

**Riparian Vegetation Management Task Force
Annual Report
June 30, 2018**

(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 river basins. The passage of LB 1038 by the Nebraska Unicameral on April 12, 2016, and signed into law by Governor Pete Ricketts on April 18, 2016, created the framework for the Task Force to address the riparian needs of the state and continue the efforts started by LB 701 by the Nebraska Unicameral on April 26, 2007.

Sections 3 and 4 of the legislative bill addressed the requirements for the Task Force, including the requirement for an annual report. An annual report shall be submitted to the Governor and the Legislature by June 30 each year with the first report due on June 30, 2017. The report submitted to the Legislature shall be submitted electronically. Sections 1 and 2 of the legislation created a separate grant program for management of riparian vegetation and tasked the Nebraska Department of Agriculture (NDA) with management of this program.

During the course of the Task Force’s existence, the group has met six times.

Meeting dates and locations:

March 8, 2017.....	Kearney, Nebraska
May 31, 2017.....	Alda, Nebraska
July 27, 2017.....	Chadron, Nebraska
October 5, 2017.....	Waterloo, Nebraska
January 25, 2018.....	Lincoln, Nebraska
March 8, 2018.....	Ainsworth, Nebraska

Seven work groups were created during the May 2017 meeting to assist the Task Force in identifying the fundamental needs to carry out the goals and objectives of the legislation. These groups will solicit input from non-Task Force members. However, any recommendations will be delivered by the Task Force.

The work groups include:

- Goals, Objectives and Reports
- Vegetation Management and Treatment
- Survey and Monitoring
- Education and Awareness

- Funding and Incentives
- Streambed Ownership
- Vegetation Water Use

Work Groups

Task Force Goals, Objectives and Reports Work Group

LB 1038 states the task force shall develop and prioritize riparian vegetation management goals and objectives, analyze the cost effectiveness of available vegetative treatment and develop plans and policies to achieve such goals and objectives. It further states an annual report shall be submitted to the Governor and Legislature by June 30, of each year with the first report due on June 30, 2017.

Actions –

1. Develop recommendations on vegetation management goals, objectives and priorities.
2. Recommend the content of preliminary recommendations and final report to the Governor and legislature, and
3. Provide guidance on preparation of the preliminary recommendations and final report utilizing the inputs of the other work groups and the task force.

Members – Don Kraus, Mark Czaplewski, Pat O'Brien

Vegetative Management and Treatment Work Group

This work group should determine what vegetative management actions are needed to meet the vegetation management goals and objectives.

Actions -

1. Recommend proactive management and control strategies using the adaptive management approach that utilizes the best techniques currently available.
2. Estimated cost for initial and follow-up control, removal and management.
3. Analyze cost effectiveness of control, removal and management options.
4. Develop Templates and Protocols for Control, Revegetation and Rehabilitation, Monitoring and/or long term Management and Maintenance.

Members – John Erixson, Game & Parks, Tala Awada, Rich Tesar, Kevin Adams, (Ritch Nelson NRCS), (TJ Walker G&P)

Survey and Monitoring Work Group

Identifying the extent and location of invasive plant problems is essential for effective planning. It is also important to monitor, document and evaluate the control and management efforts. This is key in the use of an adaptive management approach.

Actions –

1. Summarize past and current management and control efforts.
2. Evaluate past and current management and control efforts.
3. Identify the extent and location of invasive vegetation using available information.
4. Recommend a system for on-going survey and monitoring of management and control efforts.

Members – Rich Tesar, Rod Ely, Forest Service, Game & Parks, Brent Meyer, Kevin Adams, Larry Heyden, (Dave Tunink G&P)

Education and Awareness Work Group

Since almost all the riparian areas and streambeds are privately owned, riparian vegetation management is dependent upon aware and receptive landowners. A riparian vegetation management plan will not get accomplished without the awareness and commitment of the landowners and the public. It is critical that we have an aggressive education and awareness campaign about the importance of riparian areas and the increasing impacts of invasive plants on these areas. It is essential that the riparian landowners, the general public and decision makers be aware of the need for riparian vegetation management and supports it. They need to be kept informed of task force activities and have a chance for input.

There are many invasive plant information and education activities by numerous groups, but there is no overall plan, campaign or directed effort that identifies target audiences and desired end results utilizing all appropriate strategies, combines and coordinates efforts of all potential partners, or fully utilizes professional information and education specialists.

Actions –

1. Provide recommendations on how to keep public informed of task force activities and a framework for public input.
2. Review current invasive plant information and education activities.
3. Recommend a framework for a coordinated information and education campaign.

Members – Ryan Chapman, Mike Sarchet, Rod Ely, Rod Imm, Brent Meyer, Gloria Erickson, (Bob Wilson UNL), (Ericka Hall NARD)

Funding and Incentive Program Work Group

As indicated in the background information for the Streambed Ownership Work Group the riparian owners own to the center of the stream in all rivers. Most of these owners are not taxed on the streambed and are not receiving any income from this land. There are other owners that are receiving some economic return or are receiving some beneficial use such as recreational, hunting; fishing or it is being managed by public and private interests for the benefit of wildlife, endangered species, plant diversity or natural areas. There is an increasing demand for purchasing stream beds for recreation, hunting and fishing. While all owners (public and private) are responsible for the control of state designated noxious weeds.

Actions –

1. Determine if funding is needed to provide incentives, support and assistance to accelerate control, removal and management efforts where there are public benefits.
2. Determine the potential federal, state and local sources of funding of incentive programs.
3. Determine funding needs.
4. Make recommendations as to state and other funding needs.

Members – Mike Sarchet, Matt Lukaszewicz, Arden Wohlers

Streambed Ownership Work Group

The State of Nebraska State Surveyor Instruction 91-1, January 18, 1991 states “The decisions of the Court in Nebraska have been quite clear and consistent that the riparian owners own to the center of the stream in all rivers, without regard to navigability, in Nebraska. Court decisions alternately use the terms “centerline of the stream”, “thread of the stream”, center of the channel” and “thalweg.” These instructions provide guidance to the surveyor in dealing with these terms and using “other more reliable and permanent methods to determine the limits of the ownership of the beds of rivers.” Steve Cobb, Nebraska State Surveyor’s Office stated that it would be helpful if state legislation was changed to provide a clear understanding of permanent boundaries in riparian areas.

Nebraska County Assessors are to maintain cadastral data and maps for the purpose of assessing property. These data and maps are in different stages of currency in counties as it relates to riparian ownership. Many stream beds have been considered waste land and have not been taxed and the ownership boundaries are not current or even identified. There is an increasing demand for purchasing stream beds. This requires that boundaries be determined so the land can be sold. As stream beds are determined to have value they can be assessed and property taxes collected. Clearly identified stream bed ownership is also important to determine responsibilities for controlling riparian noxious weeds, purple loosestrife, saltcedar and phragmites.

Actions –

1. Determine county current status of cadastral information on streambeds 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.
3. Outline legislation needed to provide a clear understanding of permanent boundaries in stream beds.

Members – Matt Lukasiewicz

 **Vegetation Water Use Work Group**

There needs to be a better understanding of the water consumptive use by native plants and non-native plants in riparian areas.

Actions –

1. Provide information to the task force on current information on native and non-native plant water consumptive use.
2. Determine what is needed to develop a better understanding of consumptive use of riparian vegetation.

Members – Shuhai Zheng, Tala Awada

The initial work group members would be those assigned by the agency, group or organization and any Task Force Members that chose to participate. The names shown in parenthesis are individuals that have shown an interest and/or have expertise that would contribute to the work group actions. Membership and representation should be flexible to allow for the best information and recommendations to the Task Force. Additional work groups could be established as needed.

Grant Program

As noted earlier, sections 1 and 2 of LB 1038 created a grant program for management of riparian vegetation and placed the responsibility for this program with the Nebraska Department of Agriculture. This serves as a natural administrative location for the grant program as NDA already has an existing structure in place in association with its authority over the state Noxious Weed Program.

As per LB 1038A, the Legislature appropriated a total of \$1,000,000 general funds each year (FY2016-17 and FY2017-18) for grants to manage invasive plants in and near rivers and streams. Of the \$1,000,000, \$975,000 was for aid and \$25,000 for administrative costs. Funds were only to be disbursed to weed management entities, local weed control authorities and Natural Resources Districts. During FY2016-17, NDA awarded grants for eight projects totaling \$668,799. During FY2017-18, NDA awarded grants for five projects totaling \$475,000.00. However, this funding was reduced an additional 2% to help the State meet budget shortfalls.

During the 2017 Legislative session, LB 22 reduced the funding for aid to \$675,000 and \$15,000 for administrative costs. Due to state budget shortfalls, the Legislature authorized \$475,000 in grants for FY2017-18. The first call for proposals was disseminated on September 8, 2016 and the second call for proposals was disseminated on June 6, 2017.

The following is a summary of funded projects for FY2016/17 and FY2017/18.

2016/17 Riparian Vegetation Management Grant Summary

Twin Valley Weed Management Area

Eastern Republican & Little Blue Riparian Improvement Project (16/17-01)

Total Dollars Requested: \$100,000.00 Total Dollars Funded: \$100,000.00

This project continues ongoing efforts to eradicate invasive species, control vegetation in stream channels, and improve riparian habitat along the Republican & Little Blue Rivers and their tributaries within six of the Twin Valley Weed Management Area (TVWMA) counties. Control efforts are conducted in a holistic manner utilizing a full range of mechanical, biological and chemical tools. TVWMA has undertaken this project over recent years to improve streamflow along these river systems to help Nebraska to meet its water delivery obligations to Kansas, to restore and maintain into the future a healthy river system and prevent wasteful degradation of water resources to improve riparian habitat including planting beneficial species as well as pollinators and increase public awareness of the best practices that can be used to properly manage riparian lands.

Lower Platte Weed Management Area

Lower Platte Weed Control & Maintenance Project (16/17-02).

Total Dollars Requested: \$63,294.00 Total Dollars Funded: \$63,294.00

Indigo bush or false indigo is working in tandem with phragmites and purple loosestrife to negatively impact channel streamflow in the Lower Platte River. It is stabilizing sandbar accretion ground and causing channel narrowing to the point where some channels are at risk of permanent loss of capacity to move water or ice during flood and ice jam seasons. The Lower Platte Weed Management Area (LPWMA) has attempted to control this plant using Imazapyr and other foliar treatments with little or no success. At its current spread and range in some channels this is limiting survey and control efforts on the Lower Platte. The LPWMA proposes to perform cut-stump treatments of indigo bush on a channel of the Lower Platte River to restore streamflow and ice capacity. A contractor will perform the work during late fall and winter months. Adjacent landowners will participate by stacking the cut material to be burned. LPWMA also plans to purchase and aquatic service vehicle to perform surveys and control work

in the Platte River as well as upland aquatic sites. This equipment will be shared by all ten counties in the LPWMA.

Panhandle Research Integration for Discovery Education

Map, Monitor, Educate and Control with PRIDE (16/17-03)

Total Dollars Requested: \$66,505.00 Total Dollars Funded: \$66,505.00

Panhandle Research Integration for Discovery Education (PRIDE) will focus on the control of yellow flag iris in Sioux County, using a unique and innovative approach to invasive weed mapping in riparian areas. This approach will map infestations of yellow flag iris using a drone with GIS/GPS mapping technology provide expert imagery. Treatment will take place on all know and mapped infestations and the imagery will assist with long-term monitoring and adaptive management planning. Common mullein infestations have increased in disturbed areas of the Pine Ridge and riparian areas. This project will be implementing biological control using the common mullein seed eating weevil. A colony will be established each of the four counties (Dawes, Box Butte, Sheridan and Sioux). Once populations are sustainable, insects will be relocated. Introduced phragmites has been identified on the White River in Dawes County. PRIDE will map and control phragmites, estimated to be less than 50 acres in numerous small patches. Controlling phragmites now while infestation levels are low is economical and beneficial to riparian biodiversity. PRIDE's publication, *The Weed Watch* will serve as the educational component of this project.

High Plains Weed Management Association

High Plains Invasive Species Project (16/17-04)

(Phase Two)

Total Dollars Requested: \$200,000.00 Total Dollars Funded: \$200,000.00

The High Plains Weed Management Association's project will continue to improve riparian areas in the North and South Platte Rivers and their tributaries. Over the past three years this project has removed over 4,000 acres of Russian olive, saltcedar and phragmites. This project has 1,223 acres to be completed and will focus on 123 miles along the North Platte River and nine miles of the South Platte River.

Platte Valley Weed Management Area

Invasive Species Control within the Central Platte River (16/17-05)

Total Dollars Requested: \$211,000.00 Total Dollars Funded: \$211,000.00

During the drought years of 2000-2006 invasive species infested and formed thick monocultures within the Central Platte River reducing flow conveyance, reduced wildlife habitat, increased water consumption by invasive vegetation and reduced diversion of irrigation water. With thousands of acres potentially infested, lack of defined ownership, herbicide restrictions and the need of specialized application equipment landowners cannot effectively control invasive vegetation. Platte Valley and West Central Weed Management Areas have collaborated on this issue since 2008 and have shown great progress. However, yearly maintenance and expansion of control on remaining acres is needed along with implementing a cost-share program to private landowners.

Nebraska Weed Management Area Coalition

Early Detection & Rapid Response in North Central Nebraska (16/17-06)

Total Dollars Requested: \$15,000.00 Total Dollars Funded: \$15,000.00

The Nebraska Weed Management Area Coalition (NEWMAC) is made up of local Weed Management Areas (WMA's) that brings together landowners, agencies and organizations in a geographical area to coordinate efforts and expertise against newly recognized invasive plant species. In 2015, 1.5 million acres of Nebraska were infested with state designated noxious weeds. NEWMAC recognizes the need to ensure these noxious weeds continue to be treated. However, NEWMAC recognizes the need for continued surveying and management of additional species that have the potential to become widespread problems. NEWMAC partners will monitor for invasive plants on the Watch List (A list developed by the Nebraska Invasive Species Council). This proactive approach will allow for detection and control of these species before they become established and therefore more difficult and expensive to control. When small infestations are treated early, native plant communities can recover providing quality forage and habitat. NEWMAC will use aerial and ground ocular surveys to document invasive plant species within the creeks and tributaries of the Sandhills and the riparian areas of the South, Middle and North Loup Rivers, Niobrara River and the Snake River. Infestations will be documented and provided to each local weed control authority. The local weed control superintendent will work with private landowners regarding awareness and control efforts.

North Platte Natural Resource District

Invasive Plant Control in the North Platte River Valley (16/17-07)

Total Dollars Requested: \$3,000.00 Total Dollars Funded: \$3,000.00

The North Platte Natural Resource District has a long history of spraying noxious weeds and undesirable plants as part of their habitat, tree and buffalograss programs. They have always been limited with boom sprayers mounted on pickups. Terrain and maneuverability has been a hindrance on many of their projects in riparian areas. This project will purchase an ATV wrap-around sprayer to mount on an existing ATV to better attack noxious and invasive species. Additionally they will purchase a 7 ½ foot disc to aid in site preparation for better inter-seeding and prescribed fire.

Northeast Nebraska Resource Conservation & Development Council

Yellow Flag Iris Detection & Control on the Elkhorn River Drainage (16/17-08)

Total Dollars Requested: \$10,000.00 Total Dollars Funded: \$10,000.00

The overall goal of this project is to protect the Elkhorn River and its tributaries from plants that may inhibit flows, impact native vegetation, and/or impact wildlife. Invasive species like yellow flag iris in this case have the potential to negatively impact biologically unique landscapes by competing with or reducing native vegetation invading areas not typically vegetated and reducing water flows in small channels. The Elkhorn River in Holt & Antelope Counties is the focus of this project. This project proposes to aerially survey for yellow flag iris and follow-up with herbicide treatment with landowner permission. They will also investigate other methods of control and provide education through a tour of yellow flag iris infested waters.

2017/18

Riparian Vegetation Management Grant Summary

Twin Valley Weed Management Area

Eastern Republican & Little Blue Riparian Improvement Project (17/18-01)

Total Dollars Requested: \$100,000.00	Total Dollars Funded: \$93,500.00
	2% Reduction: \$1,870.00

The highly successful Eastern Republican & Little Blue Riparian Improvement Project continues ongoing efforts to eradicate invasive species, control vegetation in stream channels, and improve riparian habitat along the Republican & Little Blue Rivers and their tributaries within six of the Twin Valley Weed Management Area (TVWMA) counties. Control efforts are conducted in a holistic manner, utilizing a full range of mechanical, biological and chemical tools. TVWMA has undertaken this project over recent years to improve stream flow along the Republican & Little Blue Rivers to help enable Nebraska to meet its water delivery obligations to Kansas, to restore and maintain into the future a healthy river system and prevent wasteful degradation of water resources, to improve riparian habitat including re-planting beneficial species, as well as including pollinators, and to increase public awareness of the best practices that can be used to properly manage riparian lands.

Platte Valley Weed Management Area

Invasive Species Control within the Central Platte River (17/18-03)

Total Dollars Requested: \$200,000.00	Total Dollars Funded: \$187,000.00
	2% Reduction: \$3,740.00

During the drought years of 2000-2006, invasive species infested and formed thick monocultures within the Platte River of central Nebraska reducing flow conveyance, negatively affecting wildlife habitat, increasing water consumption by invasive vegetation and reducing the ability of irrigators to divert Platte river flows. Known infestations of invasive, non-native phragmites are present along with a new invader, Yellow Flag Iris. With the thousands of acres of infestation, lack of defined ownership, herbicide restrictions and the need for specialized vehicles for application, overwhelmingly, the majority of landowners cannot effectively control their invasive vegetation. Platte Valley and West Central WMA's have collaborated on this issue since 2008 and have made great forward progress, however yearly maintenance and control of remaining acres and drainages/ tributaries is needed, in addition to the implementation of the private lands cost share program. A two-fold approach, direct control and education/ outreach strategy is being proposed to assist landowners to become better informed of invasive species issues and how they can receive assistance in controlling invasive vegetation. It is the intent of the WMA's members to implement

Early Detection and Rapid Response (EDRR) approach on new invasive plant species that are detected along the Platte River to avoid huge infestations in the future years.

Nebraska Weed Management Area Coalition

Early Detection & Rapid Response in North Central Nebraska (17/18-04)

Total Dollars Requested:	\$80,500.00	Total Dollars Funded:	\$75,287.50
		2% Reduction:	\$1,505.75

The Nebraska Weed Management Area Coalition (NEWMAC) is made up of local Weed Management Areas (WMA's) that bring together landowners, agencies and organizations in a geographical area to coordinate efforts and expertise against newly recognized invasive weed species.

In 2015, 1.5 million acres of Nebraska were infested with the State Listed noxious weeds. NEWMAC recognizes the need to ensure these noxious species continue to be treated. However, they also recognize the need for continued surveying and management of additional species that have the potential to become widespread problems.

NEWMAC is requesting funding to 1) treat invasive species that were documented in 2016 by surveys and monitoring 2) continue supporting the Weed Watch publication and create new invasive species brochures, 3) implement biocontrol along the Niobrara River for Leafy Spurge and Purple Loosestrife and 4) survey for invasive species on the watch list. All of these objectives assist in enhancing Nebraska's native biodiversity and natural beauty.

Control and survey work will be implemented on the Niobrara, North Loup, Middle Loup and South Loup, and Platte River basins. The Weed Watch informational and educational publication and the new brochures will be distributed within the Panhandle Research Integration for Discovery Education (PRIDE), Sandhills Weed Management Area (SWMA), Middle Niobrara Weed Awareness Group (MNWAG), West Central Weed Management Area (WCWMA) and Platte Valley Weed Management Area (PVWMA) geographical areas.

Panhandle Research Integration for Discovery Education

Map, Monitor, Educate and Control with PRIDE (YEAR 2) (17/18-05)

Total Dollars Requested:	\$57,500.00	Total Dollars Funded:	\$53,762.50
		2% Reduction:	\$1,075.25

The Panhandle Research Integration for Discovery Education Weed Management Area (PRIDE WMA) has been actively completing successful projects since 1998. In addition to Dawes, Sheridan, Sioux and Box Butte Counties, our partners include private landowners, the Upper Niobrara White Natural Resources District, US Forest Service, Nebraska Game and Parks Commission, Nebraska Department of Agriculture, National Park Service, Chadron State College and Sioux County Future Farmers of America. We continue to fulfill our mission statement of serving as a cornerstone, building and

maintaining partnerships between many cooperators working on invasive weed management and education. This project, "Map, Monitor, Educate and Control with PRIDE Year 2 will continue on the ground noxious and invasive weed control, yellow flag iris research and education through *The Weed Watch* publication.

PRIDE will continue yellow flag iris control efforts on the Niobrara River in Sioux and Box Butte counties. Utilizing grant funds, yellow flag iris infestations on both AFBNM and private landowners downstream will be treated. In June 2017, common mullein seed eating weevils were released on sites in Dawes, Sheridan and Sioux counties in an effort to establish insectaries in each county. PRIDE would like to continue with releases of insects in 2018. Once these populations are considered sustainable, insects can then be relocated to other common mullein infestations. Three other invasive species-absinth wormwood, black henbane and Dalmatian toadflax will be treated using Early Detection and Rapid Response methods in areas they have been identified. Mapping and control of these species will help to prevent large problems in the future. Education of landowners regarding these species is of utmost importance.

Lower Platte Weed Management Area

Lower Platte Sandbar Restoration and Tributary Project (17/18-06).

Total Dollars Requested:	\$70,000.00	Total Dollars Funded:	\$65,450.00
		2% Reduction:	\$1,309.00

The Lower Platte Weed Management Area (LPWMA) is planning to survey four tributaries in Lancaster County in mid-July. The LPWMA is seeking funds from the Nebraska Department of Agriculture (NDA) for 50 % landowner cost share of control of phragmites on these tributaries. All acres of phragmites within the flowing waters of the LPWMA will require landowner cost share. Funds from NDA will be matched with dollars from funding provided by Natural Resource Districts. As part of the annual helicopter project, the LPWMA has identified 75 acres of new growth vegetated (woody vegetation) to be controlled by helicopter application on sandbars. The WMA is seeking NDA funds for sandbar restoration and control of these invasive woody plants. County Weed Control Superintendents will be performing airboat surveys and herbicide applications of invasive plants along the Platte River sandbars and banks from mid-August through killing frost. The LPWMA is requesting funding for these surveys and applications. This survey and control work done by the County Weed Control Authorities has been proven to keep down helicopter project costs which lower costs for all LPWMA partners: landowners, Natural Resource Districts, and County Weed Control Authorities themselves.

NDA funds were utilized to remove 60 acres of invasive Indigo bush in Douglas County in late winter 2016 into early spring of 2017. The contractor removed the plant by mowing and made follow up cut stump treatments on the mowed areas. The LPWMA anticipates 10% regrowth of new seedlings within the Indigo bush removal channel. The LPWMA is requesting funding for follow up basal bark treatments of new seedlings and mechanical removal of larger areas with more cut stump treatments to continue the sandbar restoration on this channel of the river.

Summary

The Task Force continues to gather and collect information and data. Work Groups will be submitting a draft of their recommendations to the Task Force in the upcoming year. The Task Force applauds the projects for the work they are accomplishing with funding provided by the Legislature.

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