

## **Riparian Task Force Annual Report 2024-2025**

### **Timeline for Riparian Grant Program Funding 2024-2025**

- April 16, 2024 – Call for proposals disseminated.
- April 22, 2024 @ 8:00 AM – Application portal opens.
- May 10, 2024 – Deadline for submission of proposals to Nebraska Department of Agriculture.
- June 3, 2024 – Nebraska Department of Agriculture awards grants for approved proposals\*
- June 3, 2024 Nebraska Department of Agriculture announcement by Director Sherry Vinton to defund the Riparian grant program
- August 2024 Legislative Special Session: Riparian funding retained in budget for 2024-2025
- Nebraska Department of Agriculture awards no grants for 2024-2025

### **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.

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 solicit input from non-Task Force members. However, any recommendations will be delivered by the Task Force. These work groups were reassigned in April 2024.

The six current work groups include:

- ☐ Goals, Objectives, and Reports
- ☐ Vegetation Management and Treatment
- ☐ Survey and Monitoring
- ☐ Education and Awareness
- ☐ Funding and Incentives
- ☐ Vegetation Water Use

### **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, 2024.

#### **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 – Mike Reed, Tammy Zimmerman, Brent Meyer, Dave Zorn,

Andrew Tonnies, T.J. Walker

Chair: Dave Zorn

### **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 – T.J. Walker, John Erixson, Larry Heyen, Nathan Munter,  
Tyler Weishahn

Chair: Larry Heyen

### **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 – Brent Meyer, Mike Sarchet, Rich Tesar, Lance Philben, Larry  
Heyen, Nathan Munter

Chair: Rich Tesar

### **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 – Tammy Zimmerman, Andrew Tonnies, Mike Sarchet, Ryan

Chapman, Tala Awada

Chair: Tammy Zimmerman

**□ 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 Reed, T.J. Walker, John Erixson, Jeff Kanger

Chair: T.J. Walker

### **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, Katie Hickle, Tala Awada, Shannon Smith

Chair: Katie Hickle

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. Work Group chairs will facilitate communication between members and identify action items for their work Group and the Riparian Vegetation Management Task Force.

## **Project applications for 2024-2025 received by Nebraska Department of Agriculture**

### **Platte Valley Weed Management Area Project 2024/2025: \$300,000**

The Platte River of south-central Nebraska is known for its irrigation value for row crops and also wildlife habitat for a diverse range of flora and fauna. Labeled the 'ribbon of life' by some wildlife enthusiasts the Platte River is home to many wildlife species of concern. Portions of this reach have been designated by the U.S. Fish and Wildlife Service as critical habitat for endangered whooping cranes and is utilized by threatened piping plover and endangered least terns. Areas are also of great importance in the Central Flyway as a critical spring stop over site for a variety of shorebirds and waterfowl. These species and the river system ecology are listed as a priority landscape for management under the Nebraska Natural Legacy Project. The water demands of the Platte River is extremely high with multiple irrigation districts diverting water from the river.

Historic and present water development on the Platte River and its tributaries has altered the river's hydrology, reducing flows, and changing flow chronology. These changes have had a detrimental effect on wildlife habitat available and the vegetation community that is present. Water developments have caused the upper portion of this project site, *Ogallala to Elm Creek to be classified as over-appropriated and the remaining portion is classified as fully appropriated.*

Within the Platte River valley invasive species such as salt cedar, reed canary grass, Russian olive, purple loosestrife and invasive phragmites are present and are capable of out-competed native vegetation. All the above mentioned invasive species have reduced biodiversity by out-competing native vegetation and forming monoculture stands. Invasive phragmites has taken over low-lying areas along the Platte River including riverbanks, wetlands, meadows, side channels, sloughs, and sandbars. This plant is an aggressive invader and rapidly replaces native plant communities. Phragmites also forms thick 'choke points' that reduces water conveyance. These choke points can cause significant lowland flooding which in turn reduces agriculture production and can cause municipalities major concern when flooding occurs within cities. By removing invasive plants flow conveyance is increased and this flooding potential is reduced. Phragmites also uses large amounts of water from the river by evapotranspiration.

Platte Valley WMA initiated an invasive species control project within the Platte River from Columbus to Kingsley Dam in 2008. Since inception the WMA's have partnered with numerous resources and have applied herbicide on approximately 49,500 acres of invasive species resulting in an increase of flow conveyance and reduced water consumption by those plants. The WMA's have had great success with the project showing an increase in water conveyance and providing assistance to private landowners in control efforts. The last five years have demonstrated that the maintenance need of invasive species is very high and without yearly

touch up work and expanding control to side channels the plants will re-infest treated areas and all the previous work will be lost. WMA's are working with private landowners to implement control work on tributaries and side channels on a cost share basis. This work on secondary channels, floodplains and understory is the next step in a watershed control plan as it contains the seed source that can re-infest the main Platte River.

If awarded this grant will support four objectives:

- 1.) Direct control of invasive species within Platte River channels, tributaries, and understory areas, including cost-share programs (helicopter, airboat, drone)
- 2.) Implement and expand landowner cost-share program – increased one-on-one contacts
- 3.) Support educational and outreach components.
- 4) Perform yearly evaluation to ensure efficacy of project

#### Project Plan and Design:

The Platte Valley Weed Management Area encompasses 14 counties along the Platte River. This grant, Invasive species control within the central Platte River, will address invasive weed problems within approximately 356 'river' miles of the Platte River between Kingsley Dam and Columbus Nebraska and consists of over 700 private landowners. PVWMA consists of federal, state, county and private landowners. PVWMA receives cash contributions from the Platte River Recovery Program, Nebraska Public Power District, Central Platte NRD, Tri-Basin NRD, Twin Platte NRD, Central Nebraska Public Power and Irrigation District, Audubon, Whooping Crane Trust, Nature Conservancy and individual county contributions.

By focusing on the system, the project can maximize control, efficacy, and long-term maintenance, while restricting re-infestations from up-stream seed sources. By approaching riverine invasive species in this manner, the project will have maximum effectiveness for the entire Platte River and prevent additional seed sources from expanding downriver of the confluence.

#### Objective 1:

The PVWMA is proposing direct herbicide application on invasive phragmites that remain within Platte River and lower Loup River channels. This will take place from September 1<sup>st</sup>, 2024 to June 30<sup>th</sup>, 2025. The project will incorporate an integrated weed management

philosophy and an applied research approach. Much of this work will take place on privately owned lands through voluntary, incentive-based management agreements. Within flowing channels of the Platte River 100% of cost share will be supplied to landowners but cost share will be supplied by numerous partners. Within side channels and back water areas WMA's supply herbicide and the landowner is responsible for application costs. This cost-share program has shown great success and is growing rapidly.

## Objective 2

Increasing Landowner cost-share program. PVWMA initiated a cost-share program approximately 8 years ago and has been successful but PVWMA desires to increase the program. Within the PVWMA boundary there are side-channels, back waters and tributaries that need ground-based control. The cost-share program supplies the herbicide while the landowner must apply or contract to have it applied. This results in the landowner having buy-in and costs associated with the control of invasive species. During fall 2024 and spring 2025 PVWMA may initiate a pilot project within selected tributaries to contract a person to reach out to individual landowners, gain permission, build relationships, and ultimately control invasive plants within the tributary.

## Objective 3

PVWMA desires to inform and education landowners along the Platte River to raise awareness and control efforts. By-yearly letters to all landowners (over 700) will be mailed to explain the negative effects of invasive species and the control steps landowners can implement. The phragmites cost share program will also be encouraged by sending information to the landowners

## Objective 4

PVWMA will continue to fly/ground survey direct control applications to evaluate effectiveness and efficacy. PVWMA uses photo references from year to year along with GIS polygons to track yearly application efforts and success. PVWMA is working with partners on possibly testing different herbicides and timing to continue to improve our efficacy on control and also cost-effectiveness. PVWMA also compares stream gauges (river flow compared to flood stage) to document our success at increasing flow conveyance and reducing flood potential. Previous evaluations have shown 12-25% increase in flow conveyance after project implementation.



## **Nebraska Weed Management Area Coalition 2024-2025 Riparian Control and Education:**

**\$668,150.00**

### **Sound Planning and Design**

Each of the 4 WMAs involved in this grant met to plan projects and priorities. Sandhills WMA will coordinate one helicopter to spray phragmites on the North, Middle and South Loup Rivers, Calamus, Cedar, Dismal Rivers, and Birdwood Creek in six counties. These areas were surveyed and mapped in June 2023 by NE IA Helicopter, so the spraying will be completed this fall by the same company. Northeast WMA will continue control of phragmites on public and private lands on the Missouri River in Knox County. Panhandle WMA will continue work on yellow flag iris, Scotch thistle, phragmites and Canada thistle in the panhandle counties on the Niobrara, North Platte and White Rivers and Lodgepole Creek. *Explanation of projects for each WMA will be added as an appendix to this grant.* \*\*

### **Direct Measurable Environmental Benefits**

NEWMAC members network and work with professional herbicide representatives, assuring that direct control of noxious and invasive vegetation is done with the best matched products, and application is completed in the most effective manner. Herbicides used on or near rivers or streams are specific to aquatic weeds and have been tested for aquatic application. UTVs, ATV's and drones do more selective weed control, if the area is accessible, and the infestation is not solid. Each year we see more and more success stories from the grant projects completed. As the landowners see the impact of persistence, and they see a definite decrease in noxious weed infestations, they are more inclined to continue their efforts.

### **Wide Variety of Public/Private Partners**

WMAs within the NEWMAC grant work with US Army Corps of Engineers, NE Game and Parks, The Niobrara River Council, Natural Resource Districts, and hundreds of private landowners involved in the Cost Share program, and control work on riparian areas. Many of our counties have limited state or federal properties; therefore, working with private landowners establishes relationships, gives them ownership in the projects, and gets the noxious weeds controlled.

### **County Weed Control Authority Leadership**

In addition to regular County Weed Superintendent duties, these weed professionals add projects and attend extra meetings of their WMAs. Networking and brainstorming gets everyone motivated. Panhandle and Sandhills superintendents are currently working to get cash match from each county, plus meeting with NRD's to secure cash match from them. By pooling each person's strengths, more gets done. Knowledge of noxious and invasive weeds, spray equipment, herbicide, test plots, technology, outreach and education happens when counties and WMAs collaborate. Superintendents work to involve private landowners in the projects, creating an opportunity to educate and share resources.

### **Innovative and Unique**

NEWMAC was formed to encourage all WMAs to get involved. With strategic planning, and project implementation, our projects involve 36 counties! Many counties have new superintendents or have limited knowledge about writing or managing a grant. These superintendents don't hesitate to take part in projects knowing they have support and mentors to help. Several counties have had an ineffective weed control program, but newly hired and knowledgeable superintendents desire to get a strong program going. Our group can help that happen.

#### Duration of Benefits

NEWMAC has several projects that will be long term. Biological Control, using insects is a tool of noxious weed control that may take years to see results, but is very host plant specific, and can have very successful results. The cost share herbicide program gives the superintendents a chance to get private lands controlled, create relationships with landowners, gets the noxious weeds controlled, and gives landowners ownership in the project. Agreements with landowners assure continuation of the control work. This program creates a balance of short-term control and long-term sustainability.

#### Prevents Resource Contamination and Degradation

Many of NEWMAC's projects will involve spraying by ATV, UTV and drones. This method is more selective, and the spot spraying prevents application to desirable vegetation. By networking, the superintendents make sure proper aquatic herbicide is being used, at the right rate, and most effective stage of growth for control according to research and herbicide labels. Controlling phragmites, purple loosestrife and yellow flag iris on hundreds of miles of rivers improves water flow and improves accessibility for recreation by the public.

#### Integrates Multiple Weed Management Tools

NEWMAC utilizes airplanes, helicopters, ATV's, UTV's, Argos, airboats, drones, biological control and controlled burning. Each project utilizes the most effective management practice. Test plots are very beneficial to provide results of different products, different rates and different timing of herbicide application.

#### Cost Effective

Planning and preparation to have a contractor work in several neighboring counties saves time and miles. Purchasing herbicide in bulk amounts for a large project saves money. Having cost share for private landowners along riparian areas gets the noxious weeds controlled, the landowners use their own equipment, and it's a "win win" for all, providing a better long term economic outcome.

#### Matching Resources (percent cash)

Northeast WMA partners with Nebraska Game and Parks, and US Army Corps of Engineers on the Missouri River near Niobrara. With an estimated 20,000 acres explosion of phragmites

following the 2019 floods, it will take multiple partners multiple years to make progress. USACE spent over \$200,000 in 2023 and will continue to work on the phragmites this year. NEG&P spent \$30,000 in 2023 and plans to spend \$20,000 during this grant cycle. Panhandle and Sandhills superintendents are currently meeting with county boards and NRD's to secure cash match. The combined WMAs spend over \$15,000 per year for postage or insertions fees for the Weed Watch.

### Quantify Public Benefit

Spring and fall each year NEWMAC publishes the Weed Watch. This 12-page, full color publication is dedicated to noxious and invasive weeds, plants, insects, and aquatic species. Nearly 100,000 copies are distributed to homeowners and landowners across the state. In addition to "on the ground" weed control projects, the Leafy Spurge Working Task Force Tour and Conference is a great learning opportunity. The UNWNRD Conservation Festival, the Outdoor Education Rendezvous and the Watershed School Festival reach well over 1,000 students, the future stewards of our land.

### Economic Impact

Consider the acres protected by the work done within MNWAG, Panhandle and Sandhills WMAs. By attacking the seed source and seed banks in western Nebraska, we are effectively preventing spread downstream. The work that has been done through the landowner cost share on the Niobrara River in Brown, Keya Paha and Rock counties shows huge economic impact, when what used to be hundreds of acres of purple loosestrife is now scattered infestations. The landowners have contributed to the success of decreasing the purple loosestrife to manageable infestations, resulting in success by working together.

### Management Practices Developed Extend Beyond Grant Term

The benefits of WMAs utilizing and completing work with grant funds is beyond measure. The herbicide cost share gets the weed control accomplished and saves dollars for landowners. New and seasoned weed superintendents collaborate, mentoring happens across county boundaries, and increased work gets accomplished when all work together. Large scale projects are completed, and success stories are shared. By controlling noxious and invasive weeds in riparian areas, the desirable native plants can regrow, water flow is increased, and accessibility to riparian areas improves. Weed superintendents, federal, state and county partners, homeowners, landowners and students have the tools to continue projects beyond the grant term.

\*\*\*APPENDIX (Description of each WMA projects)

Middle Niobrara Weed Awareness Group (MNWAG) 2024-2025

The Middle Niobrara Weed Awareness Group (MNWAG) is a weed management area that is very narrowly defined as the 76-mile corridor of the Niobrara River that was designated as Scenic and Wild by Congress in 1991 and managed by the National Park Service. It includes a mile wide corridor on either side of the river. The Niobrara River presents unique challenges for weed control as we operate under the oversight of the National Park Service, even though the land is either privately owned, under the Nature Conservancy, or federally owned. In the past, we have used grant money from Riparian Vegetation Management Grant to contract with a helicopter or airboat to control purple loosestrife, invasive phragmites and yellow flag iris in our weed management group. MNWAG is proposing three projects to be funded by the grant in the upcoming grant cycle.

#### Direct Control of Invasives on the River

As the Niobrara River winds through its course, it has carved out a deep canyon which is difficult to access the riverbank from land. It's a problem for both the landowners and the weed control agencies. MNWAG will unite with landowners in three counties, the Nature Conservancy and the National Park Service, to access and address the invasive weeds all in one period. A helicopter will be used to control the noxious and invasive weeds. Interactions between the control authorities and the landowners provide opportunities to engage and educate our landowners as to why it is important to treat every infestation they know about. Mapping results show that infested acres have decreased over time. The heartbreaking fact is that our funding has been inconsistent and while we make good gains for a few years, we periodically lose funding and must sit on the sidelines and watch our gains be lost.

The Niobrara River that flows through the MNWAG territory has been federally designated and recognized for its wild and scenic nature. People from around the country travel to our region to experience the natural beauty of the river. Invasive plants do not contribute to that beauty and over time will change the ecosystem that we are trying to protect. This impacts the public good by preserving the very corridor and scenic value that Congress recognized and set aside for current and future recreational enjoyment.

We are in a very rural and sparsely populated part of the state with limited resources. We will receive \$4000 to help with the project from the Niobrara River Council. The weed superintendents in Brown, Keya Paha, and Rock counties coordinate all the work to be done. Funds requested: \$60,000

#### Chemical Cost Share Program

In addition to the Direct Control project, we manage a chemical cost share program with our landowners. In this project, we purchase selected herbicides for the landowners to use on their lands. The landowners agree to use the herbicides they purchase through the program on their lands to control the invasive plants that the helicopter cannot get to. This has been a very successful program as the landowners are responsible for the application of the herbicides on their own lands. This project builds on the success of the direct control program as the

landowners become invested and partner with us to treat noxious weed infestations. As a result, the landowners are assuming responsibility of the control of the invasive weeds on the river.

Funds requested: \$20,000

### Biological Control Program

In the United States, the use of bio control has recently been rising as a preferred control strategy from the federal government to local efforts. In Nebraska, the lead for the use of bio control agents has been spearheaded by the Research and Bio Control Committee of the Nebraska Weed Control Association. The program has been run on a very lean and meager budget along with many hours of volunteerism. Funding from NWCA has been inconsistent and harder to come by and yet, the benefits of bio control continue to grow. We feel that to grow the bio control program in Nebraska, we need an additional source of funding.

Bio Control is a tool that can be used easily in our riparian regions. The system doesn't use herbicides, which is an important consideration in our riparian areas. The agents only attack the target pest or they die. The agents are self-replicating and once established, they continue to attack the invasive pest for many years. Additionally, the agents can be carried downstream from the release site and reestablish in different areas and become part of the environment. Recent studies have indicated that the return on investment in bio control is 27:1.

Bio Control is using imported agents, usually insects, to attack the invasive plant from the invasive plants' native territory. It is highly regulated and controlled to avoid unintended consequences. We have partnered with USDA-APHIS in Lincoln to help us in permitting and obtaining some of the agents. We are requesting funds to help us with training more people in the art of bio control, obtaining agents that we currently are unable to with USDA-APHIS, and attending national meetings to learn cutting edge systems and create a network with other researchers and practitioners to exchange information and gain access to many more bio control agents.

One of the projects Scott Erthum, Bio-control Chairman would do is take a team of weed superintendents to North Dakota to do a leafy spurge flea beetle collection for a couple of days. A collaborator in North Dakota is willing to set it up. We would drive up, learn to collect flea beetles in the field, learn to sort, package, and transport the agents back to Nebraska for release. By training a team, we will be able to replicate the work in Nebraska as our own populations of flea beetles increase. Funds would also be used to help defray the costs of transporting agents across the state and possibly purchase agents that are not offered for free.

Grant funds would be used to fund NWCA Research and Bio Control Committee members the ability to attend meetings on the national level. This would help to create partnerships and networks for obtaining bio control agents. Nebraska currently does not have the capacity to lab raise any of the bio control agents. We rely on purchasing or being given agents from other states and this can only occur if we have created a network.

MNWAG is asking for this funding, but the use of these funds would be shared across the entire state's riparian areas. Historically we have been receiving about \$2,000 from the Nebraska Weed Control Association and we will continue to apply for that as well.

Grant funds requested; \$10,000

Total amount requested by MNWAG \$90,000

Cash Match: Niobrara River Council \$4,000, Nebraska Weed Control Association \$2,000

Total cash match \$6,000.

#### Northeast Weed Management Area 2024-2025 Grant Request

Antelope County Weed Superintendent Bryan Cornett will continue work on yellow flag iris on Elkhorn River near Clearwater. Spraying with drone, using aquatic herbicide. Antelope County Board approved up to 30% cash match of dollars allocated to Antelope County.

Funds requested: \$5,000

Boyd County Weed Superintendent Terri Krysl will control phragmites and purple loosestrife on the Niobrara River in Boyd County. Helicopter control in conjunction with Holt County. Acres controlled will be based on funds available.

Funds requested: \$8,150

Cedar County Weed Superintendent Justin Heike will work on Logan Creek near Randolph to control noxious weeds surrounding the Army Corps of Engineers drainage system. The work will be done with a drone.

Funds requested: \$5,000

Dixon County Weed Superintendent Mike Elton plans to have a drone survey of the Missouri River in Dixon County to map purple loosestrife, saltcedar and phragmites. Between the flooding of 2011 and the Spencer Dam break in 2019, the altered river channel needs to be surveyed, so budget and planning for control can be done in the near future.

Funds requested: \$10,000

Holt County Weed Superintendent Bill Babutzke will have Countyline Helicopter do follow up control on the Niobrara River in Holt County. The 54 mile area was sprayed in 2022, so follow up work is needed.

Funds requested: \$10,000

Knox County Weed Superintendent Steve Banks will work with NE Game and Parks Josh Kounovsky and US Army Corps of Engineers to continue work on the 20,000 acre explosion of phragmites following the 2019 floods near Niobrara on the Missouri River. Collaboration between Northeast WMA, USACE and NEGame and Parks resulted in over \$280,000 being utilized on this project in 2023. A similar amount will be done in 2024.

Funds requested \$50,000

Pierce County Weed Superintendent Steve Gathman will work to control phragmites that infests boggy areas in the Willow Creek area ~20 acres. Funds requested: \$10,000

Wayne County Weed Superintendent Doug Deck will utilize grant funds to control 15 acres of scattered phragmites patches on Humbug Creek near Winside and Hoskins, and 10 acres of phragmites on Logan Creek near Wayne. Funds requested: \$5,000

Total grant funds request for Northeast WMA \$ 103,150

Cash Match: Army Corps of Engineers \$200,000, Nebraska Game and Parks \$20,000, Dixon County \$1,000, Antelope County ~\$1500. Total cash Match \$222,500

#### Panhandle Weed Management Area 2024-2025 Request

Panhandle WMA recently expanded our area, by having Banner and Kimball Counties join in 2023 and more recently Morrill County in 2024. PWMA now includes 10 Panhandle Counties: Banner, Box Butte, Cheyenne, Dawes, Deuel, Garden, Kimball, Morrill, Sheridan and Sioux. In addition to “on the ground” control work, Panhandle WMA has a booth at the Upper Niobrara White NRD Conservation Festival, participate in the CSC Range Day and help to distribute The Weed Watch. Each superintendent meets annually with the USDA Farm Service Agency. Panhandle WMA will soon launch a Facebook page, to provide noxious and invasive weed identification and control education.

Banner County Weed Superintendent Tim Grubbs completed the survey Pumpkin Creek early June 23. 2024-2025 funds will control Canada thistle, musk thistle and Scotch thistle along 35 miles of Pumpkin Creek, nearby marshy areas and adjoining drainages. Aerial application would be used, as the area is easily accessible, Funds Requested: \$20,000

Box Butte County Weed Superintendent Brett Lauder will continue herbicide control of scattered patches of yellow flag iris on the Niobrara River. Funds requested: \$40,000

Cheyenne, Deuel and Garden County Weed Superintendent Brent Fletcher will use UTV and aerial application to continue herbicide application on 30 miles of Lodgepole Creek that runs through Cheyenne County. Target species are Canada and musk thistle.

Funds requested: \$60,000

Dawes County Weed Superintendent Dan Wordekemper plans to apply herbicide by Drone, ATV and UTV on a 10 mile stretch of the White River in Dawes County. This area has severe infestations of Canada thistle, Scotch thistle and musk thistle, but also has a lot of trees, so aerial application will not be used. Funds requested: \$45,000.

Kimball County Weed Superintendent Rick Wangler plans to continue noxious and invasive weed control on 35 miles of Lodgepole Creek and drainages in Kimball County, beginning at the

Wyoming state line all the way to Potter. Target weeds are Canada thistle, Scotch thistle and musk thistle.

Funds requested: \$25,000.

Morrill County Weed Superintendent Bryan Hoerler recently added Weed Superintendent duties along with Road Superintendent. Panhandle WMA superintendents will mentor Bryan and spend time with him to encourage improvement of a noxious weed program that has been neglected for several years.

Sheridan County Weed Superintendent Seth Tausan plans to survey and control Clay Creek and White Clay Creek in northern Sheridan County. This area is infested with Canada thistle, houndstongue, leafy spurge, musk thistle, common mullein, and dame's rocket. Seth will also survey the Niobrara River for any additional phragmites infestations, and control if found. Seth would also continue follow up control of phragmites on Pine Creek and Rush Creek.

Funds requested: \$50,000.

Sioux County Weed Superintendent Nick Sanderson plans to complete an aerial survey north of the Pine Ridge area on Hat Creek and Indian Creek. Most of this area is US Forest Service property. USFS is currently doing some revamping in this area, so Sioux County will work with USFS in a cooperative agreement on the project. Aerial application by airplane or helicopter, and ground application by UTV or ATV will be used. Grant funds would be utilized on private lands, and USFS dollars would fund public land. Infestations of saltcedar, leafy spurge, Scotch thistle, Canada thistle and musk thistle are all target species.

Funds requested: \$50,000

At a recent Panhandle WMA meeting, Superintendents agreed to request much less than what could actually be utilized during this grant cycle. So much more work could and would be done if the funding was available.

Total grant funds requested for Panhandle Weed Management Area: \$290,000.

Cash Match: Deuel County \$500, Sioux County \$1,500,

PWMA counties \$2,000 (Weed Watch insert fees) US Forest Service \$15,000.

Total cash match \$19,000

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#### Sandhills Weed Management Area 2024-2025 Grant Request

Custer, Garfield, Loup, McPherson, Thomas and Wheeler Counties had NE-IA Helicopter out of Tekamah, NE come and survey their riparian areas for noxious and invasive species June 5-7, 2023. We spent \$54,000. The work is half done. Everything that needs sprayed is mapped. We just need NE-IA Helicopter Service to complete the herbicide application.



Custer County Weed Superintendent Tim Conover surveyed approximately 43 miles of the Middle Loup River for phragmites and the South Loup River from Pressey State Park to the southeast corner of the Custer County line for phragmites.

Garfield County Weed Superintendent Jimmy Petersen had the North Loup and Calamus Rivers surveyed for phragmites.

Loup County Weed Superintendent Zane Young had the North Loup and Calamus Rivers surveyed for phragmites.

McPherson County and Thomas County Weed Superintendent Richard Cook had the Birdwood Creek surveyed for phragmites, yellow flag iris and leafy spurge. Richard also had 30 miles of the Dismal River surveyed for phragmites, Canada thistle and leafy spurge.

Wheeler County County Weed Superintendent Doug Reiter surveyed 15 miles of the Cedar River, 20 miles of Beaver Creek and Erickson Lake for phragmites.

These counties can all be done during the same time frame. Between the ferry fees, helicopter at \$2,500 per hour plus herbicide. Funds requested \$75,000

There are two counties in Sandhills that have never really been involved or participated in grant projects before. They are Blaine and Boone Counties. Both have new County Weed Superintendents, that want to get involved which is great. Currently, these two counties will survey the invasive species in their riparian areas. Both are ready to get involved, and get the noxious weeds surveyed and controlled.

Blaine County Weed Superintendent Dustin Spanel will survey 15 miles of the Dismal River, 45 miles of the North Loup River and 30 miles of the Middle Loup River for phragmites.

Boone County Weed Superintendent Margaret Valladao will survey 25 miles of the Cedar River and 40 miles of Beaver Creek for phragmites.

These two counties could be done at the same time as the other six counties above by NE-IA Helicopter. Surveying is \$2,000 per hour. Funds requested: \$12,000.

Boone County is also requesting a Side by Side with sprayer and a trailer so surveying and herbicide control on the project can be accomplished. Margaret is working to improve the Noxious Weed Control Program in Boone County. Funds requested: \$33,000.

Valley County Weed Superintendent Darrel Kaminski plans to survey and spray 18 miles of the North Loup River and 9 miles of the Middle Loup River for phragmites. This can be organized to have done with all the other above county projects with NE-IA Helicopter. Surveying, spraying and herbicide. Funds requested: \$10,000.

Sandhills WMA would also like to request grant funds for our chemical cost share program for landowners. We have done it for two years now and it is very popular with our landowners. It gets landowners involved, gives them ownership in the project, and will provide sustainability for the work to be done. Funds requested: \$30,000

SWMA knows that a lot more that could be done and requested in Sandhills as far as more surveying and direct control but with the funds available this grant cycle, we are just requesting money to finish projects that have already been started or are half done. Funding for two counties that have never been involved is also a priority.

The total requested by Sandhills WMA is \$160,000

Cash Match: SWMA \$3,000

Custer County \$1,000

Boone County \$1,000

SWMA Weed Watch postage \$11,200

Total Cash Match: \$16,200

### **Southwest Weed Management Area: \$125,00.00**

Southwest Weed Management operates in the Southwest Nebraska counties of Perkins, Chase, Dundy, Hayes, Hitchcock, Frontier and Red Willow. Southwest Weed Management is committed to improving the Western Upper Republican River Basin riparian areas. This involves removing invasive and undesirable vegetation in a cost share program with landowners. Southwest Weed Management enters into contracts with landowners whose property meets the program guidelines. This is a voluntary program and requires a commitment from the landowners to maintain the property for a ten year period after the contract is completed. This results in immediate benefits in the removal of invasive and undesirable vegetation and long term positive effects. These properties are inspected by the project coordinator before the contract is issued and reinspected at the completion of the contract to ensure the removal work was successfully completed. Southwest Weed Management has a competent board of directors and a proven history of successfully utilizing grant funds to remove invasive and undesirable species to improve the hydrologic system of the Western Upper Republican River Basin. Southwest Weed Management works in close cooperation with county weed superintendents, NRCS, Upper Republican Natural Resource District, Middle Republican Natural Resource District, and Nebraska Game & Parks. Southwest Weed Management continues to look for opportunities to partner with other agency's to leverage available grant funds for maximum beneficial results. The Nebraska Environmental Trust is a funding partner for Southwest Weed Management, which enables more projects to be completed and increases available water in the Western Upper Republican River Basin. This benefits the entire state of Nebraska by maintaining compliance with the Republican River Compact with the states of Kansas, Colorado and Nebraska.

### **Twin Valley Weed Management Area: \$223,000**

The Twin Valley Weed Management Area (TVWMA) proposes to continue its ongoing, highly successful project of large-scale removal of invasive plant species and debris along the Republican River, Little Blue River, and their tributaries within the jurisdiction of the TVWMA coverage area. TVWMA members include county weed superintendents, Trailblazer RC&D, the Lower Republican and Little Blue NRDs, the U.S. Army Corps of Engineers, the Nebraska Game & Parks Commission, NRCS's, FSA's, Nebraska Extension, other public agencies, and private landowners. The group's primary goal is to coordinate and assist with efforts to identify, contain, and control the spread of noxious weeds and invasive plants. The secondary goal is to ensure that the Nebraska/Kansas water compact is met through means of our primary goal and occasional debris cleanout of the waterways to mitigate water flow degradation.

### **Invasive and Noxious Weed Control**

As mentioned above, Noxious Weed Control is our primary purpose for the use of funds. This is done using several different methods; helicopter, drone, airboat, and our Argo. TVWMA has done an outstanding job of monitoring the rivers within our region and when we travel the rivers

to spray Phragmites, less outbursts have been seen than in previous years. However, with the decreasing amount of Phragmites in the rivers, we are starting to see an uptick in upland spots across our nine counties. So, we will still be targeting the rivers to ensure Phragmites outbursts and residual plants are eradicated, however we will also be targeting the upland areas that are starting to have outbreaks. In addition, utilizing the Airboat, we will target invasive vegetation growing along the banks of the rivers. It has been several years since we have been able to utilize an airboat for this project which has resulted in vegetation growing along the banks, preventing our being able to egress areas to reach patches of noxious/invasive vegetation. This undertaking is beneficial to everyone within the State of Nebraska, the spread of noxious/invasive weeds will be closely monitored and will be conducted in accordance with the chemical labels.

### Waterway Conveyance

We wish to conduct 14 thinning and pruning projects with Landowners within TVWMA, focusing on preventing wasteful degradation of water resources. Partnering with Landowners is essential and we conduct this program to aid Landowners, cleaning up areas of trees near water to prevent the buildup of debris. By having this program, less cleanup projects on creeks are needed due to the area being managed before it becomes a problem. The Corp of Engineers have also asked that we assist them with another Edge Feathering/Deadfall Cleanup project on Corp ground due to the area being littered with debris and invasive trees taking over. Since we were successful with this project before, we plan on continuing to partner with Game and Parks and the Corp of Engineers to clean up locations around the Harlan County Reservoir. This project will result in improved wildlife nesting grounds and allow us to continue to eradicate noxious weeds resulting in native habitat reestablishment.

### Education

TVWMA wants to help our Landowners become better stewards of their land within our area. We have participated in the Water Jamboree's held by both of our partnering NRD's resulting in the educating of over 600 children within our area on the activities that we conduct within the watershed area. We wish to continue educating the upcoming classes of children utilizing grant funding within this grant. With this grant we will also continue our contributions toward the Weed Watch insert and keeping landowners informed about what noxious weeds are doing throughout the State of Nebraska. This will help landowners understand what is growing and how to properly handle the unwanted plants. This will also be a great way to expand the knowledge of our programs and the ways that we can best help the landowners within TVWMA.

### Benefits & Outcomes:

1. Higher river base flows and reduced flood damage – resulting from the elimination of noxious plants and in-channel vegetation blocking water flow in rivers and tributaries.
2. Riparian Woodland health – will continue to be improved through selective cutting of undesirable and invasive tree species including Eastern Red Cedar and Russian Olive trees.
3. Re-establishment of natural landscapes – to promote native plant, terrestrial wildlife, and fish species through removal of non-beneficial species and selective replanting of beneficial species and other work to provide wildlife food and shelter as well as enhance riparian uses for livestock, recreation, and sporting opportunities.
4. Long-term control of invasive plants within and adjacent to stream channels to prevent wasteful consumptive use of water and help mitigate degradation of water supply.

### **Lower Platte Weed Management Area: \$380,708.00**

The Lower Platte Weed Management Area (LPWMA) projects benefit every Nebraskan by improving stream flows, channel conveyance, water for human and livestock consumption, recreation benefits and wildlife habitat throughout the Lower Platte River and its tributaries. Implementation of the project is through a coordinated effort between the LPWMA and its many local, State & Federal partners.

Improves stream flow and channel conveyance.

The LPWMA's project targets invasive aquatic vegetation as well as invasive woody vegetation which threatens to turn the braided stream into permanent middle and high sandbars. Many of the barren or intermittently vegetated sandbars have been invaded by an intermingling of willows, cottonwoods, false indigo as well as purple loosestrife, saltcedar, and phragmites reducing flow capacity. Middle to high sandbars, primary Platte River channel nesting habitat of the least tern and piping plover, is being lost to

vegetation. These middle to high sandbars poses a risk of reduced stream flow and channel conveyance as well as increased ice jams and flooding if left unaddressed. The recent research conducted by the United States Geological Society and Army Corps of Engineers demonstrated the current persistence of these middle to high sandbars in the lower Platte River basin. If the sandbar persists for more than one to two years, there is a greater than 60% likelihood that the sandbar will become a permanent sandbar. These permanent sandbars pose a danger to becoming quickly inhabited by invasive woody trees and

invasive weeds establishing where the seeds and plant propagules plant themselves on the upstream and downstream areas of these islands. The sandbar establishment results in water loss that would otherwise be utilized for agriculture, human consumption, wildlife habitat, and recreation. The channels of the Lower Platte would lose the ability to handle the melted flow of ice jams during the warming transition from winter to spring. Addressing these islands and

controlling new woody invasive growth and invasive species is a proactive management strategy that fosters a sustainable water supply for the future while proactively managing for efficient channel conveyance of water and lowering the risk for damaging ice out conditions which rely on clear, braided river system. It is critical to keep the channel conveyance open in the LPWMA section of the Platte River watershed to ensure adequate water to well fields that are vital to keeping Lincoln and other communities with clean, safe drinking water.

Prioritizes fully and over appropriated river basins.

The LPWMA is located downstream from the fully and over appropriated section of the Platte River. Best Management Practices (BMP's) have been put in place in eastern Nebraska to prevent this designation, as many entities work to manage the issues that have caused western Nebraska to become fully and over appropriated. Invasive species know no boundaries and the management of those invasives should not end because of the fully/over appropriated designation.

### Sound Planning and Design

The Lower Platte Weed Management Area (LPWMA) was established in 2003 with the mission to improve the health of the riparian areas throughout the Lower Platte River & Tributaries for the benefit of the landowners, recreationists, and the public. Our mission is to manage and prevent all riparian

invasive plant invaders and improve wildlife habitat and stream flow capacity by managing the nonnative vegetation in the stream bed, banks, and the adjoining flood plain throughout the Lower Platte River & Tributaries. The LPWMA works diligently with numerous landowners along the Platte River and its tributaries. The high density of residents living along the river and its use for recreation and public access make it critical for our applications to be precise to prevent herbicide damage to neighboring properties as well as keeping the channels clear to prevent flooding to the properties.

### Direct measurable environmental benefits

By managing the nonnative vegetation, we will have a positive impact on the environmental benefits along the Lower Platte River & Tributaries, including increased stream flows, water for human consumption, livestock, agriculture, as well as creating and protecting habitat for the endangered species. The LPWMA focus is always on the positive environmental impact we have on the riparian areas we manage. Sandbars free of vegetation are viable nesting habitat for Nebraska's threatened and endangered bird species the Interior Least Tern and the Piping Plover. However, new, small infestations of invasives are threatening to re-establish these clean sandbars. If left untreated, invasives will become a negative change agent for the river corridor, resulting in water lost to woody and invasive plants that would otherwise be available and utilized for agriculture, human consumption, wildlife, and recreation.

### Wide variety of public/private partners

The LPWMA is proud to partner with private landowners, local companies and utilities, County, State and Federal agencies. Many have been financial contributing partners since our beginning in 2003. Along with the 11-member County Weed Departments, we also have strong support from the Lower Platte South, Lower Platte North, and Papio-Missouri NRD's, Nebraska Game & Parks Commission, UNL Tern and Plover Conservation and UAS (drone) research partnerships. LPWMA is consistently reaching out and developing relationships with current and perspective partners.

### County Weed Control Authority leadership

The LPWMA takes pride in the role the County Weed Control Superintendents play. Our goal from day one was to make sure the funding received by the WMA is used to better the Lower Platte River & Tributaries. By having the Weed Superintendents take the lead and not hiring an outside coordinator, we are able to ensure our funding gets used to treat invasive vegetation rather than pay staff. Weed Superintendents are directly involved in the day-to-day operations, making contacts with landowners, surveying, monitoring, and treating the new and existing infestations.

### Innovative and unique

The LPWMA is continually searching for and using the latest innovative and unique methods to manage the invasive vegetation along the Lower Platte River and its tributaries. This year's project includes phase 2 of the research by the University of Nebraska Department of Biological Systems Engineering. The goal of this research includes developing an intelligent sensing and application system for mapping and automatically differentiating nonnative phragmites in riparian areas, followed by site-specific application using the state-of-the-art drone-based platforms and artificial intelligence-based decision

makings. Coordination of this technology brings innovation and experimentation.

Additional innovative and unique tools and methods include:

- 50/50 landowner cost share, getting buy in from the landowners and building public relations between landowners and LPWMA partners.
- Working to identify pathways in which invasive spread to prevent new infestations.
- Treatments made with helicopter, drone, and airboat applications.
- Implementing mechanical shredding, mowing and deep disking of sandbars.

The LPWMA is the first WMA in Nebraska to require UAS (drone) applicators to bid on contracts to

ensure cost effectiveness during applications. This bid process is now being utilized by other WMAs in Nebraska, including the Platte Valley WMA and Twin Valley WMA.

Prevents resource contamination and degradation.

To prevent contamination and degradation to the health of the river the LPWMA always follows Federal Law by using aquatic approved herbicides safe to the fish and wildlife that depend on the rivers and riparian areas. The equipment and methods used are proven to be safe and accurate, preventing any off-target applications.

Integrates multiple weed management tools.

The LPWMA uses a wide variety of tools to achieve our weed management goals. As technology continues to improve, we've been able to use technology to become more efficient in surveying and treating vegetation. Surveys and herbicide treatments are performed by helicopter, airboat, Argo, and Unmanned Aerial Systems (drones). To complement our herbicide treatments, we use mechanical removal with shredding, mowing and deep disking to improve the health of the riparian area. LPWMA brings coordination of multiple contractors together that normally wouldn't work in the same scope.

One example is the LPWMA was the first WMA to use airboats to move drone applicators up and down the river to launch at various locations to treat invasive vegetation.

Cost-effective

The LPWMA continues to be cost effective in its management of noxious and invasive species within the entire watershed. Our aggressive management over the last 20 years has reduced our infested acres to less than 5% of the approximate 40,000 acres of flowing water within the Lower Platte River. The LPWMA is coordinated, at no cost, by the Weed Superintendents and partners to ensure the funding is used to improve water conveyance. Weed Superintendents also contribute many hours of In-kind contributions that ensure the funding is maximized above and beyond the funding received. The LPWMA's helicopter applicator uses the GPS survey data for annual control efforts instead of a search and destroy method. By using precision technology data point information, we are extremely efficient and effective in our approach to controlling unwanted vegetation ensuring priority areas are proactively managed instead of relying on a contractor to fly the whole project area, identify target species, and search and destroy those targets. This method ensures the grant dollars for control are accounted for and allows for landowner cost share of acres surveyed and sprayed. Each GPS survey point is controlled by the contractor and reduces the risk of leaving untreated areas. Treatment of invasive species along the flowing rivers and streams will be made by helicopter, airboat, and Unmanned Aerial Systems (UAS) to maximize our control cost. LPWMA contractors are required to bid on our projects ensuring we are getting the best value with both qualified and cost-effective applications.



Matching resources (percent cash) 23.64 % Cash Matching funds

The LPWMA has a long history of excellent partners contributing to the success of the projects along the Lower Platte River and its tributaries. County Weed Control personnel contribute many hours of in-kind services to ensure the success of the projects. Lower Platte South, Lower Platte North and Papio– Missouri NRD's each contribute \$30,000 each, totaling \$90,000 cash match. The success of the project is made possible because of the involvement with our private landowners' 50/50 cost share. Our contributing partners all share in a common goal and provide above and beyond financial backing.

Management practices developed extend beyond grant term.

Every aspect of the projects throughout the LPWMA are working toward long-term results. Landowner education and participation are key to long-term sustainability and the LPWMA has been successful in partnering with landowners since the beginning. We have formed strong partnerships with the three NRD's in our 11-County region and will continue to work with them for many years. The LPWMA will continue to assess the effectiveness of our eradication efforts by continually evaluating how we manage the flowing streams. LPWMA partners are always looking at ways to ensure our efforts are ongoing and not just short-term fixes. Recent surveys show we've substantially reduced the number of acres of nonnative vegetation, an indication of long-term benefits for the health of the riparian area. Future maintenance and administration support of the project will be achieved through financial commitments from our NRD partners and private landowner cost share.

Protecting the "Waters of the State"

Every Nebraskan, especially those along the flowing rivers and streams will greatly benefit from the treatment of invasive vegetation to create a healthy riparian system. The economic impact of doing nothing to manage the invasive vegetation would be detrimental to the region. Increased risk of flooding, reduced water conveyance, reduced wildlife habitat, are just a few of the potential negative results. By utilizing our funding effectively and efficiently, everyone benefits; whether you're an environmentalist, recreationalist, live in the city and use the water, or drive over a bridge that is being protected by minimizing the risk of flooding, all Nebraskan's benefit from the work. The LPWMA will continue to manage for a positive economic impact with free-flowing streams, water for human and livestock consumption and increased habitat for endangered species as well as other wildlife that depend on the riparian areas. Water is the State's most valuable resource, working in a cohesive effort and protecting this resource will remain our top priority.