Environment and Natural Resources Trust Fund

M.L. 2021 Approved Work Plan

General Information

ID Number: 2021-320

Staff Lead: Rory Anderson

Date this document submitted to LCCMR: July 21, 2021

Project Title: Restoring Land, Reviving Heritage: Conservation Through Indigenous Culture

Project Budget: $420,000

Project Manager Information

Name: Katie Bloome

Organization: Belwin Conservancy

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Project Reporting

Date Work Plan Approved by LCCMR: July 20, 2021

Reporting Schedule: December 1 / July 1 of each year.

Project Completion: June 30, 2024

Final Report Due Date: August 14, 2024

Legal Information

Legal Citation: M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 05f

Appropriation Language: $420,000 the first year is from the trust fund to the commissioner of natural resources for an agreement with Belwin Conservancy in partnership with Anishinabe Academy to conduct environmental education programming that incorporates ecology and indigenous land traditions and to restore an ecologically significant area of land using modern scientific standards and traditional ecological knowledge.

Appropriation End Date: June 30, 2024

Narrative

Project Summary: By linking natural resource management, cultural heritage, and environmental education, we aim to restore an ecologically significant area of land while fostering multi-generational environmental stewardship and restoration of Indigenous culture.

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

Belwin owns and protects nearly 1,500 acres of land near the Twin Cities and reaches over 2,000 people through programs and e-newsletters. Anishinabe Academy is a K-5 Minneapolis Public School focused on Dakota and Ojibwe culture and language.

While Belwin has an abundance of land, many urban Indigenous communities have lost their connection to nature and their food heritage. The Anishinabe Academy community is seeking a place where families can gather to experience cultural events, learn about traditional ways, and grow sacred medicines and food. Currently, the school is using a small courtyard, inadequate for accomplishing their goals.

The parcel of land included in this proposal includes 600 feet of Valley Creek, a DNR trout stream formed by spring-fed ponds that empty into the National Wild and Scenic St. Croix River less than one mile away. Valley Creek is one of the best trout producing streams in the State of Minnesota and Valley Creek watershed is home to more than 20 endangered, threatened, and special concern species. The habitat currently surrounding this stretch of stream is degraded forest and grassland with many invasive species present. By restoring this land, we will increase the quality of this significant stream.

What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.

This project aims to deepen both organizations' knowledge of land management while restoring an ecologically significant area and recovering this Indigenous community's access to nature.

To accomplish this, we will bring together land restoration experts, Belwin staff, and the school community to design and implement our restoration project. The partners will work together to restore the woodland and prairie incorporating Indigenous ways with Belwin's restoration practices. This restoration will contribute to better water quality in Valley Creek and healthier wildlife habitat. This partnership approach to restoration will instill an action-based environmental stewardship ethic in participants.

Restoration efforts will be paired with field trips led by Native elders and experts in ecology. Students and families from Anishinabe Academy will come to Belwin throughout the two-year period to study ecosystems, participate in land restoration, learn about cultural heritage, experience the bison herd and tallgrass prairie, and collect samples for lessons back at their school. The school community will also cultivate a garden with sacred foods and medicines using Native American traditions.

During and after this two-year program, Anishinabe Academy will have long-term influence over this parcel of land at Belwin with the ability to visit and conduct programming anytime.

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?

By linking natural resource management, cultural heritage, and environmental education, Belwin Conservancy and Anishinabe Academy aim to restore an ecologically significant area of land, while fostering multi-generational environmental stewardship and restoration of Indigenous culture.

If funded, this project will:

- Improve habitat quality in Valley Creek and the surrounding watershed
- Foster a multi-generational and action-based conservation ethic in urban Indigenous families
- Create a deeper understanding of cultural heritage through a Native garden site
- Connect the communities that Belwin and Anishinabe Academy serve so they can learn from each other with the common goal of long-term care of the land and water

Project Location

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

Region(s): Metro

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

Region(s): Metro

When will the work impact occur?

During the Project and In the Future

Activities and Milestones

Activity 1: Anishinabe Academy Education Partnership

Activity Budget: $213,700

Activity Description:
Students and families from Anishinabe Academy will participate in field trips to Belwin to learn about ecology, participate in land restoration, connect to the land through a Native cultural lens, and cultivate a Native garden site. During field trips, participants will learn about Native garden principles, astronomy, ecology, scientific measurements, STEM concepts, Indigenous traditions, and land-management principles, all with the help of Ojibwe and Dakota language experts. One example of this is a lesson based on the herd of bison that grazes Belwin's prairie each summer. Families will connect the cultural significance of the animals to the ecological benefits they give to the prairie ecosystem. Another example is the assessment of the health of the soil and water before establishing a Native garden site.

Curriculum experts and teachers at Anishinabe Academy will tie these lessons to MN state science, math, and social studies standards and incorporate them into yearly curriculum in the classroom. We will measure outcomes through teacher assessment of students, pre- and post- surveys of students, tracking participation numbers in family field trips, and through talking circles that explore Tribal history, culture, values, and practices.

Activity Milestones:

Description	Completion Date
Curriculum related to activities at Belwin will be incorporated into classroom lessons and standards.	June 30, 2022
Students and families will gain deeper insight of cultural heritage, measured through pre/post surveys.	June 30, 2023
Families will show a commitment to environmental stewardship through participation in garden and restoration efforts.	June 30, 2023
Students will demonstrate understanding of habitat concepts: native vs. invasive species, soil/water quality, and biodiversity.	June 30, 2023

Activity 2: Habitat Restoration

Activity Budget: $206,300

Activity Description:
The 17-acre parcel of land we will restore is situated along 600 ft. of Valley Creek, identified in Minnesota's State Wildlife Action Plan as a "Key River Reach." Valley Creek is one of only a few trout streams in Minnesota that has a naturally reproducing population of Brook, Brown and Rainbow Trout. The Valley Creek watershed is home to more than 20 endangered, threatened, and special concern species.

This land around this portion of the creek is severely degraded with a high density of buckthorn and other invasive species. Restoring the land to tallgrass prairie and floodplain forest will promote species diversity and reduce erosion and runoff into Valley Creek and the downstream St. Croix River.

We will begin by removing 100% of non-desirable species. Then, we will plant and seed native species and provide management to keep invasive species from returning. We will evaluate restoration areas with photo points, plant diversity and density measurements, and soil and water sampling. We will take a partnership approach to restoration that follows modern scientific standards as well as traditional Indigenous ecological knowledge. We anticipate both Belwin and the school community will learn about and improve practices.

Activity Milestones:

Description	Completion Date
Prairie site prep and seeding	June 30, 2022
100% reduction in buckthorn/undesirable trees and woody shrubs	June 30, 2022
Follow-up woodland treatments and invasive regeneration removal	June 30, 2023
Follow up prairie establishment and invasive species removal	June 30, 2023
Install native plants in woodland	June 30, 2023

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Laura Sullivan, Principal	Anishinabe Academy	Anishinabe Academy is a Minneapolis Pubic School that serves primarily Dakota and Ojibwe students. They exist to engage urban Indigenous students by integrating and reclaiming Native American identities, cultures and languages through authentic academic experiences. Our partnership began in 2018 and we hope to expand it with this program.	Yes

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.
Belwin plans to feature this project in our print and e-newsletters, both when funding is first secured and near the completion of the ENTRF funding to highlight progress. We will also hold a community event at the restoration and education site in spring or summer of 2023 to introduce community members to the project. Belwin will install signage at the site describing the partnership and acknowledging ENTRF funding.

Anishinabe Academy will keep and prepare a video library that students and families will be able to access any time. This will provide students with an ongoing connection to the lessons. The video library and any curriculum developed in conjunction with this project will be available to other schools and districts to use as a resource as well. We will make particular effort to share this information with Minneapolis Public Schools, St. Paul Public Schools, Stillwater Area Public Schools, and the Minnesota Department of Education.

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 per the ENTRF Acknowledgment Guidelines.

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 be funded?
Together with Anishinabe Academy, Belwin will continue to manage the restored land to maintain appropriate plant diversity and low occurrence of invasive species. These costs will be absorbed into Belwin's annual budget and/or funded through other grants. Education programs with Anishinabe Academy will continue, funded by the school and other grantors, including state and federal funds available for Indigenous-focused public school programming.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	$ Amount
Personnel								
Land Assistant/Specialist		Land restoration			26%	0.2		$10,800
Operations Director		Oversee and conduct habitat restoration			15%	0.1		$8,500
Program Director		Oversee Partnership Coordinator and run programs associated with education partnership			25%	0.1		$9,300
Partnership Coordinator		Coordinate and develop education program			29%	2		$140,400
							Sub Total	**$169,000**
Contracts and Services								
TBD	Professional or Technical Service Contract	Survey of land borders to be done before restoration work begins.				0.1		$10,000
TBD	Professional or Technical Service Contract	Woodland Restoration. Initial cutting and follow up sprays/plant removal.				1		$128,000
TBD	Professional or Technical Service Contract	Woodland planting activities.				0.5		$10,000
TBD	Professional or Technical Service Contract	Prairie restoration activities.				0.4		$39,000
TBD	Professional or Technical Service Contract	Create, design, and print interpretive signs for restoration areas, garden area, natural history, and cultural history.				0.1		$6,000
TBD	Professional or Technical	Educational programming by Native elders, cultural experts, and Native garden/ecology experts.				0.2		$16,000

	Service Contract							
Anishinabe Academy	Sub award	Anishinabe Academy teaching staff to facilitate summer learning and field trips. This is a single source contract because these teaching staff will be tied to the project in the school year. Continuity through the summer will provide the best educational experience.				0.4		$20,000
							Sub Total	**$229,000**
Equipment, Tools, and Supplies								
	Tools and Supplies	Dumster	Site cleanup, removal of debris from immediate educational areas.					$1,400
	Equipment	Rental tiller for garden	Till and install garden. Would rent for one day each year for two years.					$600
	Tools and Supplies	Tribal varieties of plants and seeds	Planting in the garden and surrounding areas. Must use heirloom tribal varieties for cultural education.					$4,500
	Tools and Supplies	Garden tools (rakes, shovels, wheelbarrows, etc.)	Teaching garden principles to students. Garden installation and upkeep.					$2,000
	Tools and Supplies	Field supplies related to measuring water/soil/air quality.	Teaching ecology and STEM concepts in the field					$2,000
							Sub Total	**$10,500**
Capital Expenditures								
		Fencing and signage	Marking borders of property for safety and security.					$5,300
							Sub Total	**$5,300**
Acquisitions and Stewardship								
							Sub Total	**-**
Travel In Minnesota								
	Other	Buses	Field trip transportation from Anishinabe Academy to Belwin					$4,800

			Conservancy. 6 trips per year for two years, $400/bus.					
							Sub Total	**$4,800**
Travel Outside Minnesota								
							Sub Total	**-**
Printing and Publication								
							Sub Total	**-**
Other Expenses								
		Soil and water test kits sent out for analysis.	Educational value and assessment of soil for garden.					$1,400
							Sub Total	**$1,400**
							Grand Total	**$420,000**

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request

Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	**-**
Non-State				
Cash	Shakopee Mdewankaton Sioux Community	Curriculum development for Anishinabe Academy field trips and classroom work.	Potential	$10,000
Cash	Minneapolis Educator Leadership Grant	Supplementing cost of field trips, program supplies, and instruction experts. This is the remaining amount of funding already secured by Anishinabe Academy. We had plans to spend this school year, but are unable to since field trips are canceled through the end of the 2019-2020 school year. We are waiting to hear if we can extend to the 2020-2021 school year.	Pending	$7,000
In-Kind	Belwin Conservancy	Admin costs associated with running this program. Two staff at 3% FTE for 2 years.	Secured	$11,500
In-Kind	Anishinabe Academy	Admin costs associated with running this program. Two staff at 2% FTE for 2 years.	Secured	$10,000
In-Kind	Anishinabe Academy	Curriculum Development. One staff at 3% FTE for 2 years.	Secured	$6,300
In-Kind	Anishinabe Academy	Licensed Teachers to supervise field trips and do classroom instruction. Two staff at 5% FTE for 2 years.	Secured	$21,400
In-Kind	Anishinabe Academy	Food for field trips. Provided out of general operating money from the school or through another grant if secured.	Secured	$1,800
			Non State Sub Total	**$68,000**
			Funds Total	**$68,000**

Acquisition and Restoration

Parcel List

Name	County	Site Significance	Activity	Acres	Miles	Estimated Cost	Type of Landowner	Easement or Title Holder	Status of Work
Valley Creek (VC) 9 and 10	Washington	Floodplain forest, upland forest, prairie, and trout stream. Land is situated on a stretch of Valley Creek, a regionally significant trout stream with spawning brown, rainbow, and brook trout.	Restoration	17	0.12	$263,300	Private	Parcel would stay under Belwin Conservancy ownership.	Has not begun
Totals				**17**	**0.12**	**$263,300**			

Restoration

1. Provide a statement confirming that all restoration activities completed with these funds will occur on land permanently protected by a conservation easement or public ownership.

All restoration activities completed with these funds will occur on land permanently protected by a conservation easement. Belwin has many permanently protected areas. The area we are proposing to restore is protected under a conservation easement with the Minnesota Land Trust.

2. Summarize the components and expected outcomes of restoration and management plans for the parcels to be restored by your organization, how these plans are kept on file by your organization, and overall strategies for long-term plan implementation.

This restoration parcel is divided into three main categories, the stream bed, the floodplain forest, and the upland prairie site.

The stream bed is in need of a full engineering and regulatory evaluation to determine if there is a need for restoration. The evaluation will include a review of the regulatory floodplain in the area and a field assessment of stream stability. It will take into account how the proposed upland restoration may affect overall stream stability, as well as agency requirements, permitting needs, and environmental review needs. This evaluation will give us planning level costs and a timeline and a summary of how stream restoration could achieve our goals of improving the overall stream habitat.

The woodland area has been heavily invaded by buckthorn. We will begin restoration with the removal of all unwanted and invasive species. We will follow the initial removal with planting of native and desirable species at a density of 250 plants per acre. After the initial invasive populations are under control, the long-term management of the woodland area will be accomplished primarily through spot-treating or hand-removing invasive species.

Expected outcomes for restoration of the woodland area are:

- Maintain and promote canopy trees such as tamarack, red maple, hackberry, basswood, silver maple, black ash and cottonwood
- Maintain less than 25% cover of woody invasive species and 10% herbaceous invasive species
- Promote an understory composed of appropriate southern terrace forest shrubs, grasses, sedges and forbs

The proposed prairie area currently consists of mowed turf and planted evergreen trees. To establish and maintain the upland prairie, we will first clear unwanted woody and herbaceous vegetation. We will use mechanical removal methods where possible to reduce the amount of herbicide treatment needed. After the initial site preparation in the summer/fall, we will seed and plant in the spring. For the first growing season, we will mow the vegetation to keep it at a height of three inches. During the second growing season, we will mow, hand pull, and spot treat as needed to remove invasive species. As the native plants are more established in years three, four, or five (outside of the timeline of this grant), we will also incorporate prescribed burning into our management plan.

Expected outcomes for the restoration of the prairie area are:

- Maintain cover of warm season grasses such as big bluestem, Indian grass, little bluestem, switchgrass and side oats grama
- Promote at least 10% cover of appropriate southern mesic prairie forbs to enhance species richness
- Maintain less than 10% cover of woody invasive species and less than 25% cover herbaceous invasive species

Belwin Conservancy has land management plans for all of our 1,500 acres. These plans are based on the needs of each parcel and are kept both electronically and in physical binders. Restoration projects are prioritized based on ecological

significance, public use, and funding. After we complete initial restoration on an area, we update the management plan for continued maintenance and any additional needs.

3. Describe how restoration efforts will utilize and follow the Board of Soil and Water Resources "Native Vegetation Establishment and Enhancement Guidelines" in order to ensure ecological integrity and pollinator enhancement.

- Belwin staff have read and follow the guidelines in all restoration projects.
- We will complete major cutting on frozen ground to limit soil disturbance.
- We will make every effort to reduce or avoid the use of chemicals in this restoration project and will only use herbicides when other methods would not be effective.
- When needed, we will time herbicide treatments to limit the non-target damage to native plants and pollinators.
- We will include the highest level of diversity in species appropriate for the site when planting and seeding.
- For all plant material used in the restoration processes, we will use yellow tag seed and plants sourced as close to the site as possible.

4. Describe how the long-term maintenance and management needs of the parcel being restored with these funds will be met and financed into the future.

Belwin employs a staff with over 50 combined years of experience caring for natural resources. The long-term maintenance and management of our land is an established and funded part of our organization, with a 49-year track record of managing our lands back to health.

After the initial restoration on this parcel is complete, Belwin staff, the school community, and volunteers will monitor the land to evaluate the success and inform long-term management needs. We rely on a community of people to help us monitor and assess our land for restoration success. Belwin staff will monitor the area several times each year and Anishinabe Academy students and families will be visiting the land often, taking measurements, and assessing restoration objectives (see section 6 below). We also often have volunteers, other educational groups, and scientists do projects on our land, walk trails, conduct bird counts, and generally use the area. All of these parties are asked to report back to Belwin what they see or measure so we can adjust our management plan to address any continuing restoration needs.

Although we need outside funding to complete the initial restoration of this property, Belwin is able to fund the long-term maintenance with our general operating budget. Our annual budget is funded through a combination of grants, individual donations, earned income, and a draw from our endowment. A healthy native landscape requires less care than a non-native landscape, and that stability in turn helps our organizational budget and goals.

5. Describe how consideration will be given to contracting with Conservation Corps of Minnesota for any restoration activities.

Upon execution of the grant contract, we will notify the Conservation Corps. We will also notify them of any RFPs we put out for restoration activities. Belwin has done this regularly in the past and will carefully consider proposals by the Conservation Corps among any other proposals we receive.

6. Provide a statement indicating that evaluations will be completed on parcels where activities were implemented both 1) initially after activity completion and 2) three years later as a follow-up. Evaluations should analyze improvements to the parcel and whether goals have been met, identify any problems with the implementation, and identify any findings that can be used to improve implementation of future restoration efforts at the site or elsewhere.

We will evaluate restoration success by establishing photo points and transect areas, and testing water and soil quality. Students and staff at Anishinabe Academy will complete transect surveys of plant density and diversity, basic water quality testing, and basic soil quality testing in the same locations each year as part of their science curriculum. Belwin

will keep this data year after year and document how it is collected so we can assume responsibility for the data collection if needed.

The photo monitoring will be done by Belwin staff. We will develop a photo monitoring program on this parcel similar to the monitoring that we do on many other points of our land. We will select 1-3 photos points within the management unit, mark them with a wooden post and record the GIS coordinates. We will take photos from those points in the same direction with the same camera (if possible) at the same time each year. Because spotted knapweed and European buckthorn are two of the most problematic species at the site, we plan to take the photos in June when the spotted knapweed is in flower, and again in October when the density of buckthorn in the understory is readily apparent. Belwin has an inventory of annual photo points and these points will be added to that list to complete annually into the future.

Attachments

Required Attachments

Map

File: d2b65b15-c53.pdf

Alternate Text for Map

The visual shows two maps - a large view of all of Belwin's land holdings, nearly 1,500 acres of land located in Afton and West Lakeland Township, MN. The holdings are not all contiguous, but are all in the same general area. The large map also shows Valley Creek trout stream running through several of Belwin's parcels. The smaller map is a zoom-in of the area addressed in this proposal. The small map shows 17 acres of land with mixed habitat of upland prairie and floodplain forest with Valle...

Financial Capacity

File: 7b24cad6-67e.pdf

Board Resolution or Letter

Title	File
Belwin Board Resolution	1ec00dcd-2a6.pdf

Optional Attachments

Support Letter or Other

Title	File
Support Letter from Anishinabe Academy	805833c1-028.pdf
Belwin Background Check form	aecfc8f9-2d2.pdf

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

Changes made from proposal to the work plan are based on amount of funding recommended and new information about costs of activities in this project. Changes are:
- Increased budget for woodland restoration from $105,000 to $128,000. This is due to the market cost of these activities increasing.
- Decreased budget for woodland planting from $90,000 to $10,000. This is due to reduction in funding recommendation and knowledge that there is a seed bank that will provide native plants in the area. The plant regeneration will still occur for this restoration, but will take longer since we won't be adding as many plants.
- Removed the stream assessment, which cut $15,000 from the budget. We will pursue this at a later time as it is not critical to our goals for this project.
- Decreased budget for field supplies for education program from $4,000 to $2,000. The school was able to purchase some supplies in 2020 with other funds.
- Adjusted the number of field trips each year to 6, accommodating for increased cost of busing.

Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?

Yes

Do you agree travel expenses must follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?

Yes, I agree to the Commissioner's Plan.

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

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?

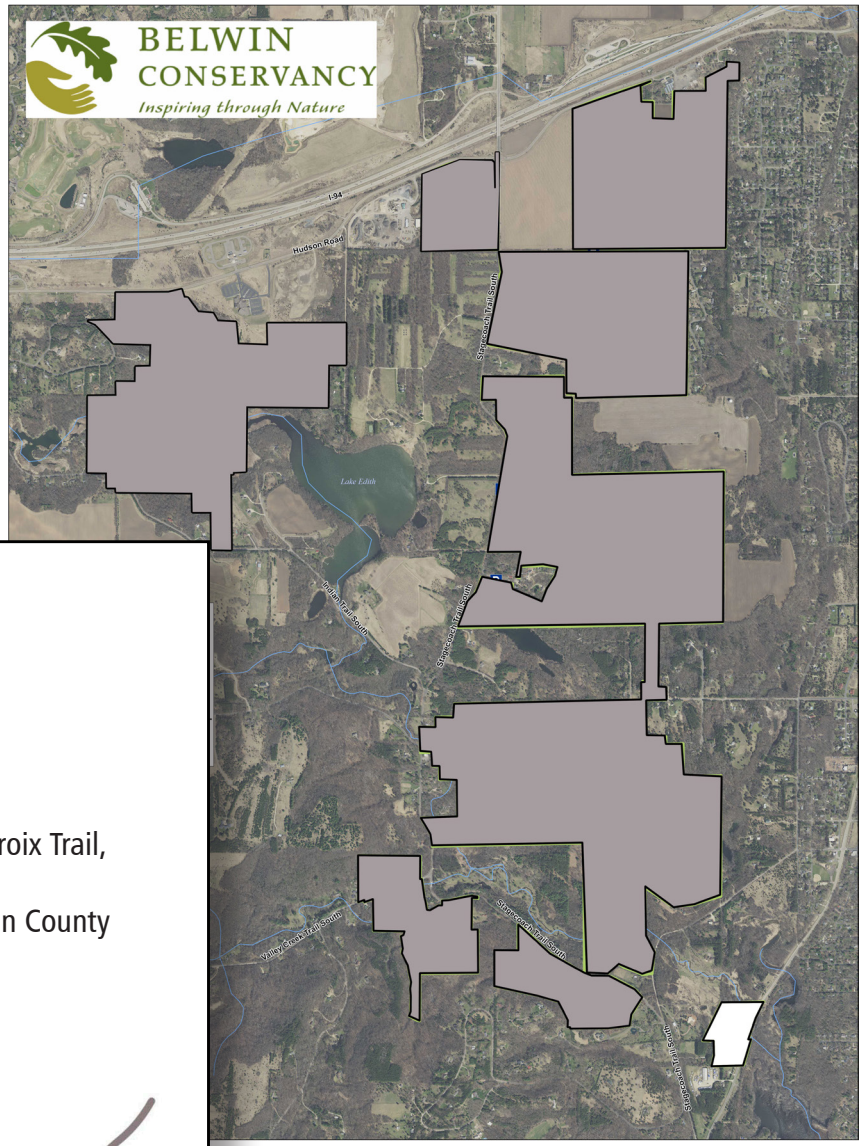
No

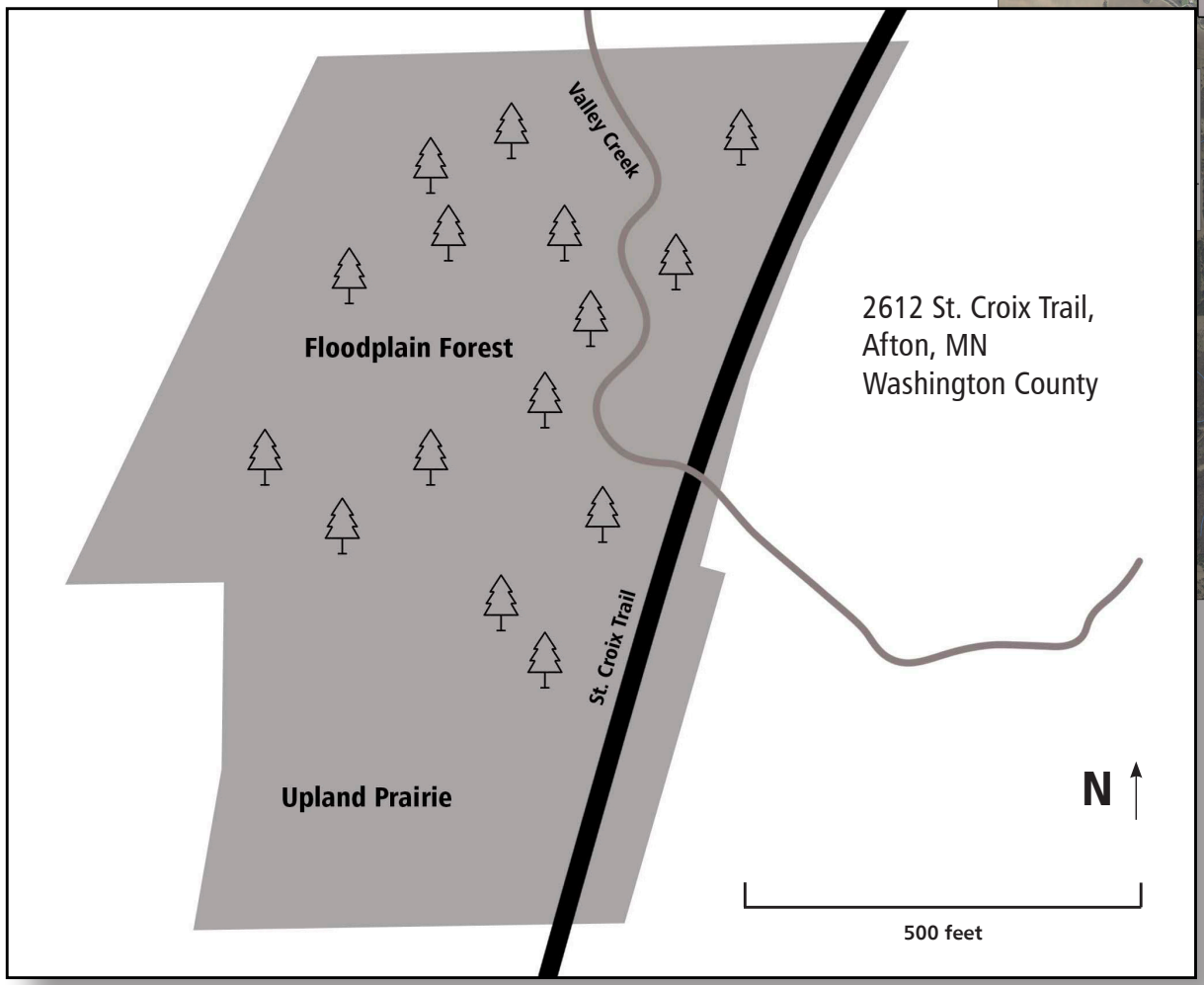
Does the organization have a fiscal agent for this project?

No

ATTACHMENT B
Visual Component or Map

PROJECT TITLE
Restoring Land, Reviving Heritage:
Conservation Through Indigenous Culture





Anishinabe Academy

BELWIN CONSERVANCY