as we can. They need to be involved in natural resources issues.

Frank Albrecht stated that Nebraska Game and Parks Commission want to continue to be involved in Weed Management Area efforts.

Senator Hansen knows that great work has been accomplished and believes in the Weed Management Area concept.

Milt Moravek comments that NRDs have a responsibility and a role to be involved in these riparian projects. He said Central Platte NRD provides funding to their Weed Management Area from their flood control funds.

Scott Josiah reported that Weed Management Areas have done an excellent job of protecting Nebraska's forests.

Bruce Rumsey stated he is happy to be a member. He has been involved with the Harlan Reservoir and Republican River projects. He said when Twin Valley WMA was formed they didn't think they had a problem but soon found infestations of saltcedar and phragmites.

Mark Brohman reported that Weed Managements Areas have done an excellent job of protecting Nebraska's natural resources. He said the Trust board likes the idea of landowner buy in.

No other business, meeting adjourned at 3:40 p.m.

A

Charlie,

Just a brief progress report on the activities within the SWWMA this season. We are currently about halfway through our scheduled brush removal projects for the season. As you know, scheduling of these projects can be frustrating at times primarily due to lack of qualified contractors and compliance with state and federal regulations. Fortunately, we have been able to work through these headwinds and make good progress.

Some of the projects that we are pretty excited about include:

Frenchman Creek. The first phase of this project has just finished up. We were able to remove virtually all of the Russian Olives growing along the Frenchman creek from just below the dam at Enders Reservoir to the village of Wauneta. This is a distance of about 7 miles. This project was a cooperative effort between the Environmental Trust, SWWMA, NRCS and the National Wild Turkey Federation. The next phase of this project will be above Enders Reservoir and will include several hundred acres west of Champion.

Rock Creek. We are currently in the middle of this particular project. We are removing the Russian Olives from the Rock Creek drainage all the way from the Rock Creek state fish hatchery clear to the convergence of Rock Creek and the Republican River. This will basically clean up the entire drainage except for some small state holdings that we are currently trying to figure something out on. We also welcome a new partner on this project, the Rocky Mountain Bird Observatory.

Swanson Dam. We have just completed cleaning over a mile of river channel just below Swanson Dam near Trenton. This project was 5 years in the making! This area was one of Rick Hedke's pet projects and it was very gratifying to finally get this done. This area included one of our last heavy infestations of Salt Cedar along the Republican River. A very hostile work environment.

Shaffert Phragmites Project. We were able to aerielly treat one of our worst infestations of phragmites along the Red Willow-Furnas county boundary. We are not so sure that this particular infestation wasn't a major contributor to the phrag problems in the Twin Valleys WMA! Sorry Merle. Additionally, our landowner partner (Paul Shaffert) let us mop up one of the most overgrown and nasty Russian Olive and Red Cedar infestations along the entire Republican River. Nice project.

These are just a few highlights of what has been going on. There are many smaller projects and daily operations going on that I won't mention here for the sake of brevity.

In the future, we would like to go continue with with our efforts along the upper Republican river and it's tributaries. We feel that the removal of invasive brush and channel clearing will have the greatest long term benefit if we work from the top down so to speak. Colorado has done an exceptional job on their stretches of the Republican and Arikeree Rivers, so our concerns about reseeding from that particular source has for the most part been eliminated. I wish I could say the same for our neighbor to the south but I don't think that they currently have anything planned as far as riparian restoration.

Additionally, Colorado and the Upper Republican NRD are continuing with construction of their respective augmentation pipelines. We would like to make every effort possible to ensure that most of that water will reach Swanson Reservoir.

We are also continuing with at least bi annual boots on the ground inspections of all treated properties to ensure there are no reinfestations and to check on compliance with our maintenance agreements.

As far as an amount for an annual operating budget, we thought long and hard about this. We don't want to go with a GSA party budget, but we also realize that there are certain realities when it comes to day to day operations (mixed in with the inevitable unforeseen expenses) as well as being able to handle large projects when the opportunity arises. The amount that we have kind of settled on would be in the 350-400 thousand dollar range. Now that might be shooting for the moon so to speak, but that amount of money would allow for the day to day operations as well as allow us to expand on the work that we have already done. We have several large projects that we would like to undertake but the realities of the current economic climate keep us from sticking our neck out to far. It goes without saying that we owe a huge debt of gratitude to the Nebraska Environmental Trust for allowing us to continue operations through these trying times.

Hope this gives you an general idea of where we would like to go.

Later, Tim

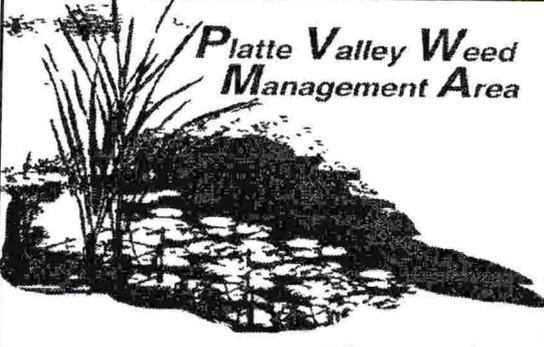
Tim Smith

Project coordinator

Western Republican River riparian Improvement Project

308.737.7445

p.s. Education, education, education!!!!!!



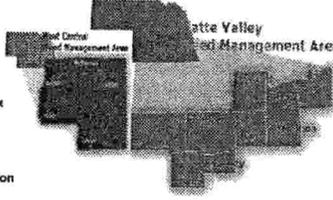
Platte Valley Weed Management Area

Rich Walters
Project Coordinator

The Nature Conservancy
NATURE HAS THE SOLUTIONS. WE HAVE THE COURAGE.

Platte Valley and West Central Weed Management Areas

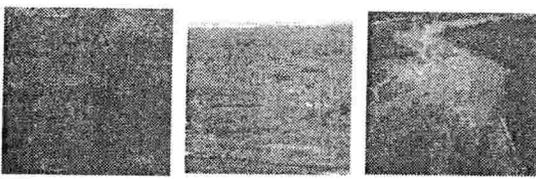
The Platte Valley and West Central Weed Management Areas are a group of public and private agencies and individuals who are concerned with stopping the spread of noxious and invasive plants located in the Central Platte River drainage area.



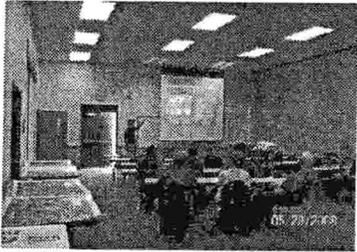
PV and WC Partners:
 Private Landowners
 County Weed Districts
 Nebraska Department of Agriculture
 University of Nebraska
 Ducks Unlimited
 Platte River Whooping Crane Trust
 US Fish & Wildlife Service
 Nebraska Game & Parks Commission
 Audubon Rowe Sanctuary
 The Nature Conservancy
 Nebraska Public Power District
 Central Platte, Twin Platte, Tri-Basin NRD
 Central Nebraska Public Power and Irrigation District

Multiple partners all working towards one goal

- Removal of invasive vegetation
 - 1) Increase Water Conveyance
 - 2) Increase Wildlife Habitat
 - 3) Decrease Water Usage by Invasive Vegetation

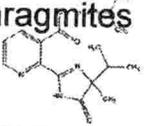


Before Implementation WMA's hosted public Meetings in summer of 2008 and 2009



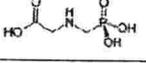
obtained agreements with landowners (650+)
 Multiple mailings and phone calls
 Semi-yearly mass mailings to keep landowners informed

Management of Phragmites



Imazapyr
 2-[4,5-dihydro-4-methyl-4-(1-methylfatty)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid

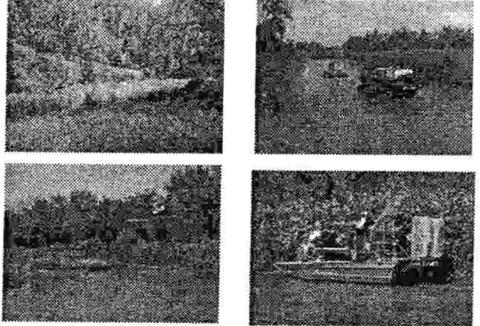
- Burning
- Grazing
- Flooding
- Mowing/Disking
- Chemical control

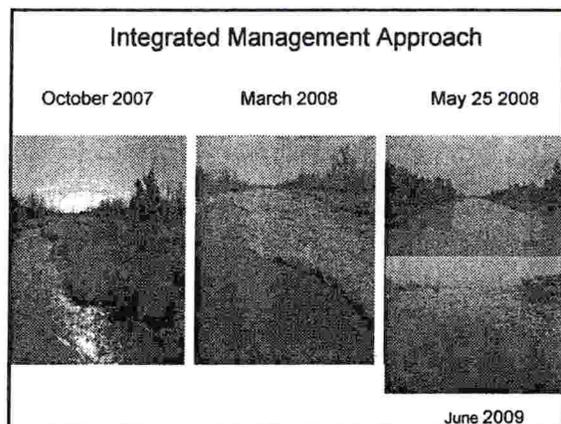
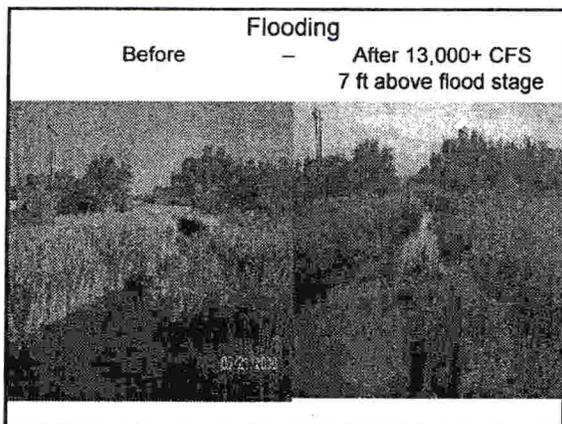
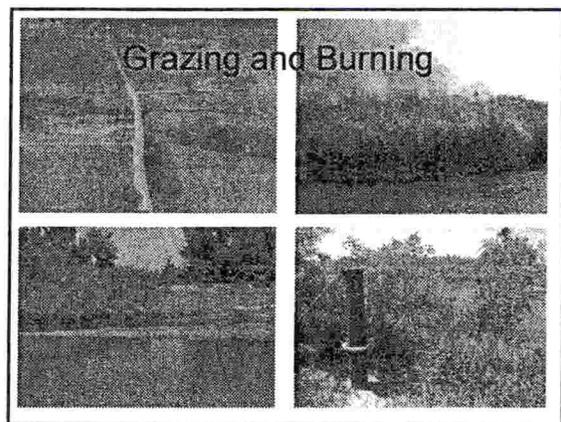
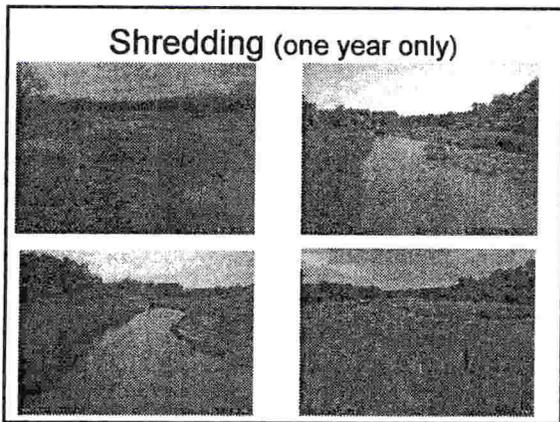
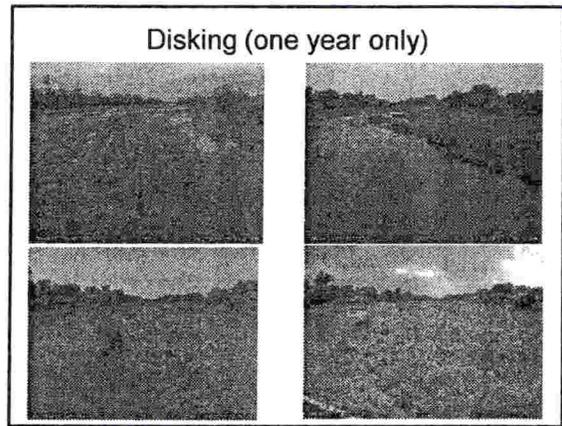
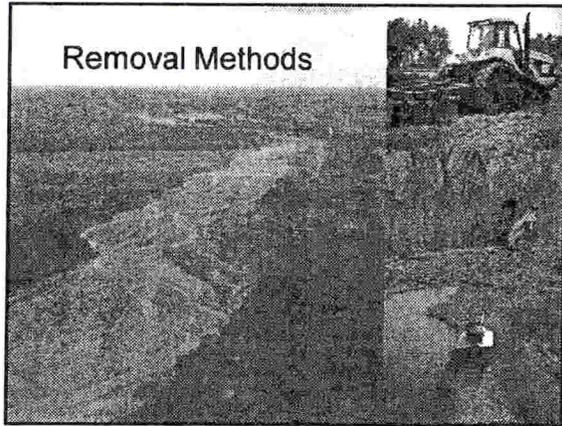


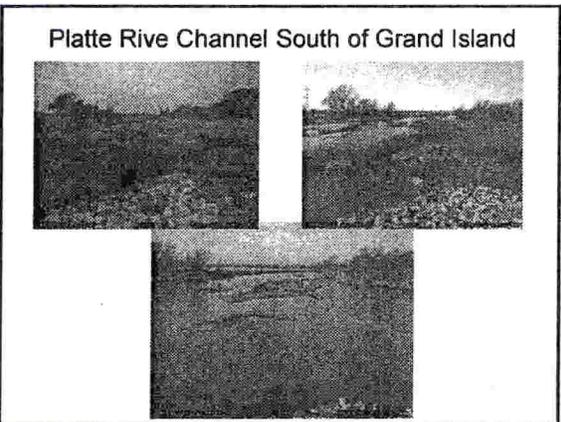
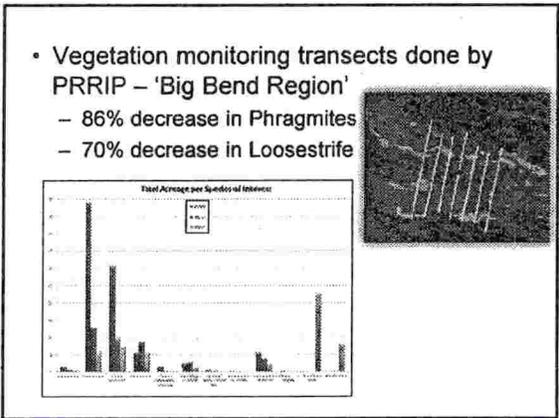
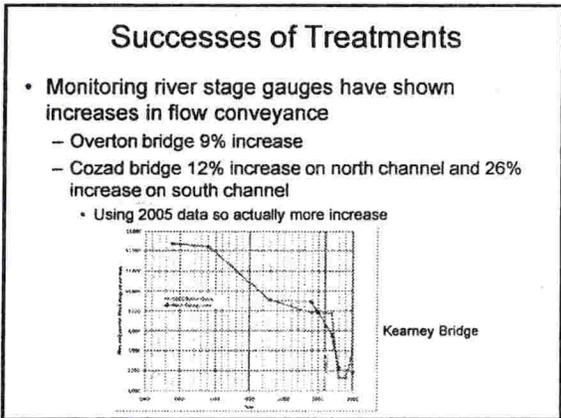
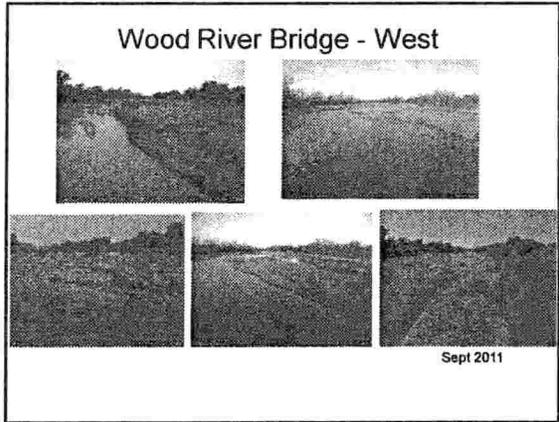
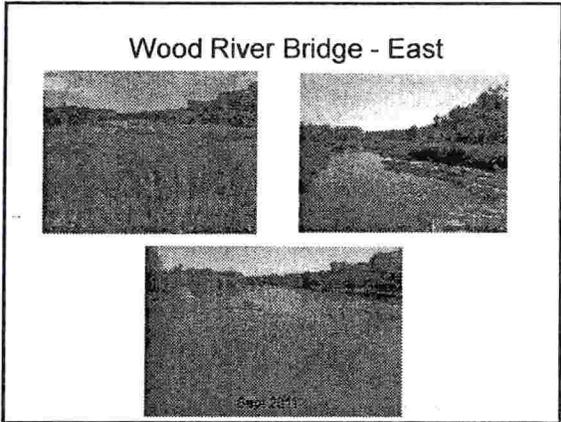
Glyphosate
 N-(phosphonomethyl) glycine

Research on all above items

Herbicide Application







Summary of WMA Grant Awards 07-11

• NET -	\$ 1,000,000.00
• PTI grant -	\$ 50,000.00
• PSG grant -	\$ 95,000.00
• NDA -	\$ 1,251,000.00
• CPNRD -	\$ 334,000.00
• Tri-Basin NRD	\$ 8,000.00
• U.S.F.W.S. and DU -	\$ 10,000.00
• DU NAWCA grant -	\$ 225,000.00
• PRRIP -	\$ 680,000.00

Total of \$3,653,000.00 obligated
(some obligations in future years)

**West Central and Platte Valley WMA
Actual Expenditures**

To date \$3,047,694.38 spent

- Applied herbicide on approximately 20,500 acres
- Approximately 2,150 acres removed



90.4% Herbicide/Mechanical
3.4% Monitoring
0.6% Public Outreach
.7% Legal and Insurance Costs
4.9% Coordinator salary (includes travel costs, mileage)

herbicide/mechanical
Monitoring
Public Outreach
Legal/Insurance
Coordinator Salary

**2012 Focus
"Monitoring and Maintenance"**

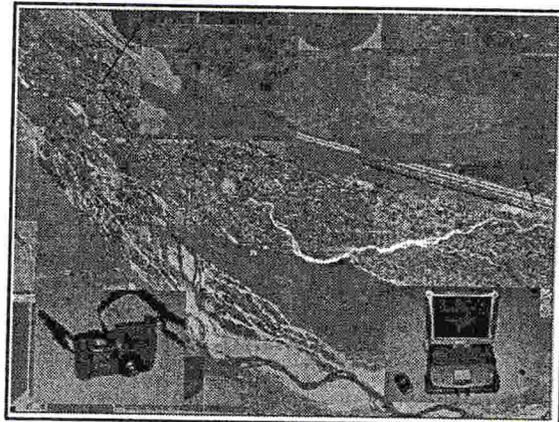
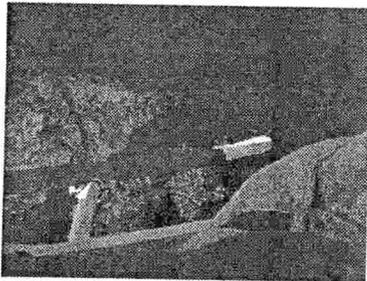
- Survey river system and perform spot treatments on infestations
 - Helicopter and airboat applications
- Work with landowners on infestations outside of channels
 - Increase public outreach/education
- Work on tributaries and other seed sources

- NET Grant
- CPNRD
- DU NAWCA
- PRRIP
- NDA

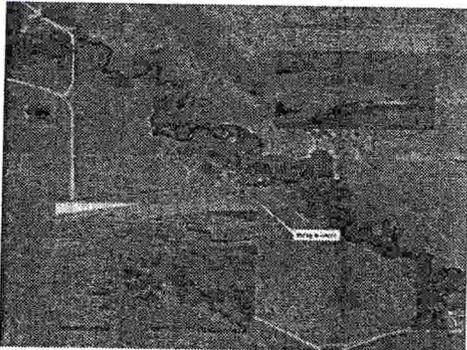
2012 Budget \$700,000.00

Includes past year carry over

Monitoring Efforts



Example of Map Given to County Weed District

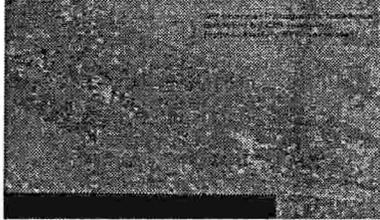


The Next Five Years

- Continue monitoring/evaluating previous work within Platte River
 - WMA continues control in flowing channels with heavy partner involvement (cost share)
 - WMA supplies data/location of infestations not within flowing channels
 - County weed districts work with landowners to implement control

- CIR for infestations outside Platte River

- Using aerial color infrared imagery to detect invasive phragmites
 - Given to counties to do control work on
- Will repeat survey in 2013 to document treatments, detect new infestations



- Continue to expand up tributaries to increase flow conveyance and remove seed source
- Expand work to other invasive species within and outside river corridors



Long-term Management

Integrated Management techniques

Allow for more long-term sustainable control

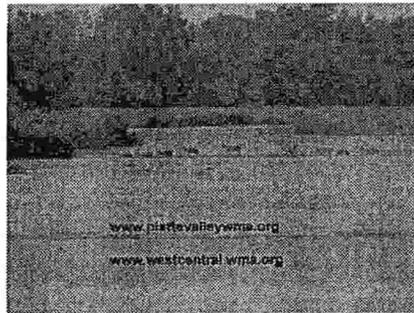
Direct control techniques but also need to focus on system issues that encourage invasive

Monitoring

Not only for existing invasives but potential ones to come

Long Term Financial Contributions for WMA Stability

Questions?



www.plattevalleywma.org
www.westcentralwma.org

C

Riparian Forests in Nebraska A Utilization Opportunity

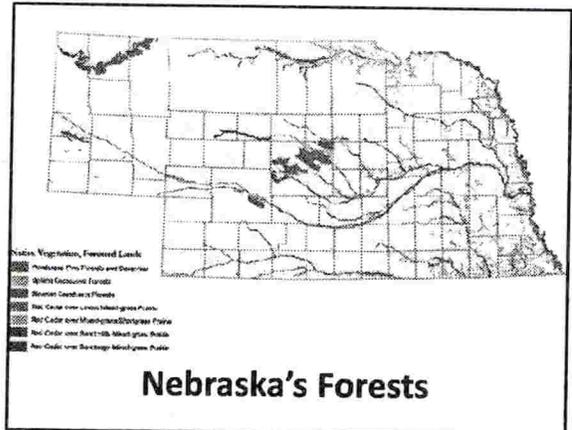
Scott Josiah
State Forester and Director
Nebraska Forest Service



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5/16/2013



Some Statewide Statistics

- 1.52 million acres of forest (+200,000 acres since 2005)
- 1.3 million acres of nonforest land with trees
- 70% are riparian forests, also forests in Pine Ridge, Wildcat Hills and Central Loess Hills & Loess Canyons
- 394 million trees; 44 million dry tons woody biomass; 2 billion cubic feet
- Sustained yield of a renewable resource
 - Net growth = 22 million cubic feet/year (60% cottonwood)
 - Using/clearing 14 million cu ft/yr
 - Thus, we are growing 8 million cu ft (120,000 tons) more than we use, every year
- Over 50% of growing stock in poor quality trees (a biomass opportunity)
- 2,200 wood product industry related jobs with output of \$286 million



5/14/2013

Nebraska Riparian Forests

- 1.1 million acres of riparian forest (>70% of all NE forest)
- Cottonwood, ash, cedar major components
- Increasing cedar component
- Increasing in area (conversion from ag land to forests- natural and planted)



4

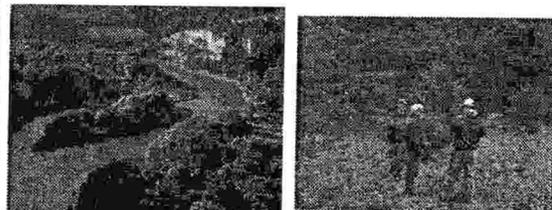
Republican River Forests



5/14/2013

5

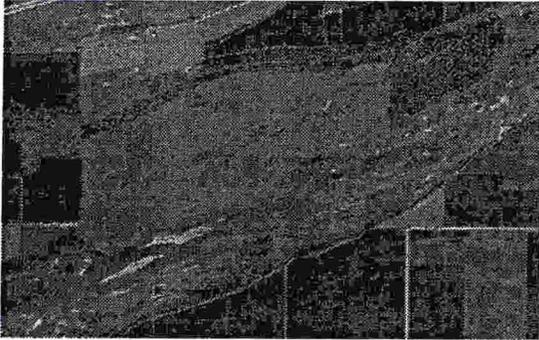
Niobrara River Forests



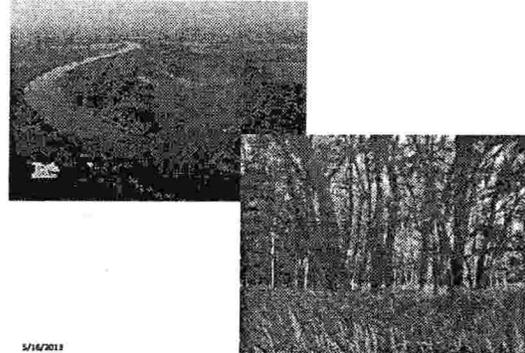
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6

Platte River Forests



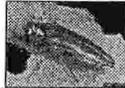
Missouri River Forests



5/14/2013

Issues Affecting Riparian Forests

- 2011 Floods – 26,000 acres of Missouri River bottomland forests inundated for 4 months – extensive tree mortality
- Emerald Ash Borer: Over 44 million ash trees at risk statewide, most are in riparian forests
- Increasing cedar and Russian olive component
 - Increasing fire risk
 - Changes in native forest structure and function
 - Impacts on wildlife habitat
- Clearing and pile burning for enhanced crane habitat



5/16/2013

Riparian Forest Utilization Opportunities

Remember, we are growing 8 million cu ft (120,000 tons) more wood than we use, each and every year

5/16/2013

10

Current Demand for Woody Biomass

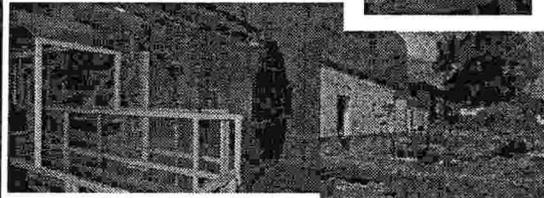
- NCTA-Curtis (1,200 tons)
- Chadron State College (9,000 tons)
- Lied Lodge (Nebraska City) (3,500 tons)
- Alfalfa pellet mill driers (~15,000 tons)
- Arbor America (3,200 tons)
- NW Missouri State University (13,500 tons)
- Wood pellets (Horizon biofuels)
- Urban tree care companies—garden mulch
- Livestock pet bedding (Gentle Touch, Elkhorn, American Wood Fiber...)
- Sawmills (Meyer, S. Sioux City, Trade Well,...)

7/18/2011

11

Institutional Heating & Cooling Using Wood Fired Boilers

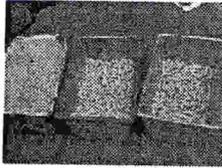
- Chadron State College
- Nebraska College of Technical Agriculture
- Arbor Day Lodge



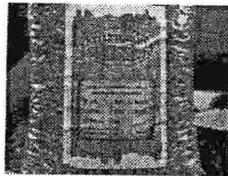
5/16/2013

NCTA Biomass Facility Construction

Wood Pellets



Pellet Types



Horizon Biofuels,
Fremont, NE

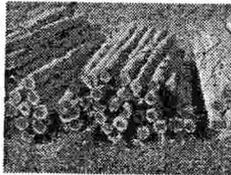
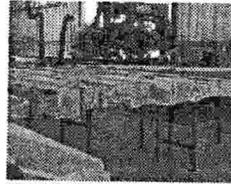
Near Full Load
Pellets are Heavy



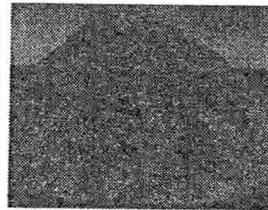
5/16/2013

13

Eastern Redcedar & Cottonwood Products



Chips and Shredded Wood



Cedar Shreds (produced with tub grinder)

Uses:

- Garden Mulch-Landscaping
- Wood Boiler Fuel for Heat
- Wood boiler Fuel for Electricity
- Alfalfa Dehydrator
- Hazmat Cleanup



Cleaner Chips (used in a boiler)

5/16/2013

16

Shavings

- Pets
- Livestock
- Poultry



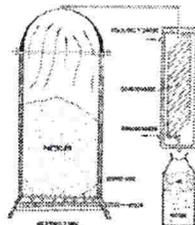
American Wood Fiber Shavings

5/16/2013

15

Selling the Smell

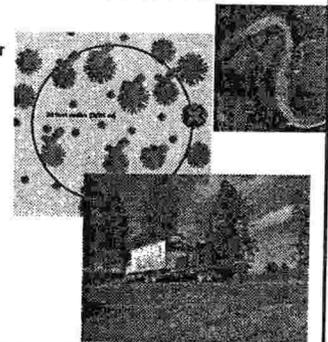
- Eastern redcedar oil is distilled from foliage & heartwood
- Pure oil sells for \$65/quart
- \$5.10/lb wholesale
- 1-3% of the material is oil
- 10T/A yields 200 lbs of oil
- 200 *\$5.10=\$ 1,020/acre



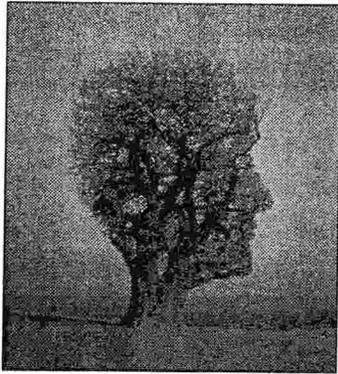
17

Marketing & Utilization Activities of the Nebraska Forest Service

- Provide cost-share funding for biomass utilization feasibility studies
- Conducting statewide inventories of forest & biomass volume
- Help users locate and secure sources of biomass supply
- Facilitate development of new consumers or processors of woody biomass
- Working to foster profitable uses of eastern redcedar



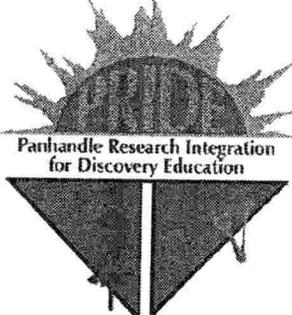
5/16/2013



Questions?

Scott J. Josiah
Nebraska Forest Service
102 Forestry Hall, UNL E. Campus
Lincoln, NE 68583-0815
Email: sjosiah2@unl.edu
402-472-1467

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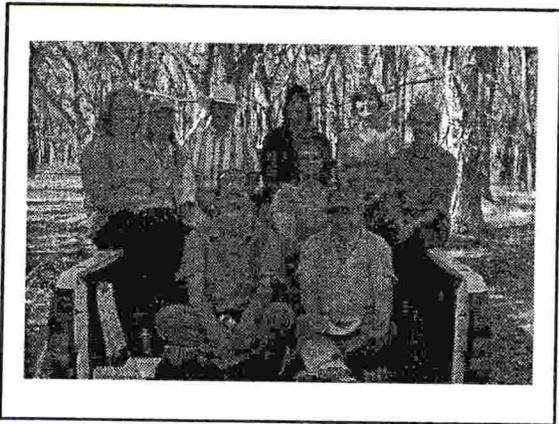
Panhandle Research Integration
for Discovery Education

Update for the Nebraska
Riparian Task Force Committee
April 19, 2012

Started in 1998, first WMA in Nebraska
Box Butte, Dawes and Sheridan Counties

PRIDE's Mission Statement

PRIDE serves as a cornerstone to build and maintain partnerships between the many cooperators in invasive weed management and education. With this collaborative effort a more efficient and successful approach to invasive weed management and awareness is achieved. PRIDE's efforts in pooling of funds and resources from contributors will result in a compounding of investments and rewards.



Ash Creek Project
3 Years of National Fish & Wildlife's
Pulling Together Initiative Funding for
PRIDE's Ash Creek WMA combined for a
total of \$189,000 over the 3 years.








2006-2008 NRCS Grazing Lands Conservation
Initiative Grant (3 years \$150,000)

Nebraska Department of Agriculture (Environmental Trust) Grants



2009 Russian Olive Removal Project

Partnered with Sandhills Task Force, NE Game & Parks, and Rocky Mountain Bird Observatory

Nebraska Department of Agriculture (Environmental Trust) Grants



2010 Your Trash Is NOT My Treasure

Take PRIDE In your compost, no noxious weeds or seeds in this dumpster

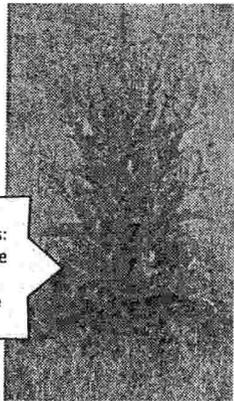
2011 Grant Projects:

NDA Grant: Riparian Habitat Recovery through Invasive Weed Control
Award: \$15,500

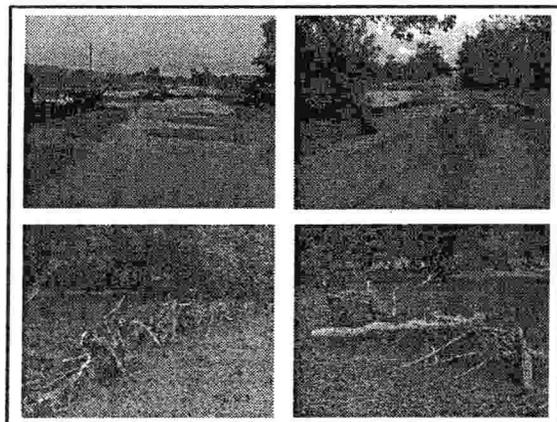
Nebraska Academy of Sciences PIE Grant: Scotch Thistle and Houndstongue Control
Award: \$2000

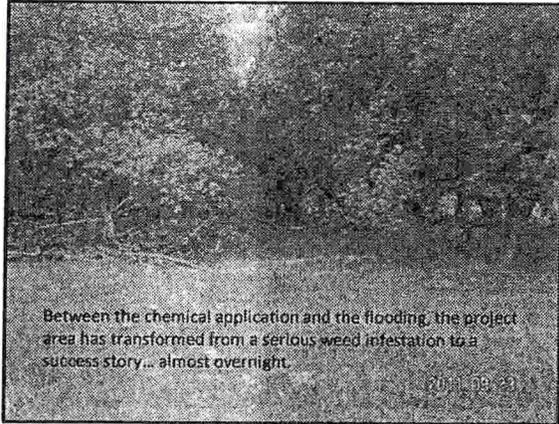


Target Species:
Houndstongue
&
Scotch thistle



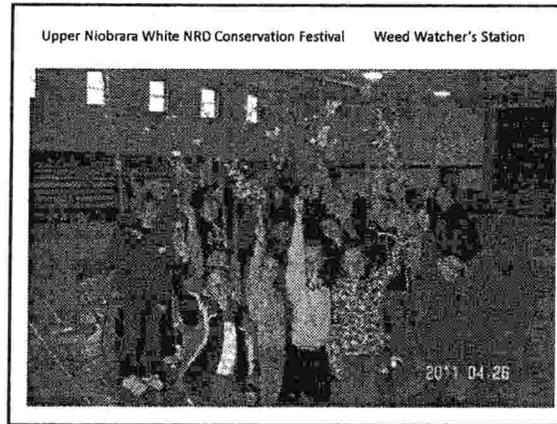
Jason Rust, Midwest Vegetation





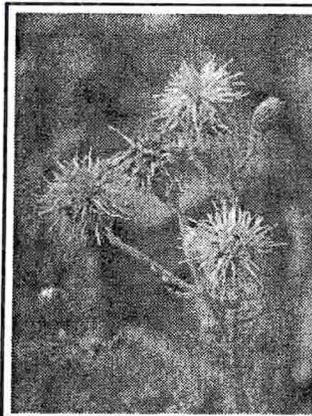
Between the chemical application and the flooding, the project area has transformed from a serious weed infestation to a success story... almost overnight.

7/11/09 23



Upper Niobrara White NRD Conservation Festival Weed Watcher's Station

2011 04 26



Noxious Weed ID & Weed Free Forage in Nebraska

Weeds 101



Missouri River Watershed Coalition

Restoring Invasive Species Sightings Using the MRC's Early Detection and Observation Mapping System (EDDO)

What is EDDO?
In September 2008 the Missouri River Watershed Coalition (MRC) launched the Early Detection and Observation Mapping System (EDDO). This system provides a central location for reporting sightings of invasive species, a database of sightings, and a mapping tool to help identify and track the spread of invasive species.

How does EDDO work?
EDDO is a web-based system that allows users to report sightings of invasive species. The system uses a combination of satellite imagery and ground truthing to identify and track the spread of invasive species. The system is designed to be user-friendly and easy to use.

Why is EDDO important?
EDDO is an important tool for the MRC and its partners. It allows us to quickly identify and track the spread of invasive species, which is critical for our conservation efforts. The system is also a valuable resource for the public, as it allows them to report sightings and help us protect our natural resources.

How can I use EDDO?
You can use EDDO to report sightings of invasive species, view a map of sightings, and receive alerts about new sightings in your area. To use EDDO, you need to create an account and log in to the system.

For more information, visit our website at www.mrc-ne.org.

EDDMaps Smart Phone and Android Mapping System

Map weed infestations Out in the field Right from your phone

Funding from:
PRIDE
Sandhills
Twin Valley
Platte Valley
MNWAG

THANK YOU!

Current Projects for PRIDE (NDA Grant Early 2012)

Expand Riparian Habitat Improvement Through Noxious Weed Control




Continue spraying with focus on houndstongue and Scotch thistle along riparian areas in Box Butte, Dawes and Sheridan Counties



The Weed Watch

Are You a Weeder Hero?

The Weed Watch

Started in 2003, 4 counties, 16,000 copies

The Weed Watch

PRIDE is an excellent local resource for information on the latest in weed control. The newsletter is available in both print and digital formats. To receive a copy, visit our website at www.mrc-ne.org.

Fall Weed Control = Successful Weed Control

As the leaves begin to fall, it's time to start thinking about weed control. This is a critical time to identify and control weeds before they go to seed. For more information, visit our website at www.mrc-ne.org.

Teaming Together for Invasive Weed Awareness (Early 2012 NDA Grant)

Spring 2012 Edition of The Weed Watch
 6 Weed Management Areas
 48 Counties
 98,000 Households

PRIDE Receives National Award

National Invasive Species Awareness Week, Washington D.C.

Nation-wide Award "Outstanding Partner for Invasive Species Education and Awareness"
 Presented to Lora O'Rourke by Chief of Forest Service Tom Tidwell

PRIDE's future?

Projects

Funds

Partners

Panhandle Research Integration
 for Discovery Education

WORKING TOGETHER WORKS!
 MAKING THEM TOGETHER WORKS!

E

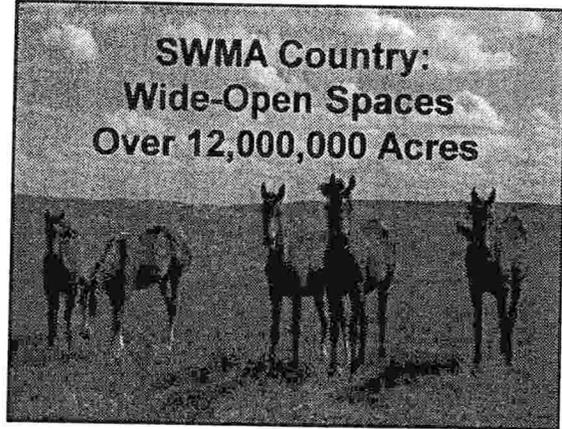
Sandhills Weed Management Area (SWMA)

Formed 2006

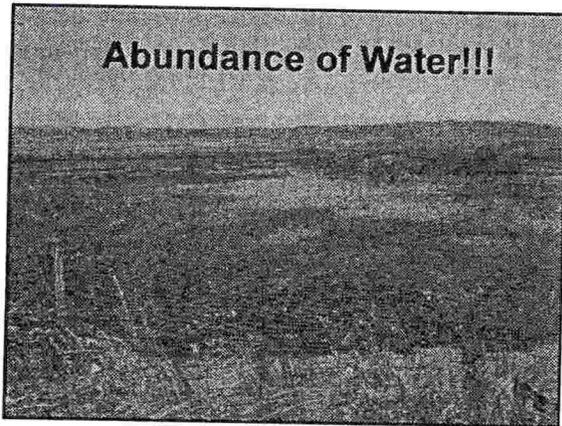
Mission Statement:

"We will form partnerships to control the spread of noxious and invasive species in the Sandhills Weed Management Area."

SWMA Country:
Wide-Open Spaces
Over 12,000,000 Acres



Abundance of Water!!!



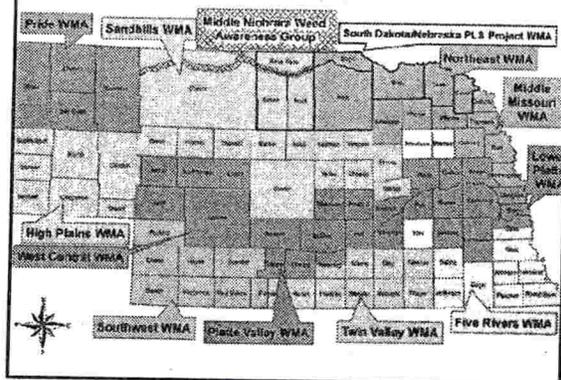
JD SAYS:

"With our wetlands, rivers and intact habitat, we are the most important weed management area in the state."

JD Also Says:

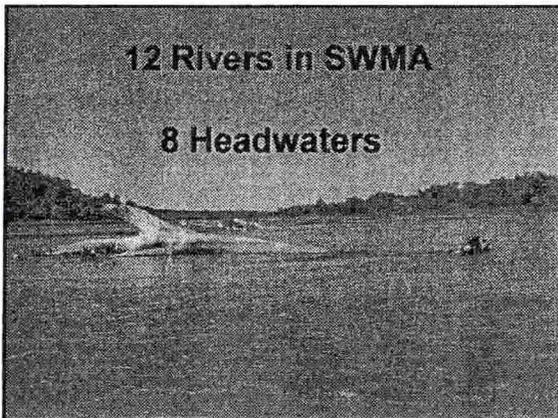
"If we don't take Early Detection and Rapid Response seriously NOW, the Sandhills will end up like the Platte River!"

Nebraska Weed Management Areas

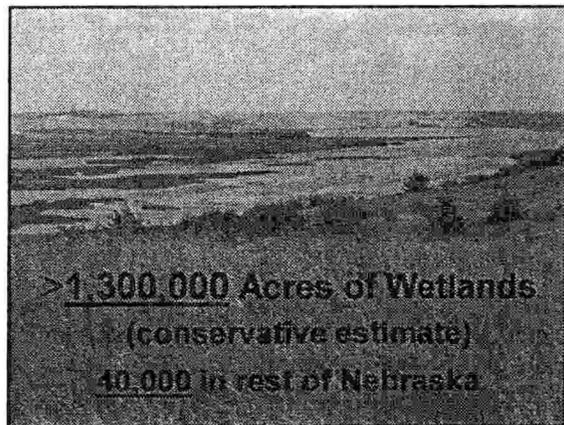
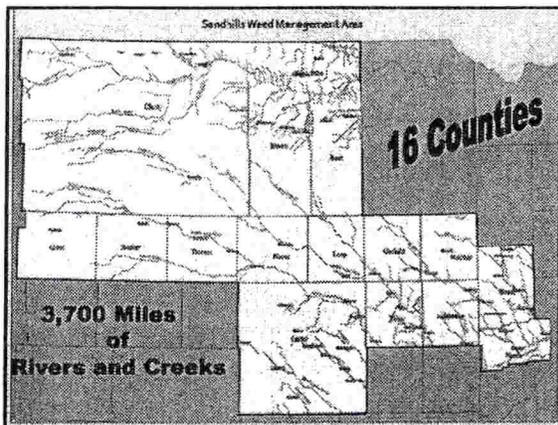


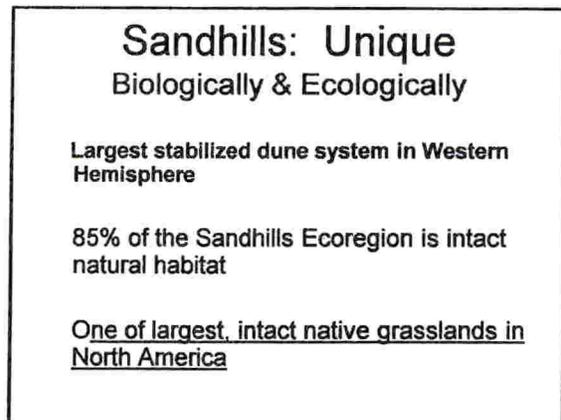
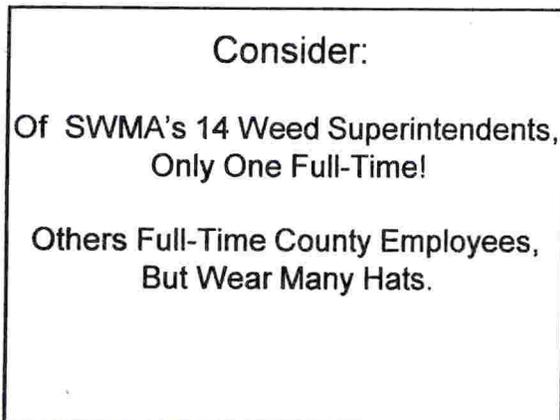
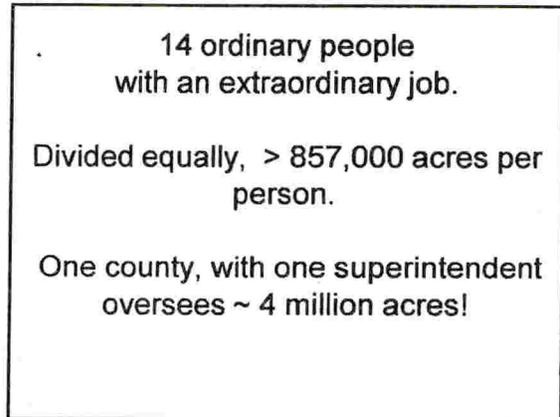
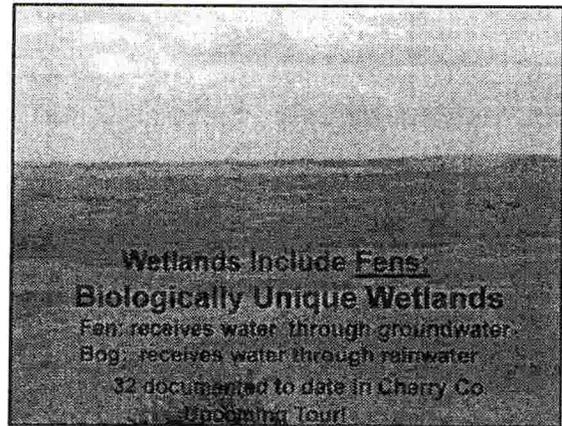


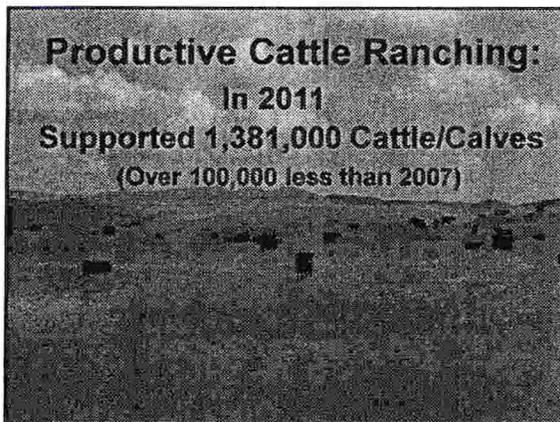
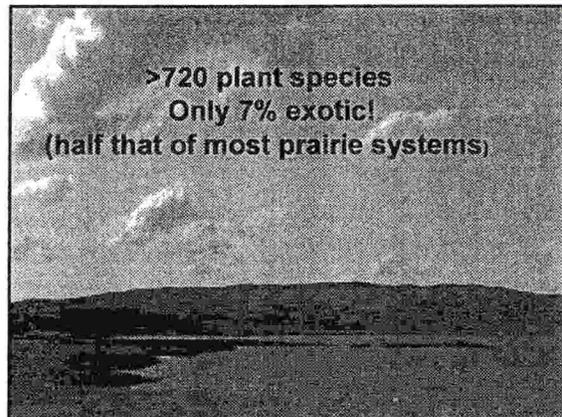
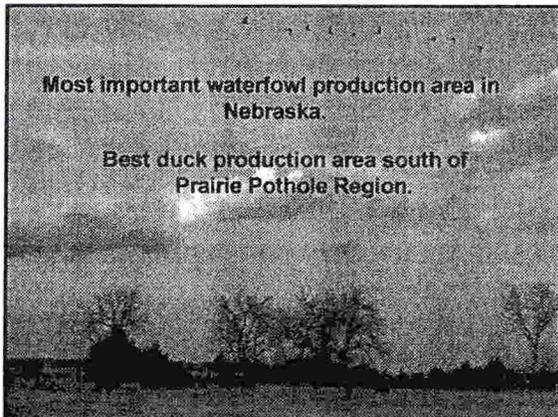
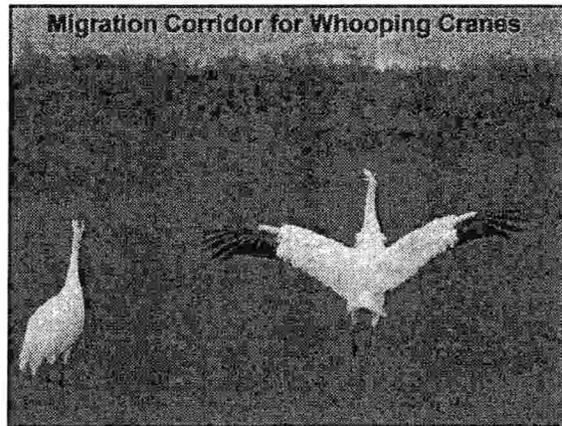
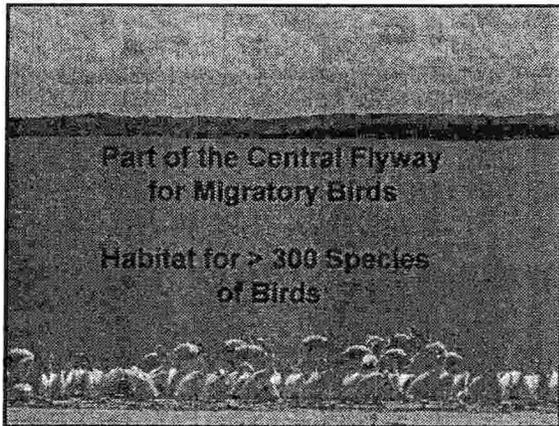
- ### Six Natural Resource Districts in SWMA :
- > Middle Niobrara
 - > Lower Niobrara
 - > Upper Elkhorn
 - > Upper Loup
 - > Lower Loup
 - > Central Platte



- | | |
|---|---|
| <u>Rivers:</u> | <u>Eight Headwaters:</u> |
| <ul style="list-style-type: none"> · Niobrara > Snake > Calamus > Elkhorn > Keya Paha > North Loup > Middle Loup > South Loup > Loup > Dismal > Cedar > Wood | <ul style="list-style-type: none"> Snake Calamus Elkhorn North Loup Middle Loup Dismal Cedar Wood |

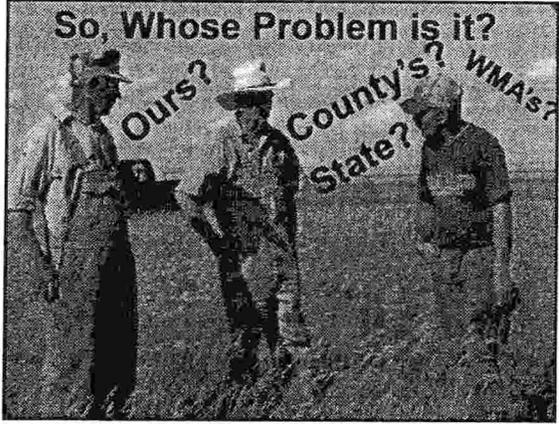
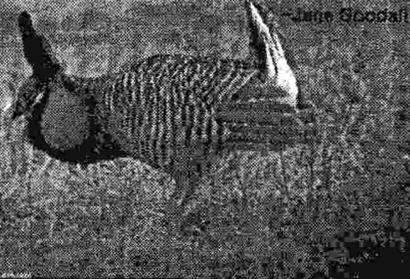




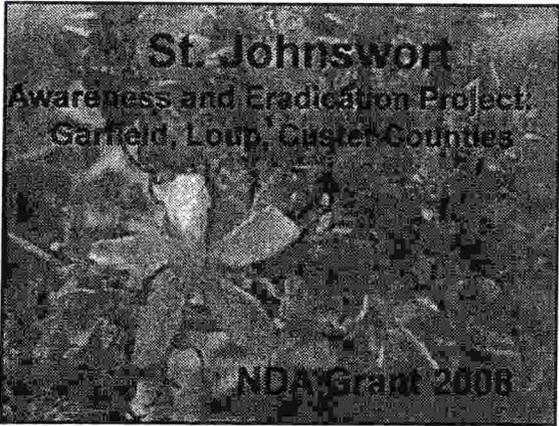
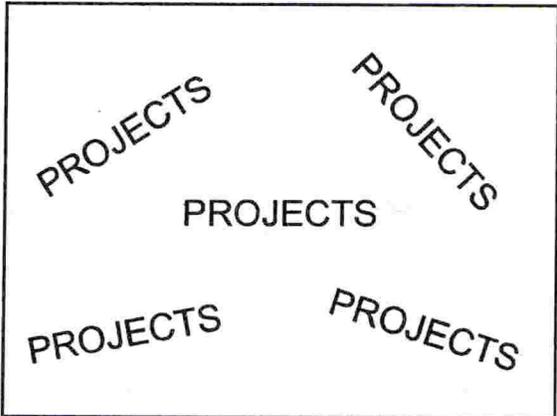


**SO JD IS RIGHT!!!
The SWMA Area
Is Extremely
Important,
For Many Reasons!**

"Compared to other places I've seen, there is a lot of remaining habitat for wildlife in Nebraska. Nebraskans have a great opportunity to protect places like the Sandhills."

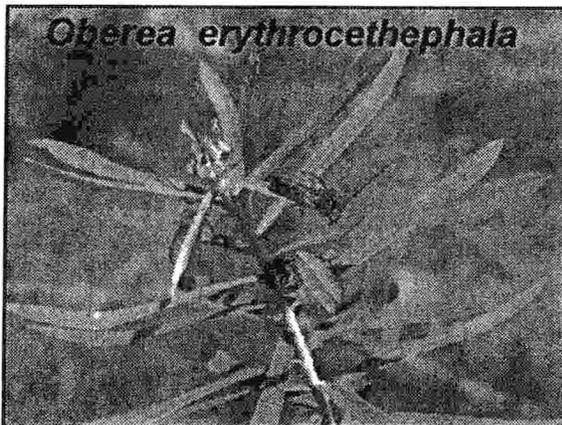
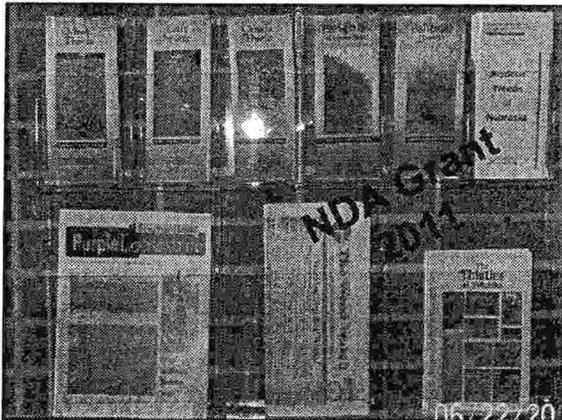


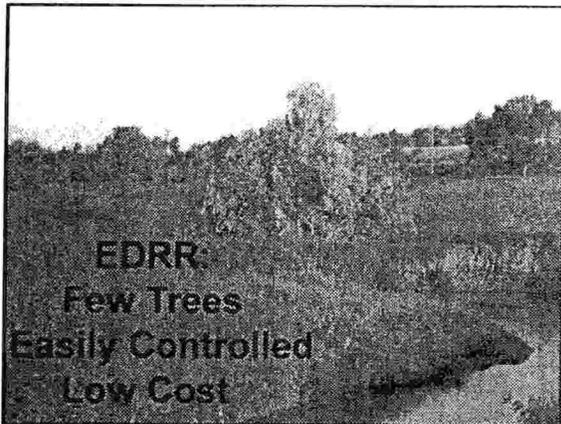
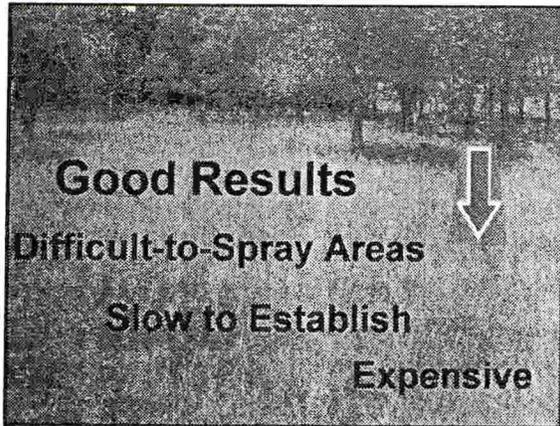
- SWMA's Partners: Landowners +**
- > Lower Loup NRD
 - > Loup Basin RC&D
 - > Nebraska Department of Agriculture (NDA)
 - > Nebraska Environmental Trust (NET)
 - > Nebraska Forest Service
 - > Nebraska Game and Parks
 - > Sandhills Task Force
 - > U.S. Fish and Wildlife Service (USFW)
 - > U.S. Department of Agriculture Forest Service
 - > Other Weed Management Areas: Platte Valley, Pride, Middle Niobrara

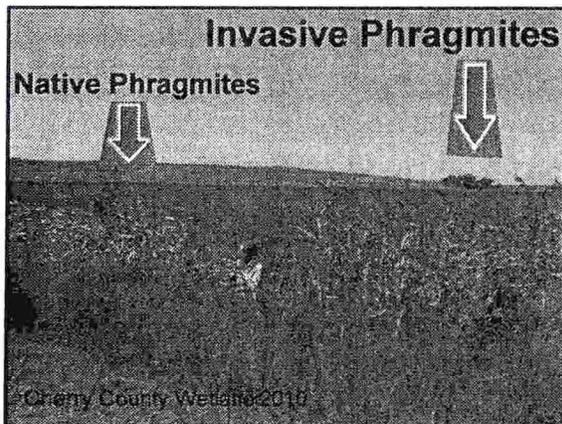


"The Weed Watch is a great publication that provides a much needed forum to discuss invasive species. . . overall I have found the Weed Watch to be very readable and diverse."

-Kyle Graham
U.S. Fish & Wildlife Service







**Nebraska National Forest
Service Grants:
Blaine, Cherry, Thomas**

Since Inception, SWMA has treated:

- Over 12,000 acres of Leafy Spurge
- Over 200 acres of Canada Thistle
- Over 100 acres of Purple Loosestrife

“...SWMA is doing fantastic work.”

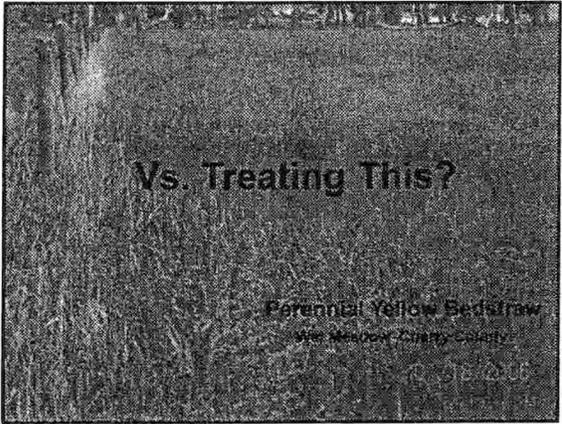
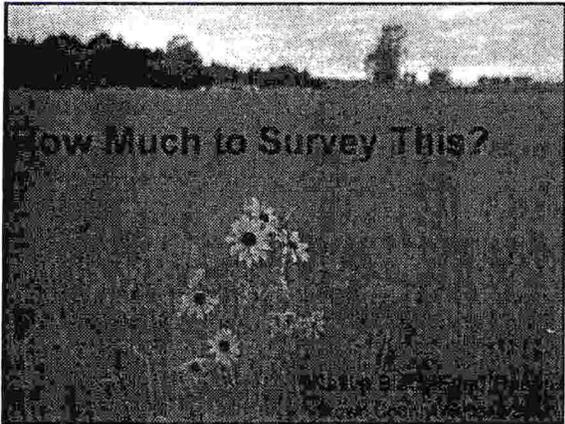
~Lora Hawkins O'Rourke
Rangeland Management Specialist
Nebraska National Forest

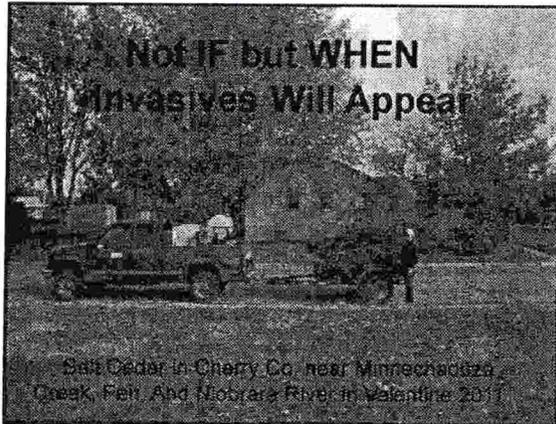
**Helicopter Surveys
for
Noxious and Invasive Species:
Loup River 2010
Cedar & Calamus Rivers 2011**

- Partnered with Lower Loup NRD
- Platte Valley Weed Management Area
- Middle Niobrara Weed Management Area

“The Sandhills is a unique environment that deserves constant attention to protect its natural resources from noxious and invasive plants. Building these partnerships will ensure that . . . SWMA will accomplish long-lasting goals .”

~Mitch Coffin
Noxious Weed Program Mgr.
Nebraska Dept. of Agriculture



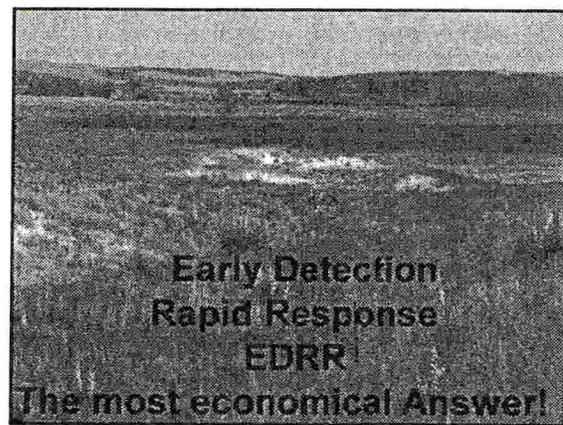


JD Says

"Our million + acres of wetlands and
3,700 + miles of river and creeks
(double that) are
PRIME HABITAT
for
purple loosestrife and invasive phragmites!"

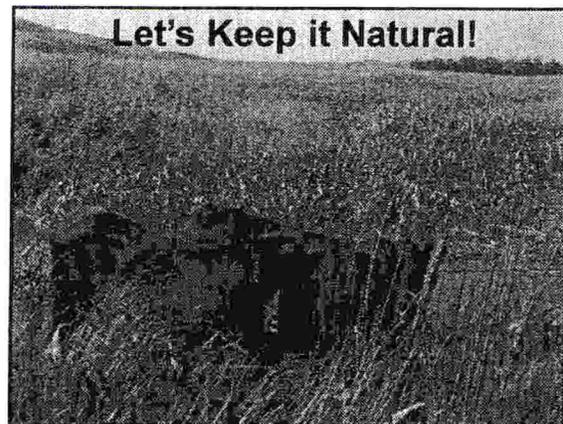
We Need Funding For:

- > EDRR surveys
- > Equipment such as amphibious vehicles
- > Helicopter applicators
- > Greater work force (field, grant writing, administrative. . . .)
- > Stable, centrally located headquarters
- > Education (general public, landowners, weed boards, commissioners, policy makers)



". . . losses to the American economy due to . . . invasive plants are now at least \$50 billion per year."

What Will Be the Cost in SWMA?



References

Westbrooks, R. and C.Bageron. 2011. Invasive Plants Coming to America: New Strategies for Early Detection and Rapid Response to Invasive Plants in the United States. Fact Sheet. USGS, Whiteville, NC, and U.G.A. EDDMapS, Tifton, GA.
URL: <http://www.eddmaps.org/workshops/GeneralOverview.pdf>

Nebraska Game and Parks Commission 2001. <http://os.dco.nebraska.gov/sandhills/programs/education/lectures/7.pdf>

Nebraska Game and Parks Commission 2003. Electronic Dockets comments to the Environmental Protection Agency. URL: <http://www.nzap.state.ne.us>

Nebraska Game and Parks Commission 2001. <http://www.communityfish.org/nebraska1.pdf>

Nobrara National Scenic River Interpretive Plan. <http://www.nra.gov/sites/default/files/2-30-10-NRIS-IRIP-Letters.pdf>

Steinuer, Rolfemeier, Steven, Hardy 1996. "Inventory and Floristics of Sandhills Fens in Cherry County, Nebraska". Transactions of the Nebraska Academy of Sciences and Affiliated Societies Paper 86. <http://digitalcommons.unl.edu/nraas86>

Cattle/Calves Production in Nebraska, 2011 USDA National Agricultural Statistics Service. <http://www.nass.usda.gov>

Barbara Good-Smail, Cherry Co. Weed Superintendent. bgood@inebraska.com

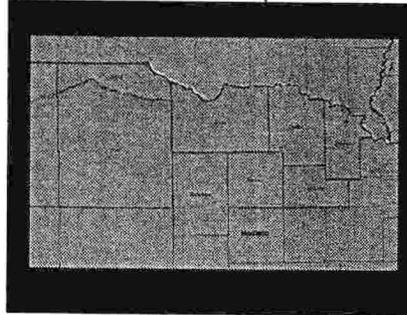
www.sandhillswma.org

F

Northeast Nebraska Weed Management Area

By Lucas Negus, Nebraska Game and Parks Commission
Chair-Northeast Nebraska WMA

Area Map



Initiated April 19, 2004

- > Boyd, Antelope, Cedar, Dixon, Knox, Holt, Pierce, & Wayne County Weed Authorities & counties
- > Nebraska Department of Agriculture
- > National Park Service
- > Lower Elkhorn, Upper Elkhorn, Lewis & Clark, & Lower Niobrara Natural Resource Districts
- > Nebraska Game & Parks Commission
- > Santee Sioux Nation
- > Ponca Tribe of Nebraska
- > Bureau of Indian Affairs
- > Corps of Engineers
- > Northeast Nebraska RC&D Council
- > Nebraska Forest Service
- > APHIS
- > Natural Resources Conservation Service
- > Missouri River Futures Coalition
- > SD/NE Purple Loosestrife Project

Land Cover Data

- > 318,751 acres of water or wetlands (7%)
 - Missouri, Niobrara, and Elkhorn Rivers
 - 98 miles of Missouri and 20 miles of Niobrara Nat'l Recreational River
 - Highly susceptible to infestations of Saltcedar & Purple Loosestrife
- > 2,020,642 acres are grasslands or pastures (44%)
 - Commonly infested with Leafy Spurge, Spotted Knapweed or Canada thistle

Threatened & Endangered Species

- > Interior least tern
- > Piping plover
- > Bald eagle
- > Western prairie fringed orchid
- > Whooping crane
- > Topeka shiner
- > American burying beetle
- > Pallid sturgeon
- > In addition
 - hundreds of native grass, flower, & wildlife species will have the opportunity to restore wetland & grassland habitats

Critical Habitat

- > Emergent sandbars in Niobrara and Missouri River systems provide needed nesting & rearing habitat for federally endangered interior least tern and federally threatened piping plover
- > These sandbar habitats are threatened by exotic vegetation encroachment, specifically purple loosestrife & tamarisk

Funding

Funder	Date	Grant Award	Matching Contributions
National Fish & Wildlife Foundation - Pulling Together Initiative #1	2006	\$32,674	\$69,046
National Fish & Wildlife Foundation - Pulling Together Initiative #2	2007	\$49,500	\$34,151
Nebraska Environmental Trust Fund #1	2008	\$30,000	\$28,000
NE Department of Ag	2008	\$11,900	\$6,000
Nebraska Environmental Trust Fund #1	2009	\$25,000	\$28,000
Nebraska Environmental Trust Fund #1	2010	\$25,000	\$28,000
NE Department of Ag	2011	\$1,870	\$1,870
Nebraska Environmental Trust Fund #2	2012-2014	\$70,000	\$75,000
Total		\$265,894	\$290,069

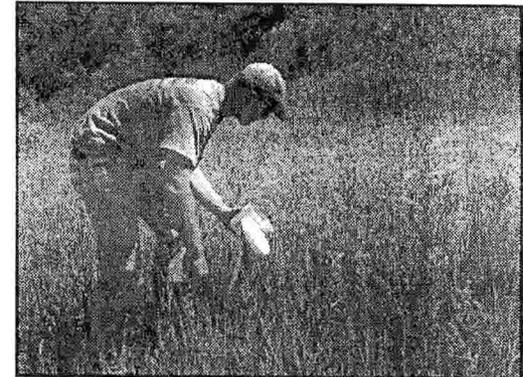
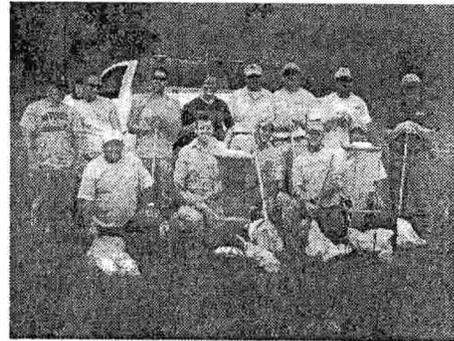
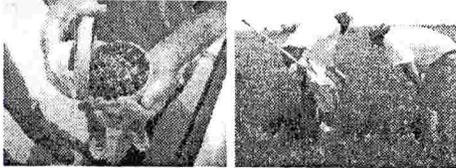
Accomplishments 2005-2011

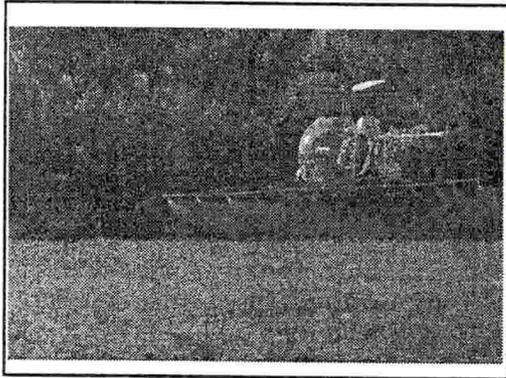
- 515 releases of purchased bio-control insects on Leafy Spurge
 - Millions swept and relocated
- 35 releases of purchased bio-control insects on Purple Loosestrife
 - Many millions swept and relocated or purchased by SD/NE PLS Group
- 182 releases of purchased bio-control insects on Canada Thistle
- 264 releases of purchased bio-control on Spotted Knapweed

Accomplishments 2005-2011

- Salt Cedar Search and Destroy
- Over 2000 acres sprayed by boat or aurally on Missouri and Niobrara Rivers
- 2 Landowner education days held every year – 1 in summer and 1 in winter
- Mapping of bio-control release sites
- Niobrara Public Schools wins National Awards

Releasing & Monitoring Biocontrol Agents



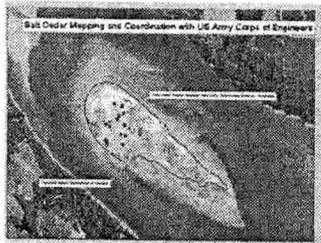


Present Activities

- > NETF Grant received for Aerial detection and mapping on river systems, bio-control, and educational activities
- > Historic flooding on Niobrara and Elkhorn Rivers in 2010 and Missouri in 2011 has set us back – a lot!
- > Difficult predict what we will encounter and need for funding

Needs

- > \$\$\$\$\$ - The more Fluid the better
- > Coordinator
- > Crystal Ball



For More Information

Lucas Negus, NNWMA Chair
 Nebraska Game and Parks Commission
 86502 Grove Lake Rd
 Royal, NE 68773
 402-893-2559
Lucas.negus@nebraska.gov

G

MIDDLE MISSOURI VALLEY WEED MANAGEMENT AREA

CHARLES:

DUE TO OTHER OBLIGATIONS I WILL NOT BE ABLE TO ATTEND THE TASK FORCE MEETING ON THURSDAY. OUR WEED MANAGEMENT AREA HAD OUR MONTHLY MEETING AND DISCUSSED HOW WE COULD HELP BENEFIT THE TASK FORCE .WE HAVE STARTED WORKING WITH THE B.I.A. ON THE *Bureau of Indian Affairs* RESERVATIONS. AND WE ARE WORKING WITH THEM ON THEIR GARLIC MUSTARD PROBLEM.OUR PROBLEM THIS SUMMER WILL BE WITH OUR FLOODED RIVER GROUNDS.THE PURPLE LOOSESTRIFE WILL OUR MAIN CONCERN.OUR GROUPS SUGGESTION ON NEEDS FROM THE TASK FORCE WOULD BE MONEY TO BUY CHEMICALS TO FIGHT THESE NOXIOUS WEEDS.WE WILL MONITOR THIS OVER THE NEXT YEAR AND SEE HOW IT DEVELOPS. AGAIN, SORRY I COULD NOT BE PRESENT .



SINCERELY

Mike Smith
MIKE SMITH

Minutes
Middle Missouri Valley Weed Management Area
Monthly Meeting 4-18-12

The April Monthly Meeting of the Middle Missouri Valley Weed Management Area was called to order by President Mike Smith at 10:02 AM on Wednesday, 4/18/12 at the USDA Service Center in Walthill.

Those present were: Mike Smith, President (Washington County); Leon Pies, Treasurer (Dakota County); Mark Heckenlaible, Secretary (Thurston County); Jason McCauley (Winnebago Agency, Bureau of Indian Affairs); and Justin McCauley (Winnebago Agency, Bureau of Indian Affairs). Also present was: Kent Neumann (NRCS - Walthill). Absent were: Stan Voskamp, 1st Vice President (Cumming County); Lew McNear, 2nd VP (Burt County); and Dave Boschult (Ag Inspection Specialist - Neligh). Jason hosted. Mark made a motion, seconded by Leon to approve the agenda as presented. Motion carried.

Minutes: The Minutes from the 3-21-12 meeting were passed out for review. Leon made a motion to approve the minutes as presented, seconded by Jason. Motion carried.

Treasurer's Report: Leon Pies gave the Treasurer's Report. The Weed Management Area had a March 31, 2012 ending balance of \$24.86. For the month of March, there was no income nor were there any expenses. Motion by Jason and seconded by Mark to accept the Treasurer's Report. Motion carried.

Training / Upcoming Schedule:

- **Spring Training at Hastings:** Those who attended felt this was a very good session. Christy Burke, Ag Inspector, is resigning and will be moving to Montana. Her position will be filled. Counting Christy, there are currently 3 State Inspectors.
- **October 16 – 17:** Fall Training at Hastings
Weed Superintendent's need 20 hours of Continuing Education each year. They are also required to attend at least two State-wide meetings.

Old Business:

- **Power Point:** The person in Omaha who was going to convert the PowerPoint presentation to a DVD is no longer answering calls or e-mails. We'll need to find a new person to do this work for us. When the new Executive Director for the Nebraska Loess Hills RC&D takes over, we'll ask her to make this her first project to work on.
- **Garlic Mustard:** Jason invited everyone to join the BIA for the Garlic Mustard Field Day. A tentative date of Tuesday May 15 has been set. Everyone will meet at the BIA at about 9:00 and caravan from there. Bring your own lunch and wear an orange vest. We'll be doing a lot of walking in timbered areas, so wear appropriate clothing. Jason is expecting about 20 people to attend. We should also be aware that American Ginseng also inhabits the same areas that Garlic Mustard does. American Ginseng is listed as a State Species of Concern and this will limit what treatments are available for Garlic Mustard. Hand-pulling seems to be the most viable option. Hundreds of acres of Missouri River Wooded Bluffs could be infested between Ponca State Park and Indian Cave State Park.

New Business:

- **State-wide Weed Management Area:** Mike reported that the Riparian Vegetation Management Task Force is looking into creating a State-wide Weed Management group. They are hosting a meeting in Grand Island tomorrow at the Central Platte NRD. Each WMA has been asked to attend or to send in a report. Mike will fax or e-mail a report to them from our WMA.