



# Environment and Natural Resources Trust Fund

## 2021 Request for Proposal

### General Information

**Proposal ID:** 2021-344

**Proposal Title:** Create Jobs Statewide by Diverting Materials from Landfills

### Project Manager Information

**Name:** Steve Thomas

**Organization:** Better Futures Minnesota

**Office Telephone:** (612) 325-7858

**Email:** sthomas@betterfutures.net

### Project Basic Information

**Project Summary:** By diverting over 20,000 tons of used household goods and building materials from the waste stream, this project will: reduce CO2 emissions; create 18 jobs; and, launch two businesses

**Funds Requested:** \$2,992,000

**Proposed Project Completion:** 2023-06-30

**LCCMR Funding Category:** Air Quality, Climate Change, and Renewable Energy (E)

### Project Location

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

Statewide

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

Statewide

**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.**

45% of emissions worldwide comes from the production of consumer goods and buildings. The preservation of Minnesota's air, water and land, depends on adopting viable practices for reducing the harmful effects of making, using, and then discarding consumer goods and buildings. Yet, most efforts to reduce harmful emissions have focused on the energy sector.

Here are two examples of how the current process of extracting virgin materials and then throwing them away have a negative effect on Minnesota's environment. 1) The MPCA has identified at 42 landfills across the State which are leeching toxic chemicals. 2) Based on data from a previous LCCMR-funded project, the partners found the demolition of a typical house emits 250 million metric tons of CO<sub>2</sub>. This level of pollution is equal to driving 5 cars for a year.

The serious harm caused by current practices, however, is a great opportunity for Minnesota's environment and citizens. An alternative production model, focused on restoration, regeneration, and reuse of products and materials yields significant environmental and economic benefits. Instead of discarding goods and materials (assets) after only one product cycle, companies are developing ways to continually re-acquire and re-introduce these assets back into the marketplace.

### **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 will foster the development of sustainable practices for diverting consumer goods and materials from the waste stream throughout the State. Just as important, the partners will test and help build small businesses focused on reusing, repairing, or re-purposing the goods and materials diverted.

Our goal is to demonstrate the viability of alternative business and operating models that generate multiple life cycles for products and materials through restoration, re-purposing, or reuse. We will also document the significant environmental and economic benefits of these new business processes. Overall, this project is an investment in Minnesota's future: by reducing harmful emissions, we help ensure the future quality of our air, water and land; and, by fueling the emergence of new businesses with jobs for local people, we help build a more stable economic future.

### **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?**

This project will benefit Minnesotans and preserve our air, water, and land. Specific outcomes include:

1. Diverting at least 20,000 tons of used consumer goods and building materials from the waste stream;
2. Reducing or averting the emission of at least 15,000 million metric tons of greenhouse gas emissions;
3. Developing local practices and businesses focused on restoration, re-purposing or reuse;
4. Building markets for products or materials restored, reused, or repurposed;
5. Creating at least 18 FT sustainable jobs with living wages and benefits.

## Activities and Milestones

**Activity 1: Implement waste diversion practices at transfer stations; provide pick up services for households and businesses with used products and materials.**

**Activity Budget:** \$2,485,000

### Activity Description:

- a) Host briefing sessions for county staff statewide to introduce practical and safe methods for diverting goods and materials at transfer stations
- b) Identify type of items to be diverted: textiles, furniture, carpet, building materials, mattresses and other items deemed a priority by the county
- c) Establish operating agreements with interested counties; agreements outline roles and responsibilities of all parties, performance expectations, metrics and staffing plan
- d) Hire and train local staff for diversion and processing team at the site
- e) Identify cities and contractors interested in testing and fully implemented curbside or job site pick up protocols
- f) Hire and train local staff to perform pick up and processing service
- g) Identify reliable outlets for the diverted materials
- h) Assist existing and new businesses with building capacity to restore, reuse or re-purpose diverted goods and materials
- i) A manual and training curriculum to support the operation of waste diversion, material recovery, pick up services, and restoration, reuse, or re-purposing is prepared and distributed

### Activity Milestones:

Description	Completion Date
Impact reports summarizing the total weight diverted and GHG emissions averted	2023-06-30
At least 18 FTE sustainable jobs with living wages and benefits are created.	2023-06-30
At least 15,000 million metric tons of greenhouse gas emissions averted	2023-06-30
1. At least 20,000 tons of used consumer goods and building materials diverted	2023-06-30

**Activity 2: Develop and implement financially viable methods and businesses for restoring, repurposing or reusing of materials diverted from the waste stream**

**Activity Budget:** \$507,000

### Activity Description:

1. Search and identify current businesses focused on using reclaimed materials for reuse, restoration or re-purposing
2. Secure engagement from existing businesses to expand reuse, re-purposing or restoration work, or develop new lines of business using reclaimed materials
3. Assist with business expansion and or new business development plans; support includes creating access to materials diverted from the waste stream and helping build markets for new products
4. Research and share information about emerging restoration, reuse, or re-purposing methods using materials diverted from the waste stream
5. Host webinars and workshops statewide to introduce and promote reuse, restoration or re-purposing activities using reclaimed materials; make these recordings and session materials accessible via each partners website
6. Create a virtual marketplace for promoting products restored, reused, or repurposed; use this web-based

destination to connect buyers with sellers, and people with used products with outlets for reuse, restoration or repurposing.

**Activity Milestones:**

Description	Completion Date
A virtual marketplace is developed and launched	2023-06-30
4. A report summarizing emerging business lines is produced	2023-06-30
Business development assistance is provided to at least 10 business	2023-06-30
Six webinars and six regional workshops are presented	2023-06-30
Two new businesses focused on restoration, reuse or repurposing are in operation	2023-06-30

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Petrina Rhines	Steger Center for Innovation and Leadership	Assist with assessing viability of reusing or repairing select materials from the waste stream, with a particular focus on building materials and furniture Provide training related to reuse and restoration techniques and harvesting used goods Help guide NRRI on its research and its review of re-purposing businesses	Yes
Victor Krause	Natural Resources Research Council (NRRI)	NRRI will research emerging techniques for re-purposing used goods such as building materials, furniture, textiles, and mattresses. Assist with identifying businesses focused on re-purposing such materials. Support the development of protocols for efficiently diverting materials from the waste stream to reuse, repair or re-purposing outlets, and assess the environmental impact.	Yes

## 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?**

These tactics will help achieve our significant results:

1. Waste diversion and material recovery practices will be fully implemented at transfer stations and landfills and sustained with fee income;
2. Pick up services for households and businesses with used products and materials will be implemented and sustained with fee income;
3. Viable methods for restoring, re-purposing or reusing of materials diverted from the waste stream will be launched and sustained with earned revenue;
4. A manual and training curriculum to support the operation of waste diversion, material recovery, and pick up services will be made available and shared.

## Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Expand Materials Reuse and Recycling Jobs Program	M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 05k	\$800,000
Building Deconstruction to Reduce Greenhouse Gas Emissions and Solid Waste	M.L. 2015, Chp. 76, Sec. 2, Subd. 07c1	\$845,000

## Project Manager and Organization Qualifications

**Project Manager Name:** Steve Thomas

**Job Title:** Founder and Social Enterprise Development Officer

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

Steve Thomas has served as the Project Manager for two previous LCCMR grants, both focused on reclaiming used building materials and creating markets for the used materials. This work included developing tools for measuring the environmental impact of this work. In this role, he worked in partnership with the Northwest Indian CDC and the Natural Resources Research Institute. He also shepherded pilot projects with officials in Hennepin, Becker, Ramsey, and St Louis counties, and with city officials in Minneapolis and St Louis Park. His work included the active engagement of the MPCA, including an effort to recommend ways to reduce the dumping of C and D waste in landfills. Under both grants, Thomas and his partners met or exceeded all the goals, including training and employing more than a hundred workers, diverting

tens of thousands of million metric tons of building materials from landfills, and documenting a significant reduction in CO2 emissions as a result of these LCCMR-funded activities.

Thomas presents regularly at conferences and via webinars on topics related to deconstruction policies and practices and to high value uses for materials reclaimed. He advises localities, counties and State agencies on ways to increase the reuse and recycling of used building materials and is a resource for ways to develop regenerative models for used materials of all types. In his staff role with Better Futures Minnesota, he helps identify and develop new lines of business that promise to create new jobs and reduce CO2 emissions. He serves on the Board of ReUSE MN and Build Reuse, the national association of deconstruction contractors and used materials retailers.

**Organization:** Better Futures Minnesota

**Organization Description:**

Better Futures Minnesota fuels and guides a formerly incarcerated man's desire to turn their life around and walk a new path toward better health and success.

We embrace a group of people living in chronic poverty with histories of persistent unemployment, untreated mental illness, addiction, incarceration, and homelessness. Their circumstances are a public health problem that originates in the core hurts and trauma experienced by these adults. We envision a much better future for men who have been locked out of society all their lives. We also reject and aim to re-form current policies which drive harmful practices and reinforce institutional racism, persistent failure, and negative stereotypes.

Fundamentally, BFM is a smarter, more cost-effective way to address a long-standing challenge: the proven inefficiencies and limited effectiveness of fragmented systems dealing with only one aspect of people's lives. By every key measure, the enterprise is a resounding success.

BFM's social innovation responds immediately to participants' two most basic needs –safe, decent, affordable housing and a job. Once these basic needs are met, the value and impact of other services accelerates. BFM's six business lines create much-needed jobs for participants. Equally importantly, the businesses generate operating income and combat climate change.

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Business Manager Alex Baldwin		Trainer and Quality Control			55%	0.5		\$57,000
Retail Sales Manager Jason Allen		Manage virtual marketplace, marketing advice for public and private partners			33%	0.5		\$32,000
Operations Aide Mark Hanson		Logistics support for trainings, webinars and workshops; social media support			28%	0.5		\$37,000
Field Supervisors		Daily supervision of workers at transfer stations and pick up services; supervision of workers assigned to reuse, restoration and repurposing projects			45.53%	8		\$545,000
Workers		Work at transfer stations diverting and packaging reclaimed materials; picking up used materials at curb or job sites; working on reuse, restoration and repurposing projects			45.53%	28		\$1,611,000
							<b>Sub Total</b>	<b>\$2,282,000</b>
<b>Contracts and Services</b>								
Steve Thomas, The Next Frontier, LLC	Professional or Technical Service Contract	Steve Thomas will serve as the Project Manager				0.8		\$134,000
TBD	Professional or Technical Service Contract	Technical support with designing, activating and managing the virtual marketplace				0.2		\$25,000
TBD	Professional or Technical Service Contract	Business development consultant to assist primarily with financial modelling and forecasting				0.2		\$40,000
University of Minnesota Duluth,	Sub award	NRRI will research emerging techniques for repurposing used goods such as building materials, furniture, textiles, and mattresses. Assist with				1.62		\$168,000

Natural Resources Research Institute		identifying businesses focused on repurposing such materials. Support the development of protocols for efficiently diverting materials from the waste stream to reuse, repair or repurposing outlets, and assess the environmental impact.						
Steger Institute for Innovation and Leadership	Sub award	Assist with assessing viability of reusing or repairing select materials from the waste stream, with a particular focus on building materials and furniture Provide training related to reuse and restoration techniques and harvesting used goods Help guide NRRRI on its research and its review of re-purposing businesses				2.4		\$151,000
							<b>Sub Total</b>	<b>\$518,000</b>
<b>Equipment, Tools, and Supplies</b>								
	Equipment	Rental of steel Shipping Containers	For storing materials diverted at transfer stations; for storing materials picked up from customers; and for storing tools and equipment at job sites					\$12,000
	Tools and Supplies	PPP safety gear, fall protection gear, power saws, tool boxes, power drills and denailers, generators	These tools will be used to repair, restore, repurpose or dismanlte materials diverted					\$25,000
							<b>Sub Total</b>	<b>\$37,000</b>
<b>Capital Expenditures</b>								
		One 24 foot box truck and one crew cab pick up truck	Box truck will be used for pick up service in Twin Cities area and for transporting diverted materials from sites statewide; pick up is for transporting crews and equipment to/from job sites					\$125,000
							<b>Sub Total</b>	<b>\$125,000</b>
<b>Acquisitions and Stewardship</b>								

							<b>Sub Total</b>	-
<b>Travel In Minnesota</b>								
	Miles/ Meals/ Lodging	BFM Travel: Mileage for 8 site visits and meetings among partners in Twin Cities. Mileage and meals for in-state travel for up to 20 workshops, meetings with public agency staff, and business development support; 20 overnight trips with meals in State for workshops and agency staff meetings, trainings and business development support in Greater Minnesota; mileage for transport of materials from Greater MN to Minneapolis warehouse						\$30,000
							<b>Sub Total</b>	\$30,000
<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>	\$2,992,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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## Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
<b>State</b>				
			<b>State Sub Total</b>	-
<b>Non-State</b>				
In-Kind	EARNED BUSINESS REVENUE FROM BETTER FUTURES OF ABOUT \$50,000 PARTNER STAFF OF ABOUT \$75,000	BETTER FUTURES REVENUE AND PARTNER STAFF TIME WILL SUPPLEMENT THE STAFF TIME AND PROVIDE SUPPORT FOR THIS PROJECT	Potential	\$125,000
Cash	PROJECTED GRANTS TOTALLY \$100,000 FROM FOUNDATIONS PROJECTED COUNTY GOVERNMENT CONTRACT REVENUE OF \$75,000	THESE PROJECTED FUNDS WILL COVER PROJECT EXPENSES NOT COVERED OR ALLOWED BY THE LCCMR GRANT	Potential	\$175,000
			<b>Non State Sub Total</b>	<b>\$300,000</b>
			<b>Funds Total</b>	<b>\$300,000</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [f7893e96-6dc.pdf](#)

#### *Alternate Text for Visual Component*

We attached two graphics.

The first explains how we must tackle the 45% harder to abate emissions associated with production (along with the 55% of emissions related to energy) if we want to seriously combat climate change.

The second graphic depicts how the multiple components of a circular, regenerative economy interact with and support one another. This economic development approach is much more sustainable and efficient compared to a linear (extract, produce, consume, throw away) economic model.

#### *Financial Capacity*

File: [9975eb8a-873.pdf](#)

#### *Board Resolution or Letter*

Title	File
MOST RECENT FINANCIAL AUDIT	<a href="#">154fd696-87a.pdf</a>
2018 990	<a href="#">ab5ea0a0-d88.pdf</a>
Letter from Better Futures Board Chair	<a href="#">1dd8324f-8ce.pdf</a>
Tackling Overlooked Emissions	<a href="#">dfaceef76-4af.pdf</a>
Circular Economy System Diagram	<a href="#">19de80e8-270.pdf</a>

## Administrative Use

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

No

**Does your project have patent, royalties, or revenue potential?**

Yes,

- Potential revenue generated or net income from the sale of products or assets developed or acquired with ENRTF funding

**Does your project include research?**

Yes

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

No

# Key findings

Today's efforts have focused on the critical role of renewable and energy-efficient measures in the transition to a net-zero economy. However, meeting climate targets will also require tackling the remaining 45% harder-to-abate global emissions, which are associated with the production of goods and materials. A circular economy offers a systems-level and cost effective approach to tackling this challenge. This paper shows that when applied to the food system and industry – more specifically to cement, steel, plastic and aluminium production – circular economy strategies could help reduce global emissions by around 9.3 Gt CO<sub>2</sub>e in 2050. This is equivalent to removing all forms of GHG-emitting transport from the planet. Such an emissions reduction could bring key industry materials 40% and the food system 49% closer to their respective net-zero emissions targets for 2050.

## COMPLETING THE PICTURE: TACKLING THE OVERLOOKED EMISSIONS



