

**Environment and Natural Resources Trust Fund
2012-2013 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 017-B

Controlling Terrestrial Invasive Plants with Grazing Animals

Topic Area: B. Forestry/Agriculture/Minerals

Total Project Budget: \$ 52,000

Proposed Project Time Period for the Funding Requested: 3 yrs. July 2013 - June 2016

Other Non-State Funds: \$ 0

Summary:

Connects livestock producers with landowners to develop a cost effective environmentally friendly BMP to control invasive terrestrial species through planned grazing, and then transfer this knowledge to others in region.

Name: John Beckwith

Sponsoring Organization: Hiawatha Valley Resource Conservation & Development, Inc.

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Location

Region: SE

County Name: Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona

City / Township:

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ Employment	_____ TOTAL _____%



Environment and Natural Resources Trust Fund (ENRTF) 2012-2013 Main Proposal

PROJECT TITLE: Controlling Terrestrial Invasive Plants with Grazing Animals

I. PROJECT STATEMENT

Terrestrial invasive plants including buckthorn, wild parsnip, honeysuckle, garlic mustard and others are becoming dominate species at an alarming rate in many ecological sites in SE Minnesota. Present chemical and mechanical control methods are costly, effective only in the short-term or have other negative environmental impacts. Prescribed grazing for invasive plant management has been used in many parts of the western US to manipulate patterns of defoliation and disturbance to place target plant species at a competitive disadvantage. This is often done by grazing at a time and frequency when target plants are most vulnerable to prevent flower and seed production. Grazing management that employs multispecies (goats, sheep or cattle) grazing techniques takes advantage of each animal’s inherent dietary preferences among different livestock classes. Benefits include reducing the competitive advantage of one plant over another by creating equal pressure on grasses and forbs in a community.

The goal of this project is to: 1) develop a cost effective and environmentally friendly alternative to chemical and mechanical control methods for these species, 2) demonstrate that multispecies grazing techniques can be used effectively to control invasive plants, 3) distribute results during field day demonstrations to connect livestock producers within landowners in the SE Minnesota Driftless Area and 4) develop a Best Management Practice for invasive species control using sustainable grazing management.

Sites with the target species will be selected and grazed at different durations and intensities using multispecies grazing techniques. The grazing duration, intensity, frequency and timing will be evaluated to determine the most successful method for invasive plant control. Monitoring will be conducted during the spring, summer and fall for two years to document the effect of prescribed grazing management. Control plots will also be established and managed with mechanical or chemical treatments for comparison. This project will allow Hiawatha Valley RC&D to continue grazing efforts already initiated during the 2011 and 2012 growing seasons to expand federal funds previously earmarked for the Driftless Area Initiative. We envision this project will be the mechanism to transfer small localized prescribed grazing knowledge and sustainable techniques to a broader audience across the SE Minnesota Driftless Area.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Inventory, Monitoring, Evaluation and Documentation

Budget: \$18,000

Document site conditions through photographs and vegetation transects as the project progresses (spring, summer and fall). Monitor grazing management techniques and evaluate where grazing duration, intensity, frequency and timing modifications are required to determine the most effective management for target and non-target species. Establish control plots for chemical and mechanical treatments for method comparisons for outreach at field demonstration days.

Outcome	Completion Date
1. Baseline data collection, vegetation transects, and photograph documentation	Sept 2015
2. Evaluation of grazing modifications (if necessary) for targeted and non-targeted species	May 2015
3. Inventory, evaluate & document control sites receiving mechanical and chemical treatment	Sept 2015

Activity 2: Prescribed Multispecies Grazing of Target Species

Budget: \$24,000

Select plots with invasive species and identify livestock producers to implement prescribed grazing. Develop and implement a grazing plan to control target species. The plan will identify paddock locations, grazing duration, intensity and frequency during the plants’ most vulnerable time stage in the reproductive cycle to interrupt flower/seed production. Monitor and adjust stocking rates as needed.

Outcome	Completion Date
1. Select sites with target species & develop site-specific grazing plans (annually)	March 2014
2. Establish paddock enclosures & water sources	Sept 2015
3. Adjust stocking rates and duration to provide desired control of target species	July 2014

Activity 3: Outreach, Education, BMP Development and Reporting

Budget: \$10,000

Host two field demonstrations per year to educate the public and land use professional about effective alternative control methods for invasive plant management. Field days will include tours and will request input from participants for BMP development. Compile data and prepare final report.

Outcome	Completion Date
1. Host 2 field demonstrations per year (6 total)	May 2016
2. Develop multispecies prescribed grazing BMP for invasive plants	March 2016
3. Distribute results and final reporting	June 2016

III. PROJECT STRATEGY

A. Project Team/Partners - The Hiawatha Valley RC&D will be the fiscal agent and only organization to receive ENRTF funds. John Beckwith, Executive Director of Hiawatha Valley RC&D will be responsible for coordinating the overall project. Four other team members will be directly involved: John Zinn, State Grazing Specialist at the NRCS-USDA will provide guidance in developing a sustainable grazing system that addresses forage and livestock requirements; Steve Carlin, Ranger at the Gamehaven Boy Scout Ranch will provide over 200 acres of grassland for grazing and host field demonstrations; livestock producer(s) (to be selected) will provide animals for grazing and a independent contractor (to be selected) will monitor vegetation during the grazing progression. Additional partners that will contribute technical or in-kind services include: George Poch, Private Soil Scientist and President, Hiawatha Valley RC&D; Mike Muzzy, District Conservationist, NRCS-USDA; Kurt Hinz, Forester, MNDNR; Boy Scouts of America Gamehaven Boy Scout Ranch (site) and USDA-Natural Resource Conservation Service.

B. Timeline Requirements - In Year 1 we will: 1) complete two field demonstration days at the Gamehaven site to engage livestock producers and landowners to participate in the project, 2) distribute results collected during 2011-2012, 3) select livestock producers, grazing sites, prepare grazing plans, conduct vegetation transect data and initiate grazing. In Year 2 we will: 1) host two field days and 2) continue grazing plots and collecting vegetation transect data. Year 3 will: 1) host two field days, 2) finalize grazing management and data collection, 3) develop a prescribed grazing BMP for invasive control and 4) quantify invasive species reduction and prepare the final report.

C. Long-Term Strategy and Future Funding Needs - Three years of funding from the ENRTF will allow the project to be implemented over two growing seasons. Unlike other forms of invasive control, prescribed grazing does not provide dramatic changes to landscapes in a short period of time, so multiple years of management may be required to sustain desired goals. Development of a prescribed grazing BMP for invasive species control will help sustain this project long-term through landowner adoption. Funding to connect producers with landowners on a statewide scale may be requested in the future.

2012-2013 Detailed Project Budget

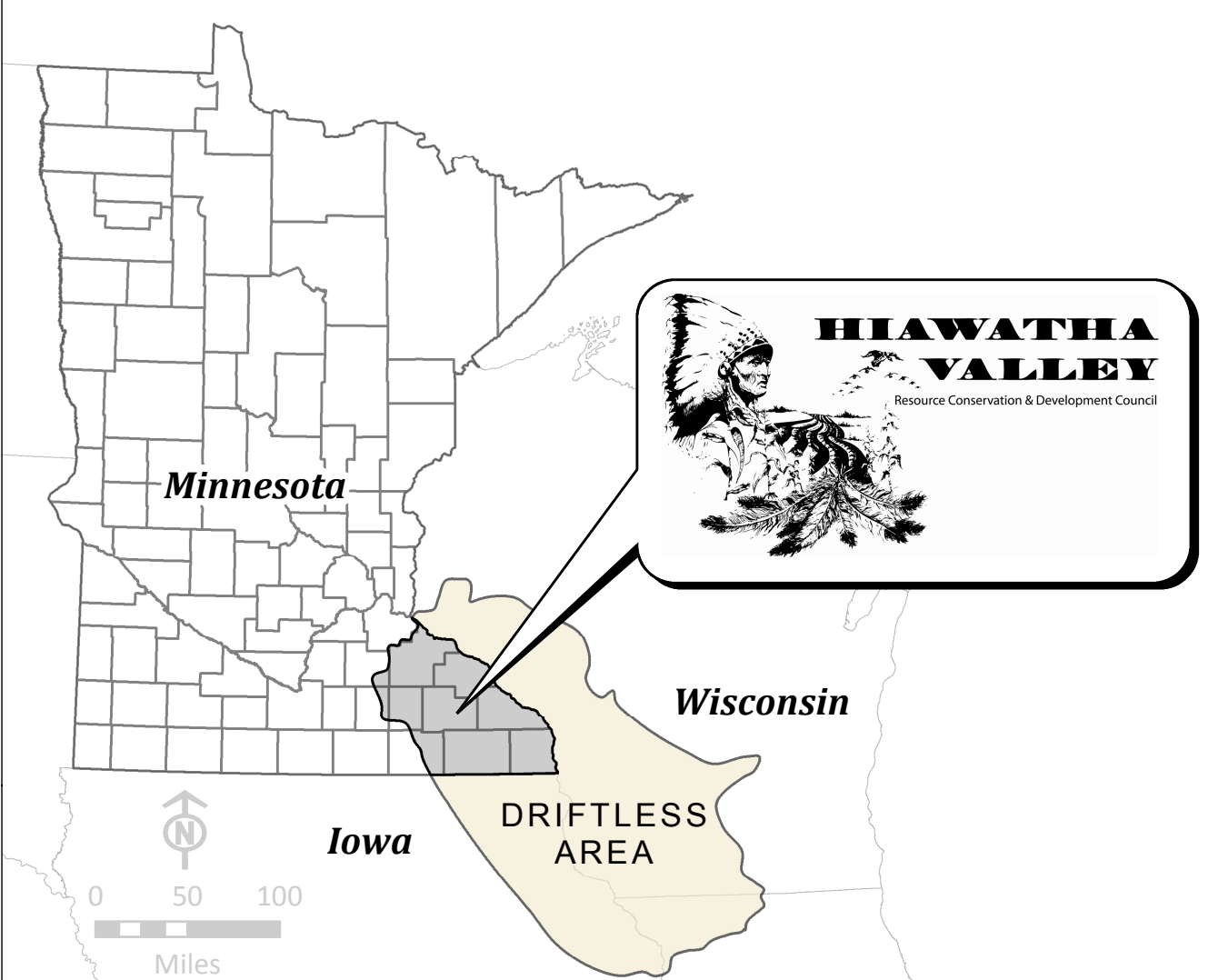
IV. TOTAL ENRTF REQUEST BUDGET [*Insert # of years for project*] years

BUDGET ITEM	AMOUNT
Personnel: Project Coordination - John Beckwith (Hiawatha Valley RC&D), 0.010 FTE 70% salary 30% benefits for 3 years.	\$ 6,000
Contracts: Grazing Contractor(s) to be selected. Provides animals, equipment, tools, daily care of animals and set-up of temporary grazing enclosures on each site . (\$3,000/site/yr for 3 years for 2 sites/yr)	\$ 18,000
Contracts: Inventory, monitoring and evaluation of each study site; Contractor to be selected through competitive bidding. Establish baseline conditions through transects and photographs, conduct analysis and reportings. (\$8,000/yr)	\$ 24,000
Equipment/Tools/Supplies: Provided by contractor, or use of Hiawatha Valley RC&D fencing purchased with federal funding through the Driftless Area Initiative.	N/A
Acquisition (Fee Title or Permanent Easements):	N/A
Travel:	N/A
Additional Budget Items: Publication and distribution of results and BMP	\$ 4,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 52,000

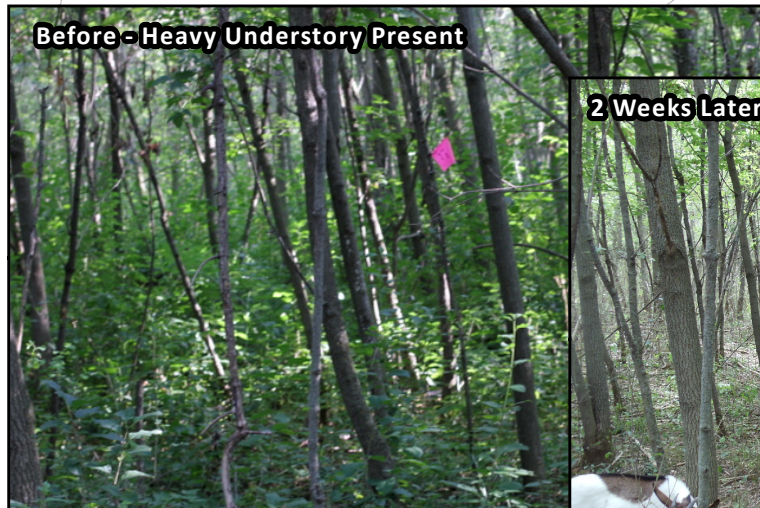
V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Applied to Project During Project Period:	N/A	
Other State \$ Being Applied to Project During Project Period:	N/A	
In-kind Services During Project Period: Grazing plans and monitoring by the NRCS State Grazing Specialist (John Zinn). Information will be used to establish criteria for BMP development. (150hrs/yr @ \$80/hr)	\$ 24,000	<i>pending due to fed. Budget</i>
In-kind Services During Project Period: Gazing land (Value of pasture rental) 100 acres per site \$90 ac/6 month period. Two sites to be selected per year.	\$ 36,000	<i>pending, but have previous commitment</i>
Remaining \$ from Current ENRTF Appropriation (if applicable):	N/A	
Funding History: Federally earmarked funding for the Driftless Area Initiative passed through the NRCS Conservation Technical Assistance Program. Funding was used during the 2011-2012 growing season to begin prescribed grazing management.	\$ 16,500	


Controlling Terrestrial Invasive Plants with Grazing Animals



The map displays the state of Minnesota with county boundaries. A callout box points to a specific area in the southeastern part of the state, labeled "DRIFTLESS AREA". This area is shaded in light yellow. To the east of this area is the state of Wisconsin, and to the south is Iowa. A scale bar at the bottom left indicates distances of 0, 50, and 100 miles. A north arrow is also present. An inset box in the upper right corner features the logo for "HIAWATHA VALLEY Resource Conservation & Development Council", which includes a black and white illustration of a Native American man in traditional dress.



Before - Heavy Understory Present



2 Weeks Later - Understory Removed

Photos showing the results of a successful demonstration project from the Gamehaven Scout Ranch in Olmsted County, MN.

Controlling Terrestrial Invasive Plants with Grazing Animals: Project Manager Qualifications & Organization Description

Project Manager Qualifications

John is a graduate of the University of Minnesota in Crookston with an Associate of Applied Science in Soil and Water Technology, and a Graduate of the University of Minnesota St. Paul with a Bachelor of Science Degree in Soil Science. John has 37 years' experience with the USDA-Natural Resources Conservation Service in technical and management positions. He was a District Conservationist for six years in Houston County, which is within the project area. He has also been in key leadership positions of project development and management with NRCS, providing assistance to nine states other than Minnesota.

Experience that will lend itself to this project management role includes supervision of multidisciplinary teams at area office and state office levels in NRCS. He was the area conservationist in Eau Claire, WI supervising the area staff of scientists and engineers. Again, issues of West Central Wisconsin are similar to the natural resources of Southeast Minnesota. He was also a water resources staff leader in the Minnesota State Office for six years, supervising a team of professionals, overseeing watershed and river basin planning activities, and represented NRCS on numerous stakeholder groups for TMDL planning. Most recently, John has been the executive director and project manager for the Minnesota Association of RC&D Councils and Hiawatha Valley RC&D. He is managing projects associated with wetland mitigation banking, technical service providers and the Driftless Area Initiative.

Organization Description

The vision of the Hiawatha Valley RC&D Council is to have a productive economy and good standard of living in balance with a quality environment. Our mission is to provide a regional framework to empower people to balance environmental and economic needs through leadership, collaboration, communication, and project development. The Council addresses resource conservation and development issues in the eleven southeastern Minnesota counties. These counties are: Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha and Winona. Our projects have primarily focused on protection of natural resources, improving agricultural practices for resource protection and alternative crop production, and rural community development. These broad objectives have been accomplished through project activities including tours and demonstrations, information and education programs, community and group planning, and project coordination with numerous partners.

The council was organized in 1972 when they made their application for USDA authorization, which was approved in 1975. In May of 1976 Hiawatha Valley RC&D was incorporated in the State of Minnesota as a Charitable Trust and was recognized as a 501(c)3 non-profit organization by the IRS. The council is comprised of up to three members from each county within the RC&D area, for a total of thirty-three members. These three members represent their respective counties and include one SWCD Board Member, one County Commissioner and one At-Large Member. The council has four officers, Chairman, Vice-Chairman and Secretary-Treasurer and an alternate.

The Council has been actively engaged in grazing as a management tool for controlling invasive species. They have an ongoing project utilizing goats for this purpose and are working towards connecting producers with landowners to develop efficient and sustainable practices for managing grasslands. This project will provide the background and knowledge needed to proceed with larger scale utilization of livestock in invasive plant control. We envision our experience will result in cost effective practices and the Council will be the driver to transfer this knowledge for larger scale control.