



# Environment and Natural Resources Trust Fund

2027 Request for Proposal

## General Information

**Proposal ID:** 2027-232

**Proposal Title:** Mobile Biochar for Invasive Plant Disposal and Suppression

## Project Manager Information

**Name:** Tia Parks

**Organization:** Cook County

**Office Telephone:** (218) 264-9774

**Email:** tia.parks@cookcountymn.gov

## Project Basic Information

**Project Summary:** Purchase a mobile biochar kiln that will be used for the innovative disposal and suppression of invasive plants on public, private, local, state, tribal, and federal lands in Cook County.

**ENRTF Funds Requested:** \$69,000

**Proposed Project Completion:** June 30, 2030

**LCCMR Funding Category:** Small Projects (G)

**Secondary Category:** Fish and Wildlife (D)

## Project Location

**What is the best scale for describing where your work will take place?**

Region(s): NE

**What is the best scale to describe the area impacted by your work?**

Region(s): NE

**When will the work impact occur?**

During the Project and In the Future

## Narrative

### **Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.**

Cook County faces unique issues in accessing legal disposal sites for state regulated invasive species due to its remote location in the far northeastern corner of Minnesota, on the shore of Lake Superior and the edge of the Boundary Waters Canoe Area Wilderness. A legal disposal site is a compost facility that has been approved by the state to accept invasive plants, and the closest one to Cook County is at least 80 miles away. Invasives species such as knotweeds, purple loosestrife, common tansy, wild parsnip, garden valerian, and more create large quantities of biomass making site access difficult, revegetation and restoration seemingly impossible, and decrease visual aesthetic and economic value of property. Several of the species we manage are extremely aggressive and known to have the ability to propagate from small stem and root fragments, even when brown and seemingly unviable. All stated regulated invasive plants cannot be removed from a site without a state permit, and the Department of Agriculture highly suggests leaving invasive species on the site where they originated to avoid further spread. It is difficult to impossible to move forward with management sites where the soil is inaccessible due to slowly decaying biomass.

### **What is your proposed solution to the problem or opportunity discussed above? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & Milestones.**

Our solution to the issue of invasive species disposal is to acquire a mobile biochar kiln. The county ag inspector would mobilize the kiln to management sites (85 sites from 300 sq ft to 1 acre and multiple miles) for biomass disposal, site preparation, and further suppression. The mobility of the kiln helps eliminate the threat of invasive plants spreading from the site to new areas from human transport. Converting the biomass into biochar creates material that can be spread over the disturbed area to aid in suppression of target species'. Use of biochar in the soil can aid in soil remediation post invasion which can ultimately help prepare the site for re-vegetation using native species. Restoration is not the goal of the project, but rather we plan to improve the site by revegetating with native species that thrive in the new soil type. The project has potential to expand beyond the initial use, as the team can consider creating a drop-off location for the public or by mobilizing the kiln for private property where we do not have a current project. Target species include knotweeds, purple loosestrife, wild parsnip, garden valerian, buckthorn, barberry, dalmatian toadflax, and several others.

### **What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?**

The project outcomes directly relate to protecting and improving the natural resources on Cook County public and private lands that are not yet or minimally affected by invasive plants. We manage 85 sites ranging from 300sq ft to 1 acre to multiple miles that will benefit from this project. The county thrives on our unique natural resources that must be protected. Biomass disposal and revegetating will greatly boost our ability to enhance the quality of native biodiversity on each site, while not restoring the site but by improving the soil and resources for site specific native revegetation.

## Activities and Milestones

### Activity 1: Purchase Mobile Biochar Kiln and Begin Use on Project Sites

**Activity Budget:** \$68,999

**Activity Description:**

The biochar will be purchased as soon as funding is awarded for use. The team will be trained in use of the system on one of our target sites. We will mobilize the kiln to two project sites before the end of fall. Site documentation will take place immediately at the end of processing and will continue twice annually through the following years.

**Activity Milestones:**

Description	Approximate Completion Date
Purchase and receive all equipment and supplies including the kiln system, PPE, and accessories.	September 30, 2027
Receive in-house training from Mobile Biochar Systems/Maine Kilns at one of our projects.	October 31, 2027
Start by completing 2 knotweed sites.	November 30, 2027
Process photos collected before, during, and after the process.	November 30, 2027

### Activity 2: Kiln Use Continues, Findings are Documented, and Sites Assessed for Revegetation

**Activity Budget:** \$1

**Activity Description:**

10 invasive species sites will be managed using the kiln system. Invasive species sites that have undergone biochar conversion will be observed, photographed, and findings will be documented for sharing. Observations will occur in June and August annually. Sites will be assessed for revegetation at the end of year 3.

**Activity Milestones:**

Description	Approximate Completion Date
Complete biochar conversion at 10 invasive species sites.	November 30, 2029
Invasive species sites using biochar conversion observed, photographed, and findings documented for sharing.	June 30, 2030
Observations occur in June and August annually. New growth of invasive species treated, funded separately.	June 30, 2030
Findings compiled for sharing.	June 30, 2030
Sites assessed for revegetation.	June 30, 2030

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Tia Parks - Coordinator	Cook County Invasives Team	Collaborative Partner, Education, Sharing	No
Monika Chandler	Minnesota Department of Agriculture- Noxious and Invasive Weed Program	Dissemination of information gathered from the project to distribute findings to professionals and entities around the state and neighboring states.	No

## Dissemination

**Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.** Findings will be presented to Cook County Invasives Team partners in our regular meetings. They will specifically be shared with the department of agriculture who can share further through the state and can request presentation to Minnesota Association of County Agriculture Inspectors. Presentations may be prepared for the public and/or demonstrations may be performed.

We will acknowledge the Environment and Natural Resources Trust Fund through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications and outreach.

## Long-Term Implementation and Funding

**Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this work be funded?**

This project will have long-lasting effects on the team's ability to manage invasive species sites and will become a staple in our best management practices. The findings will be documented through observation, annual photography, and written documentation. Results will be shared with partner agencies, including the Department of Agriculture, who can share the results across the state. If capacity allows, this resource will eventually become available to the public as a drop-off location where they can exchange invasive species for biochar to use and will be funded by Cook County.

## Project Manager and Organization Qualifications

**Project Manager Name:** Tia Parks

**Job Title:** Cook County Agricultural Inspector and Cook County Invasives Team (CCIT) Coordinator.

**Provide description of the project manager's qualifications to manage the proposed project.**

As Ag Inspector, I enforce the Minnesota Noxious Weed Law in coordination with the Minnesota Department of Agriculture (MDA) and manage invasive terrestrial species across all jurisdictions in the county including private, local, state, federal, and tribal lands. I also create and manage invasive species programs, provide resources for professionals and the public, administer pesticide applicator testing, and deliver outreach programs and events.

The Cook County Invasives Team is a Cooperative Weed Management Association (CWMA). As the coordinator, I initiate

and implement collaborative invasive species management and outreach efforts among multiple agencies which include but are not limited to, the Superior National Forest, DNR, MDA, Grand Portage Band of the Lake Superior Chippewa, MN Department of Transportation, and Cook County SWCD.

**Organization:** Cook County

**Organization Description:**

Cook County Government is a county governing body and serves as the fiscal agent of the CCIT and houses the County Ag Inspector.

The purpose of the CCIT is to encourage and formalize the cooperative relationship necessary for effective management, coordination, and implementation of invasive species programs among interested parties. The CCIT works to enhance invasive management programs in the region by encouraging sharing of resources, information, expertise, and effort on both public and private lands. Organizations such as the CCIT can also apply for funding for invasive management. The CCIT is a formal Cooperative Weed Management Association (CWMA).

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
							<b>Sub Total</b>	-
<b>Contracts and Services</b>								
							<b>Sub Total</b>	-
<b>Equipment, Tools, and Supplies</b>								
							<b>Sub Total</b>	-
<b>Capital Equipment</b>								
		Mobile Biochar Kiln System	The kiln system will be used to innovatively dispose and suppress invasive species on 85 project sites in Cook County where no legal disposal site exists within 80 miles one way and decomposition is far slower or not achieved. All jurisdictions and property types across the county benefit from this project through collaborative use and knowledge sharing.	X				\$69,000
							<b>Sub Total</b>	\$69,000
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	-
<b>Travel In Minnesota</b>								
							<b>Sub Total</b>	-

<b>Travel Outside Minnesota</b>								
							<b>Sub Total</b>	-
<b>Printing and Publication</b>								
							<b>Sub Total</b>	-
<b>Other Expenses</b>								
							<b>Sub Total</b>	-
							<b>Grand Total</b>	<b>\$69,000</b>

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Capital Equipment		Mobile Biochar Kiln System	<p>Justifications and payback acknowledgement attached.</p> <p><b>Additional Explanation :</b> The sole purpose of this purchase is to use the biochar kiln for disposal and suppression of invasive plants in Cook County. The use of the kiln for this purpose will continue through the life of the system, and we intend for it to become part of our best management practices.</p>

Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
<b>State</b>				
			<b>State Sub Total</b>	-
<b>Non-State</b>				
In-Kind	County Regular Funding	The county pays the salaries of the county ag inspector and environmental technician who will be using the kiln for invasive species management. The county will pay kiln maintenance and the fuel to haul the system. The county will also pay for revegetation efforts that come after the project. The amount accounts for the 3 year project period.	Secured	\$800,000
			<b>Non State Sub Total</b>	<b>\$800,000</b>
			<b>Funds Total</b>	<b>\$800,000</b>

**Total Project Cost: \$869,000**

**This amount accurately reflects total project cost?**

Yes

## Attachments

### Required Attachments

#### *Visual Component*

File: [8eca3170-dbd.docx](#)

#### *Alternate Text for Visual Component*

The attachment depicts a map of invasive species project sites managed by the ag inspector across Cook County. Picture shows biomass waste that is left behind from knotweed invasions....

#### *Financial Capacity*

Title	File
Cook County Most Recent Audit Report	<a href="#">b45785f8-176.pdf</a>

#### *Board Resolution or Letter*

Title	File
Cook County Board Resolution for Mobile Biochar Kiln	<a href="#">b00205d6-1d8.pdf</a>

### Supplemental Attachments

#### *Capital Project Questionnaire, Budget Supplements, Support Letter, Photos, Media, Other*

Title	File
Cook County Soil and Water Conservation District Letter of Support	<a href="#">e8c0eea7-383.pdf</a>
Minnesota Department of Agriculture Letter of Support	<a href="#">f271ee12-e80.docx</a>
Cook County Board Letter of Support	<a href="#">07c172f7-9f5.pdf</a>
Cook County Capital Equipment Justification & Payback Acknowledgement	<a href="#">cb0837fb-c2a.docx</a>

## Administrative Use

**Does your project include restoration or acquisition of land rights?**

No

**Do you understand that travel expenses are only approved if they follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?**

N/A

**Does your project have potential for royalties, copyrights, patents, sale of products and assets, or revenue generation?**

No

**Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?**

N/A

**Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?**

N/A

**Does your project include original, hypothesis-driven research?**

No

**Does the organization have a fiscal agent for this project?**

Yes, Cook County

**Does your project include the pre-design, design, construction, or renovation of a building, trail, campground, or other fixed capital asset costing \$10,000 or more or large-scale stream or wetland restoration?**

No

**Do you propose using an appropriation from the Environment and Natural Resources Trust Fund to conduct a project that provides children's services (as defined in Minnesota Statutes section 299C.61 Subd.7 as "the provision of care, treatment, education, training, instruction, or recreation to children")?**

No

**Provide the name(s) and organization(s) of additional individuals assisting in the completion of this proposal:**

Tia Parks Cook County

**Do you understand that a named service contract does not constitute a funder-designated subrecipient or approval of a sole-source contract? In other words, a service contract entity is only approved if it has been selected according to the contracting rules identified in state law and policy for organizations that receive ENRTF funds through direct appropriations, or in the DNR's reimbursement manual for non-state organizations. These rules may include competitive bidding and prevailing wage requirements**

N/A