



Environment and Natural Resources Trust Fund

2023 Request for Proposal

General Information

Proposal ID: 2023-219

Proposal Title: Statewide Diversion of Furniture and Mattress Waste Pilots

Project Manager Information

Name: Shawn Dolan

Organization: EMERGE Community Development

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Project Basic Information

Project Summary: Divert the growing problem of furniture disposal and implement test methods in collaboration with local governments to expand mattress and furniture recycling efforts. Reduce demand for new landfills. Create jobs.

Funds Requested: \$3,000,000

Proposed Project Completion: June 30, 2025

LCCMR Funding Category: Methods to Protect, Restore, and Enhance Land, Water, and Habitat (F)

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.

- Out-state solutions vary or are non-existent and additional programs and reuse of waste need to be identified and established
- Growing need for diversion of furniture from waste streams
- No current efforts exist to address the furniture volumes hitting the waste stream
- Mattress end-of-life disposal is estimated at 400,000 units per year in Minnesota and growing
- Illegal dumping continues to be a significant issue with both furniture and mattresses
- Furniture and mattress recycling infrastructure is geographically insufficient
- Facility limitations and fee structures at disposal sites are a significant factor in furniture and mattress disposal issues
- Factors that encourage and discourage desired recycling behavior are not well understood
- Waste management infrastructure has a strong desire to eliminate these items from the waste stream

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.

- Utilize the expertise of NRRI in Duluth, MN to conduct R&D pilots for furniture reuse and recycling
 - o Leverage existing knowledge regarding mattress recycling to the broader furniture problem
 - o Partnership with NRRI will identify new value-add commodities to address non-conforming materials found in furniture for recycling and repurposing
- Pilot expansion of services and physical presence of recycling throughout the state
 - o Identify strategic commodity partnerships throughout the state
 - o Create local jobs for those most in need of employment
 - o Expand recycling services to best fit the unique needs of the area served to encourage recycling for all residents
 - o Foster the development of geographic infrastructure to transport furniture and mattress waste to the most appropriate recycling centers
- Leverage the production expertise and expansion capacity at the Second Chance recycling center in Minneapolis to facilitate the execution of all pilot programs
 - o We have been recycling mattresses since 2008 removing over 600,000 mattresses from the waste stream.
 - o We recycle over 70,000 units per year diverting from transfer stations and landfills.
 - o We have successfully developed processes in the Twin Cities Metro area to efficiently serve retailers, lodging enterprises, waste haulers, consolidators, cities, counties

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?

- Increase capacity statewide for furniture and mattress recycling
- Develop methods and processes that will meaningfully increase the volume of material recycled or reused statewide
- Test and report on value-add projects from furniture recycling and reuse
- Develop an understanding of processes that work and don't work under the various environments throughout the state by comparing performance to baseline data.
- Inform future statewide recycling programs with ready to implement methodologies that are tailored to local conditions and flexible enough to leverage local knowledge

Activities and Milestones

Activity 1: With regional statewide partners, develop and implement mattress collection pilot programs

Activity Budget: \$1,705,188

Activity Description:

1. Regional partners
 - o Lyon County, the mattress processor for Southwest Regional Solid Waste Commission (12 county consortium)
 - o Pope/Douglas county (5 counties)
 - o Olmsted County
 - o Duluth Goodwill

2. Identify and establish mattress volumes, capacity and recycling rates by geographic regions. Pilot efficient logistics based programs to redirect mattress waste from the landfills. Track and report program success rates by county that most efficiently redirect mattress solid waste and maximize recycling by residents.

Activity Milestones:

Description	Completion Date
1. Designing and set up the county level pilot programs	September 30, 2023
2. Establish baseline data	September 30, 2023
3. Checkpoint and revise	March 31, 2024
4. Checkpoint and revise	September 30, 2024
5. Final Report complete	June 30, 2025

Activity 2: Furniture deconstruction and value-add commodity research in partnership with National Resources Research Institute (NRRI)

Activity Budget: \$748,172

Activity Description:

1. R&D conducted by NRRI
2. Partner with Second Chance to develop processes, procedures and alternative commodity partnerships for repurposing materials from furniture and mattresses
3. Collaborate with city and county agencies as statewide programs evolve

Activity Milestones:

Description	Completion Date
1. Process research on Furniture and Mattress deconstruction methodologies begins	December 31, 2023
2. Successful benchtop testing regarding furniture components	March 31, 2024
3. Check point and revise – 12 months and every 3 months as needed	June 30, 2024
4. Scale testing regarding furniture component processing	June 30, 2024

Activity 3: Expand mattress recycling and implement scaled furniture processing at Second Chance Recycling facility

Activity Budget: \$546,640

Activity Description:

1. Second Chance Recycling will be the scale partner for activities 1 and 2

Activity Milestones:

Description	Completion Date
1. Partnership with commercial waste hauler to circumvent transfers to the landfill	August 31, 2023
2. R&D and Pilot metro furniture programs to establish volumes and impact with metro	June 30, 2024
3. Partner with a large current city customer to incorporate furniture collection to existing mattress	August 31, 2024

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Victor Krause	National Resources Research Institute (NRRI)	Project partner working with us in research and development to identify commodity value ad options for furniture and mattress material.	No
Dave McNary	Hennepin County Public Works	Collection point and existing customer who will assist in pilots.	No
Nathan Reinbold	Pope/Douglas Solid Waste Management	Collaborator working with us on multiple county wide programs with collection and logistics pilots	No
Tony Hill	Olmsted County	Collaborator in the collection and logistics pilots for Southeast region.	No
Dylan Olson	Goodwill - Duluth	Collaborator in mattress recycling logistics and seasonal storage to improve workforce and production consistency	No
Dave Herberholz	Minneapolis Solid Waste and Recycling	Current customer and collaborator for continuing support of mattress volumes and furniture pilot testing	No
Roger Schroeder	Lyon County Environmental	Collaborator of county wide pilot testing for mattress recycling in Southwest Minnesota	No
Michael Reed and Nicole Stewart	Ramsey/Washington County Recycling and Energy	Collaborator and existing customer in support of Mattress expansion and furniture research and development	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?

This pilot can inform legislation for statewide programs funded by manufacturers, retailers, consumers, state and local agencies with an effective funding mechanism.

Project Manager and Organization Qualifications

Project Manager Name: Shawn Dolan

Job Title: General Manager

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

As the General Manager at Second Chance Recycling, I have direct responsibility and oversight of operational performance, contract fulfillment, financial performance and reporting, customer relationship management and enterprise growth. I am a decisive and intuitive leader with experience and passion for bringing diverse people together to exceed both customer expectations and company objectives. 30 years experience in leadership within the printing and distribution industry. I have a proven ability to implement strategy, aligned with expense and profitability measurements that drive results in all aspects of business. I am experienced with both production and customer support operations managing multiple channel, market and product strategies on a local, regional and national level. My background is in logistics, operations, staff development and technical support services. I form solid partnerships and trust between the marketing, sales, support, operations and fulfillment priorities to exceed both customer and organizational expectations.

Organization: EMERGE Community Development

Organization Description:

Second Chance Recycling is a social enterprise of EMERGE Community Development and provides high quality recycling services coupled with a vitally needed social mission. Beyond the environmental impact of mattress recycling, Second Chance makes a profound impact in the community with our re-entry program. The majority of employees at Second

Chance are formerly incarcerated individuals with significant barriers to employment opportunities who benefit from a variety of support services in addition to a much needed job. On average, 150 individuals each year are employed for 6 to 9 months. During this time, they develop solid work habits and skills necessary to obtain and keep their next job and, in many cases, the opportunity for vocational training that leads to a career.

EMERGE Community Development is a workforce and community development nonprofit. Every year EMERGE helps thousands of people access jobs, financial coaching, and career training along pathways to brighter futures. Our programs have special expertise in supporting participants overcoming a criminal background, new Americans, single parents seeking to end reliance on public assistance, and individuals in need of career training to obtain living-wage jobs.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Program Project Coordinator		Daily management and operation of entire project and all activities			19%	2		\$150,000
Part-time onsite staffing		Be onsite at pilot location for storage and seasonality model to warehouse and sort storage location			19%	1		\$39,499
Lyon County Staff Support		Working with Lyon County to coordinate Southwest Minnesota collection and recycling efforts for the region			19%	1		\$34,240
							Sub Total	\$223,739
Contracts and Services								
Natural Resources Research Institute (NRRI)	Sub award	<ol style="list-style-type: none"> R&D conducted by NRRI Partner with Second Chance to develop processes, procedures and alternative commodity partnerships for repurposing materials from furniture and mattresses Collaborate with city and county agencies as statewide programs evolve 				4.22		\$172,442
Second Chance Recycling	Professional or Technical Service Contract	Recycling fees for mattress and furniture disassembly and processing into value-add commodities for all pilot programs throughout the state. These services are provided on a per unit basis throughout the 2 year program.				0		\$1,615,000
Second Chance Recycling	Professional or Technical Service Contract	Pick up fee's associated with mattress recycling from established metro waste hauler and furniture pilot within Hennepin, Ramsey and Washington counties.				-		\$80,000
Professional Contract Carriers	Professional or Technical Service Contract	Carriers to transport mattresses and furniture within the state to recycling center(s) and county pilot staging areas				-		\$206,839

County Handling Fees	Professional or Technical Service Contract	Free drop off pilot targeted for outstate metro area (Southeast Minnesota to cover county handling fee				-		\$112,500
							Sub Total	\$2,186,781
Equipment, Tools, and Supplies								
	Tools and Supplies	NRRI R&D Expenses and supplies	Gathering and transporting materials between Second Chance and NRRI					\$1,700
	Equipment	Equipment as dictated by NRRI R&D	Evaluation of commodity value-add from furniture recycling pilots					\$50,000
	Equipment	2 Flatbed Truck 2 year lease	Transport of mattresses to nearest recycling center in regions outside the metro					\$40,000
	Equipment	Storage/Shipping containers (13) 2 year lease	Assist and coordinate transport of mattresses to nearest recycling center in regions outside the metro					\$32,500
	Equipment	Trailer Rental	Storage at collection site and transport to Second Chance Recycling or closest recycling center when trailers are full					\$59,400
							Sub Total	\$183,600
Capital Expenditures								
		Recycling and processing equipment	Purchase and install equipment in recycling center to provide localized processing of mattresses	X				\$75,000
							Sub Total	\$75,000
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	8 trips	County and city coordination with Second Chance					\$2,240
	Miles/ Meals/ Lodging	Weekly travel to different collaboration sites across the state as pilots are rolled out	Mileage, food and lodging while onsite at multiple county events					\$8,640

							Sub Total	\$10,880
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
		Processing space lease 10,000 SF for one year in or near Duluth	Activity involving storage and seasonality pilot					\$150,000
		Space rental/lease for 1 year	Processing space lease for new line of furniture recycling and processing near Second Chance Recycling Center(10,000 SF)					\$150,000
		Char Processing at scale	One of the value-add commodity stream pilots will be energy generation using char. This fee will cover expenses during the piloting of this value-add					\$20,000
							Sub Total	\$320,000
							Grand Total	\$3,000,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Capital Expenditures		Recycling and processing equipment	<p>it is expected that unique processing equipment will be necessary for pilot implementation. Specific equipment in cost is yet to be determined and may well be under Capital limits.</p> <p>Additional Explanation : The equipment will be installed and utilized for the recycling of mattresses going forward from the completion date.</p>

Non ENRTF Funds

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

Attachments

Required Attachments

Visual Component

File: [598c471a-09c.pdf](#)

Alternate Text for Visual Component

Second Chance Recycling Center...

Financial Capacity

File: [05ab6aac-23c.pdf](#)

Board Resolution or Letter

Title	File
Signing Authorization	079d7cfa-8b8.pdf

Optional Attachments

Support Letter or Other

Title	File
Natural Resources Research Institute (NRRRI) Budget	534c16aa-788.docx
PDF graphic "About EMERGE and Second Chance"	7a2c352a-7d5.pdf
Hennepin County Letter of Support	b2ca54ec-f42.pdf
Lyon County Minnesota Letter of Support	fb3814da-80c.pdf
City of Minneapolis Letter of Support	7100f221-ec0.pdf
NRRRI Letter of Support	12069a1c-0f0.pdf
Pope/Douglas County Minnesota Letter of Support	4daf93f9-9b8.pdf
Olmsted County Minnesota Letter of Support	ec81ed92-04d.pdf
Duluth Goodwill Letter of Support	c91c73c0-cff.pdf
Ramsey/Washington County Recycling and Energy Letter of Support	41373f9e-433.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

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?

Yes

Does the organization have a fiscal agent for this project?

No

Second Chance Recycling Main loading and offloading dock



1179 15th Ave SE
Minneapolis, MN 55414

Second Chance Recycling Center



