



Environment and Natural Resources Trust Fund

2026 Request for Proposal

General Information

Proposal ID: 2026-090

Proposal Title: Honey Bee Proliferation, Research, and Education

Project Manager Information

Name: Jamie Jensen

Organization: Pollinator Partners

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Project Basic Information

Project Summary: We plan to study winter survival options for honey bees. We will build, locate, and populate 40 honey bee colonies in the Metro to test best practices.

ENRTF Funds Requested: \$205,000

Proposed Project Completion: July 31, 2028

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): 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

Narrative

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

Currently, over 31% of domestic (not wild) honey bee colonies in Minnesota expire over the winter, causing a loss of almost 1/3 of the largest pollinators in the state. The difficulty is created by our extreme winter weather conditions. Honeybees do not hibernate and do not go dormant in winter, meaning that they are alive and awake all winter. The hive has to be maintained at 92 to 95 degrees for a hive to survive. As winter approaches, the hive expels the drones (male bees accounting for 1% of the hive) and starts to gather in a ball, where they will stay for the winter, constantly moving from the warm center to the outside cold of the ball. Unprotected hives often cannot withstand winter temperatures.

We plan to carry on your focus on pollinators, from your “Urban Pollinator and Native American Cultural Site Restoration” (Friends of the Mississippi River, 2021-231). Also Grants: 2024-096, 2024-192, 2024 198, 2024 224, 2024-251, all of which are working on habitat. We are working on colony sustainability in the face of our difficult winter weather.

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.

We intend to create a number of honey bee colony clusters (Four clusters of 10 hives, each) and then to experiment with different wintering options, such as wrapping the hive, boxing the hive, taking a hive indoors (garage or shed) or leave untouched, and recording the best results for each honeybee variety.

We would create a representative sample of each of the varieties in the colonies and then, as winter approaches, apply the spectrum of overwintering options that we determine have the best opportunity for success. We would continue to monitor the colonies over the summer and also over the winter to watch for changes or problems.

During the project we anticipate creating YouTube videos of our activities, which will also allow us to ask other beekeepers for their best practices. We will also be available to schools and other groups who have an interest in beekeeping. Most beekeepers are excited about their apiary and we are no different. We hope for many presentations, especially to students.

At the conclusion of the project we expect to publish our findings and to disseminate our results as widely as possible, perhaps also through conventions in Minnesota.

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?

At the end of each winter we expect to survey each colony and to find how many have survived and then to track the survivors to see if they continue to prosper the following year. Honey bees are said to pollinate up to 80% of the plants in Minnesota, and elsewhere so the success of the growing season is dependent on honey bees and other pollinators, meaning that success for them is success for all of us.

Activities and Milestones

Activity 1: Create the physical assets (hives) and survey the Metro area for suitable locations for colony clusters.

Activity Budget: \$84,770

Activity Description:

We anticipate building two types of hives, a Langstroth and a Layens, each of which have their benefits and drawbacks. We would then prepare the selected locations to receive the hives by constructing or installing stands to keep the hives off of the ground. We would then start to seek out the equipment necessary for beekeeping, including equipment needed for honey extraction and wax processors.

Activity Milestones:

Description	Approximate Completion Date
Purchase lumber to begin hive production	August 31, 2026
Build all of the hives, with boxes, frames, inner covers, telescoping cover, bottom board	January 31, 2027
Survey wide metro area for best location of hive clusters.	February 28, 2027

Activity 2: Prepare each hive for winter.

Activity Budget: \$51,790

Activity Description:

Honeybees often make more honey than they need. In such cases the excess honey can be removed from the hive, called "extraction." The excess honey can then be bottled.

The main purpose of this proposal is to determine the best practices for over-wintering the hive. Current best practices involve encasing the hive in a wrap made of dark waterproof cardboard. The timing of this activity fluctuates based on the weather. Another practice is to encase the hive in another outer box or to insulate the hive from the outside. Each has its proponents and detractors. Some leave the hive untouched.

We will be applying all known wintering techniques for honeybee survival. We will regularly monitor the bees to see which option provides the best wintering protection.

Activity Milestones:

Description	Approximate Completion Date
Remove honey if excess is found or hive is "honey-bound"	August 31, 2027
Remove, transport, and store excess brood boxes or supers.	September 30, 2027
Inspections will occur throughout the entire year	October 31, 2027

Activity 3: Following spring, open and inspect hives to check for survival.

Activity Budget: \$68,440

Activity Description:

The crucial point in this proposal occurs in spring when hives are opened. As the temperature reached 41 degrees, the starting point for honeybees to start foraging, each hive will be opened to determine survival, the nature of the survival, whether whole or partial hive, and the need for further actions.

Hives will be unwrapped or uncased, as necessary, to allow the hive to assume its summer posture.

This step requires daily monitoring, as temperatures fluctuate in spring, and hives may emerge from winter at different times.

Activity Milestones:

Description	Approximate Completion Date
Build new hive boxes, as necessary	March 31, 2027
Open hives in spring and survey for survival and condition.	April 30, 2027
Split hives to avoid swarms and create new hives.	May 31, 2027
Prepare report of winter survival	June 30, 2027

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Wendy Caldwell	Monarch Joint Venture	Advisor, reviewer	No

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?

We will use our best efforts to disseminate our findings to the beekeeping public in any practical manner. We expect to make school visits available to local schools. We anticipate creating YouTube videos of our actions. We will also explore publishing our results to other beekeepers.

If we feel that our process is successful then we will anticipate applying for additional funds from this trust in order to continue our work. Otherwise we may seek other funding, carry it on privately, or terminate the project.

Project Manager and Organization Qualifications

Project Manager Name: Jamie Jensen

Job Title: Honey Bee Project Producer

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

The project manager (producer) has been a beekeeper for over a decade in both Minnesota and Washington State. He has maintained bees, split hives (a necessity to avoid swarms) and grown hives. He has been a speaker on beekeeping, has worked at the Minnesota State Fair in the "Bee and Honey" department, both as a volunteer and an employee, and held classes for new beekeepers. The project manager builds bee hives, both Langstroth and Layens, plus smaller boxes called "swarm traps" to gather bees that are on the move. He has a genuine interest in the welfare of the bee population and has the interest in pursuing the purpose of this project.

Organization: Pollinator Partners

Organization Description:

The organization, Pollinator Partners, is managed by the producer (manager) listed earlier in this application, but tangentially involved other beekeepers and volunteers, along with all other parties who have worked on previous pollinator projects for the LCCMR. The organization will be incorporated at the time of the approval of the project application.

There are numerous other stakeholders who will become involved after the initial process is started and bee hives have been placed and populated, including other beekeepers and educational institutions that will benefit from the work done by the Partners.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Producer		Builder of assets and tender of hives.			0%	2		\$70,000
Assistant		Person to assist in times of high activity			0%	1		\$40,000
							Sub Total	\$110,000
Contracts and Services								
							Sub Total	-
Equipment, Tools, and Supplies								
	Tools and Supplies	Honeybees, four types that live well in Minnesota	To establish them in hives, then study the best protocol for overwintering					\$9,970
	Tools and Supplies	Winter wraps	Honeybee hives must maintain a temperature of 92 to 95 degrees all winter, as bees do not hibernate. The purpose of this study is to find the best way to insulate them without overheating or suffocating them.					\$1,375
	Tools and Supplies	Extraction and miscellaneous, plus rounding for your application	In the event that excess honey is found we will require extraction equipment, plus containers for the disposal of the honey, possibly by sale. We also will have other smaller expenses related to parasites and pests like Varroa mites.					\$4,855
							Sub Total	\$16,200
Capital Expenditures								
		Vehicle	Transport of assets and for regular inspection	X				\$20,000
		Lumber	Build honeybee hives, both Langstroth and Layens	X				\$16,600
		Thermometers and Bluetooth cameras	Nothing is as valuable as open-hive inspections but that is unavailable in winter. Outside inspections, along with	X				\$10,200

			internal cameras, will be our only option for constant observation.					
							Sub Total	\$46,800
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Anticipate 1-4 trips, 200 miles each.	To inspect other operations and to present findings at conferences.					\$2,000
							Sub Total	\$2,000
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Publication	Preparation of findings in as-needed form	Disseminate findings to all interested parties.					\$2,000
							Sub Total	\$2,000
Other Expenses								
		Garage or shop rental, 1,000 per month for 24 months	Location to build and store hive boxes and equipment. Building to extract honey and for bottling, if not released in bulk. Garage for vehicle.					\$24,000
		Vehicle fuel, service, upkeep, registration, taxes	Maintain the vehicle in running order					\$4,000
							Sub Total	\$28,000
							Grand Total	\$205,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Capital Expenditures		Vehicle	<p>"People get into beekeeping for the bees but get out because of the honey." Without constant attention, everything gets sticky. Personal vehicles cannot be used on a project of this scale. The project will cover the entire metro area so transport will be necessary. The items to be transported, including honeybee hives, live honeybees, honey, and other equipment which could not reasonably be transported by personal vehicles.</p> <p>Additional Explanation : A vehicle is needed to transport hives to different locations, to transport honeybees, and for regular inspection. This project, if successful, will continue long past the useful life of the asset. We will be monitoring honeybee survival on a year to year basis, with changing weather and conditions. It will also aid in educational purposes by allowing us to bring hives to other locations for study. We could purchase a lower priced vehicle but that would just lead to higher maintenance and down-time.</p>
Capital Expenditures		Lumber	<p>It is not generally ineligible. Could not activate "no."</p> <p>Additional Explanation : There is only one use for a beehive and that is for bees. They last several years</p>
Capital Expenditures		Thermometers and Bluetooth cameras	<p>This is a generally eligible expense.</p> <p>Additional Explanation : Once they are installed these items will not be removed for the life of the hive, or until they become outmoded. They will always be used for these purposes. Once they are installed in a hive they are not valuable for any other use.</p>

Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
			Non State Sub Total	-
			Funds Total	-

Total Project Cost: \$205,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [189f8c97-fba.pdf](#)

Alternate Text for Visual Component

Dead Hive: This is what we find too often in the spring. This project is an effort to determine the "best practices" for getting bees through the winter in Minnesota....

Financial Capacity

Title	File
Financial Capacity	d501736a-bfc.pdf

Supplemental Attachments

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

Title	File
Grown on the Range Profile 25_ Beekeepers Battling Minnesota Winters, originally published in Hometown Focus — Iron Range Partnership for Sustainability	8f858a2d-2a0.pdf
Wikipedia description of beekeeping	f1cf7898-d2f.pdf
Langstroth hive description	e43e279f-d32.pdf
Beekeeping Gloves	833d4fba-f6a.pdf
Beekeeping Suit	59806bc6-988.pdf
Honeybee supplier order sheet	f7811442-436.pdf
Article on Starting a Beekeeping Operation	64021d43-2e2.pdf
Vehicle Options	b3cd7290-b28.pdf
Costs Spreadsheet	8f8ba783-215.pdf

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?

Yes, I understand the Commissioner's Plan applies.

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

Yes

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

Yes

Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF? If so, describe here (1) the source and estimated amounts of any revenue and (2) how you propose to use those revenues:

Yes, Some honey and wax may be produced for sale but concerns of liability may prohibit such sales. It is also

possible that the fluctuation in the growth of honey bee colonies may result in excess bees, relative to available hives, and some bee colonies may be available for sale. This would only occur in the spring. Honey bees cannot be sold after July 1, as there is insufficient time for the colony to establish itself and collect enough winter honey before cold weather.

Does your project include original, hypothesis-driven research?

Yes

Does the organization have a fiscal agent for this project?

No

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")?

Yes

Do you certify that background checks are performed for background check crimes, as defined in Minnesota Statutes, section 299C.61, Subd. 2, on all employees, contractors, and volunteers who have or may have access to a child to whom children's services are provided by your organization?

Yes

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

At this exploratory stage there are no other organizations or individuals but they will be included as we progress.

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

