



Environment and Natural Resources Trust Fund (ENRTF)

M.L. 2018 ENRTF Work Plan (Main Document)

Today's Date: 6-25-18

Date of Next Status Update Report: January 31, 2019

Date of Work Plan Approval: June 27, 2018

Project Completion Date: June 30, 2020

Does this submission include an amendment request? NO

PROJECT TITLE: Expand Materials Reuse and Recycling Jobs Program

Project Manager: Steve Thomas

Organization: The NetWork for Better Futures (d/b/a Better Futures Minnesota)

College/Department/Division:

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Location: Statewide

Total Project Budget: \$800,000

Amount Spent: \$0

Balance: \$800,000

Legal Citation: M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 05k

Appropriation Language:

\$665,000 the second year is from the trust fund to the commissioner of natural resources for an agreement with Better Futures Minnesota, in cooperation with the Northwest Indian Community Development Corporation, and \$135,000 the second year is from the trust fund to the Board of Regents of the University of Minnesota for the Natural Resources Research Institute in Duluth to expand building deconstruction and material-reuse practices and jobs in partnership with counties, tribes, and municipalities statewide and to document the environmental, health, and economic benefits of these practices. Net income generated by Better Futures as part of this or a previous related appropriation from the environment and natural resources trust fund may be reinvested in the project if a plan for reinvestment is approved in the work plan.

I. PROJECT STATEMENT:

This project intends to establish the reuse and recycling of building materials as a preferred practice statewide. This proposal builds on and expands the strategies that were developed with a 2015 LCCMR grant award. The pilot phase of this project tested the viability of deconstruction as a sustainable alternative to demolition. As of March 2017, the outcomes from the 2015 LCCMR grant included: 1,650 tons of waste diverted from landfills; 3,435 tons of CO₂ emissions averted; 10 FTE jobs for chronically unemployed people created; and a marketplace for reclaimed materials established.

The second phase of this endeavor intends to: educate policymakers, building inspectors, homeowners, and contractors statewide about the value and techniques of deconstruction; deconstruct more buildings statewide; develop additional metrics to measure the benefits and impact of deconstruction; and, establish partnerships with (3) counties, (1) Tribe, and (4) municipalities to establish deconstruction as a preferred, common practice.

Building material stewardship is essential because the current practice of burying 70% of the State's building waste in landfills is not sustainable. Viable alternatives to dumping construction and demolition waste are needed to avert the serious health, financial, and environmental costs of landfill use. For example, 42 construction and demolition landfills in the State are leeching contaminants into our groundwater. Data from the pilot phase of this project shows every ton of building material buried in landfills emits 1.12 metric tons of carbon dioxide (CO₂), versus .13 metric tons of CO₂ per ton from deconstruction.

A much cleaner alternative is deconstruction, the process of taking apart a building in a methodical manner to preserve materials. On average, 86% of all building material from deconstruction projects is diverted. This alternative practice is capable of achieving net zero emissions and reduces significantly the leeching of harmful chemicals. Deconstruction generates 150% less CO₂ emissions than throwing away a building.

The goals for this project are to implement building material stewardship practices and create more jobs statewide.

The activities are:

- (1) Provide technical assistance and incentives to (3) counties, (1) Tribe and (4) municipalities to adopt material reuse practices;
- (2) Promote and establish deconstruction techniques and material reuse/recycling strategies statewide;
- (3) Develop additional impact metrics and document the multiple benefits of material reuse and deconstruction.

This project is expected to divert at least 3,000 tons of waste, reduce CO₂ emissions by 3,120 metric tons, and support 11.1 FTE jobs. Any net income generated as a result of the activities in this project will be reinvested directly into this project.

II. OVERALL PROJECT STATUS UPDATES:

First Update January 31, 2019

Second Update July 31, 2019

Third Update January 31, 2020

Final Update June 30, 2020

III. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1: Assist counties, Tribes, and municipalities with adopting reuse practices

Description:

Establish partnerships; provide technical assistance; help implement viable deconstruction practices; develop financial incentives and/or policies to encourage material stewardship in local communities; initiate material stewardship planning with State agencies.

One strategy under this activity is to work with State agencies, particularly the MPCA, MNDOT, and the DNR, to adopt building material reuse practices for all State-funded projects.

The other strategy under this activity is to award, through a competitive sub-grant process, up to \$130,000 to help advance practices aimed at increasing the reuse of building materials in 3-5 jurisdictions across the State. Grants would be approximately \$26,000- \$40,000 each depending on the proposer's demonstration of need as well as the degree to which the proposal meets the evaluation criteria (see below).

Examples of reuse and waste diversion activities to be funded through the sub grants include the following:

- Placing containers at transfer stations or landfills for the diversion of reusable materials
- Requiring contractors to preserve reusable materials at the job site and to transport the materials to a local reuse retail site
- Creating a reuse exchange/retail site for local contractors and residents
- Training local contractors on safe and effective reuse techniques
- Hosting a deconstruction and material reuse pilot initiative
- Providing incentive funds to homeowners/contractors who chose to deconstruct a property
- Additional innovative and creative ideas that may be proposed by the jurisdiction

These sub-grants are needed since there is no significant funding to enable counties to set goals and implement efforts to reuse and divert building material from landfills. In contrast, the State mandates standards and provides grants (incentive funds) to counties to spur the recycling of household waste. No such grants or goals exist for building materials. The expectation is the modest amount of sub-grants awarded under this project will highlight the value of material reuse, encourage more counties to implement reuse policies and practices, and engage the State in adopting building material reuse standards.

Better Futures intends to follow an open and fair process for promoting this sub-grant initiative and selecting grantees. The process is one vehicle for educating more public officials about the impact and benefits of deconstruction and the reuse of building materials. The "call for proposals" is expected to be sent to the environmental services units within each Minnesota county in the LCCMR defined Northeast and Metro regions of the state. We are targeting these geographies in order to build on momentum already established in these areas as well as to allow staff efficiencies in conducting analysis for and overseeing the grants. Sub-grantees will be asked to submit a formal proposal and budget that will be reviewed and ranked according to a set of criteria which will likely include:

1. The proposal outlines a clear and realistic strategy or strategies for increasing significantly the diversion and reuse of building material from the waste stream. The proposal must contain numeric goals for increases in diversion and reuse rates.
2. A serious commitment to implement reuse policies and practices, as demonstrated by: existing reuse policies and mandates; existing funding for material reuse practices; pending ordinances; and/or an existing contractual relationship with Better Futures.
3. A commitment of matching funds.

4. A willingness to enter into a contract with Better Futures, comply with the State of Minnesota and LCCMR contract guidelines, and agree to a set of performance goals.
5. A commitment to meet with Better Futures monthly (or more often if necessary) to review progress of the sub-grantee’s progress against the goals and tasks outlined in the contract with Better Futures.

Interviews and site visits are expected to be a part of the final selection process. The selection team will consist of staff from Better Futures, NWICDC, and the NRRI. Better Futures’ staff will formally approve the award of the contracts. Grant funds will be distributed when the results prescribed in each sub-contract are achieved.

LCCMR and DNR staff will review and approve the final “call for proposals” document, selection process, and selection criteria before Better Futures launches this sub-grant award initiative. Better Futures will also submit the contract template for sub-grantees to both agencies for approval prior to implementation.

ENRTF BUDGET: \$193,000

Outcome	Completion Date
1. Three counties/cities and one Tribe implement deconstruction practices for projects	6-30-2020
2. Four jurisdictions test financial incentives/policies to encourage deconstruction and reuse	6-30-2020

First Update January 31, 2019

Second Update July 31, 2019

Third Update January 31, 2020

Final Update June 30, 2020

ACTIVITY 2: Promote deconstruction and reuse/recycling practices statewide

Description:

Deconstruct uninhabitable, public, or Tribal-owned properties; test techniques for diverting material at job sites; certify managers and employ workers; test diversion tactics at landfills; promote deconstruction and reuse among homeowners, policymakers, and contractors

ENRTF BUDGET: \$472,000

Outcome	Completion Date
1. 20 uninhabitable, public, or Tribal-owned buildings are deconstructed and impact data generated	6-30-2020
2. On-site reuse and recycling techniques are tested at 5 job sites	6-30-2020
3. Waste diversion techniques are tested at two construction and demolition landfills	6-30-2020
4. 4 FTE jobs for chronically unemployed people are maintained during the project	6-30-2020
5. 5 managers and supervisors are trained and certified as deconstruction specialists	6-30-2020
6. Deconstruction and reuse is promoted at 50 community, Tribal, and government gatherings statewide (i.e. trade shows, city councils, county boards, State and county fairs)	6-30-2020

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ACTIVITY 3: Measure the environmental and health benefits of this project

Description:

Create formulas for measuring environmental and health benefits; assist Tribes and government agencies with calculating impact and benefits (This activity will be completed by the Natural Resources Research Council (NRRRI))

ENRTF BUDGET: \$135,000 (NRRRI has a separate budget for this activity)

Outcome	Completion Date
1. Methods for measuring the environmental and health impact of deconstruction are created	6-30-2020
2. Environmental and health impact of every job and project are calculated	6-30-2020
3. Net zero emissions for 50% of this project’s deconstruction jobs is achieved	6-30-2020

First Update January 31, 2019

Second Update July 31, 2019

Third Update January 31, 2020

Final Update June 30, 2020

IV. DISSEMINATION:

Description:

Better Futures will prepare marketing materials that promote the practice and multiple benefits of building deconstruction. These materials will focus on informing homeowners, architects, contractors, tribal governments, and government agencies statewide about the value and multiple benefits of deconstruction and material reuse. Better Futures will also develop and distribute “model” policies for State agencies, county governments, and municipalities to consider. And as noted in the work plan, Better Futures and its partners intend to identify key gatherings such as community meetings, public hearings, trade shows, industry conventions, and the State Fair to promote the practice of deconstruction and the reuse of used materials.

Better Futures will also provide regular updates about the purpose and status of this project through its Face book page and website (www.betterfuturesminnesota.com). Better Futures’ newsletter is another outlet for providing project updates and promoting deconstruction. This newsletter is distributed via e mail every other month. Finally, Better Futures will use its on-line store and warehouse to promote the reuse of materials and products made from reclaimed materials. This store will also provide an additional outlet for promoting the practice of deconstruction and the reuse of used building materials.

First Update January 31, 2019

Second Update July 31, 2019

Third Update January 31, 2020

Final Update June 30, 2020

V. PROJECT BUDGET SUMMARY:

A. Preliminary ENRTF Budget Overview:

BUDGET ITEM	AMOUNT
Personnel	\$ 426,000
Professional/Technical/Service Contracts	\$ 354,000
Equipment/Tools/Supplies	\$ 7,500
Travel	\$ 12,500
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 800,000

Explanation of Capital Expenditures Greater Than \$5,000:

Explanation of Use of Classified Staff:

Total Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation: 10.2

Enter Total Estimated Personnel Hours: 21,216	Divide by 2,080 = TOTAL FTE: 10.2
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Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation: .9

Enter Total Estimated Personnel Hours: 2,000 (does not include NRRI staff hours)	Divide by 2,080 = TOTAL FTE: .9
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B. Other Funds:

SOURCE OF AND USE OF OTHER FUNDS	Amount Proposed	Amount Spent	Status and Timeframe
Other Non-State \$ To Be Applied To Project During Project Period:			
Hennepin County (\$50,000); Better Futures MN (\$100,000 from foundations and earned revenue); Northwest Indian Community Development Center (\$25,000 from foundations and earned revenue)	\$ 175,000	\$ 0	Pending
Other State \$ To Be Applied To Project During Project Period:			

	\$ 0	\$	
Past and Current ENRTF Appropriation:			
M.L. 2015, Chp. 76, Sec. 2, Subd. 07c M.L. 2017, Chapter 96, Section 2, Subdivision 18	\$845,000	\$	Less than \$350,000 of this grant is legally obligated
Other Funding History:			
Hennepin County Environment and Energy	\$ 405,000	\$	Secured

VI. PROJECT PARTNERS:

A. Partners receiving ENRTF funding

Name	Title	Affiliation	Role
Tuleah Palmer	Executive Director	Northwest Indian Community Development Center	Assist with promoting deconstruction and material reuse policies and practices statewide with a focus on tribal governments Deconstruct eligible properties Train workers Assist with job site and landfill diversion tactics
Victor Krause	Principal Scientist	The Natural Resources Research Institute – University of Minnesota at Duluth	Develop and prepare environmental and health impact analyses Retain and supervise Tim Roman, Ecotone consultant

B. Partners NOT receiving ENRTF funding

Name	Title	Affiliation	Role

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

By adopting deconstruction and material reuse on a broad-scale, Minnesota will achieve significant reductions in greenhouse gas emissions and other pollutants, reduce the amount of waste buried in landfills, and increase the amount of materials reused. This initiative will create a stewardship policy and practice for used building materials and help develop a more vibrant reuse economy across the State. Long term, this initiative will contribute to deconstruction and building material reuse becoming financially sustainable lines of business which create new jobs and the growth of small, local businesses.

VIII. REPORTING REQUIREMENTS:

- The project is for two years, will begin on July 1, 2018, and end on June 30, 2020.
- Periodic project status update reports will be submitted on January 31, 2019, July 31, 2019 and January 31, 2020.
- A final report and associated products will be submitted between June 30 and August 15, 2020.

IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

- A. Budget Spreadsheet: Attachment A
- B. Visual Component: "Why Throw Away a House?"

**Attachment A:
Environment and Natural Resources Trust Fund
M.L. 2018 Budget Spreadsheet**



Project Title: Expand Materials Reuse and Recycling Jobs Program
Legal Citation: M.L. 2018, Chp. 214, Art. 4, Sec. 02, Subd. 05k
Project Manager: Steve Thomas
Organization: The NetWork for Better Futures (d/b/a Better Futures Minnesota)
College/Department/Division:
M.L. 2018 ENRTF Appropriation: \$800,000
Project Length and Completion Date Two years, June 30, 2020
Date of Report: 5-06-18

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	TOTAL BUDGET	AMOUNT SPENT	TOTAL BALANCE
BUDGET ITEM			
Personnel (Wages and Benefits)	\$426,000	\$0	\$426,000
BFM Business Manager: \$32,000 (72% wages, 28% benefits); .25 each year for 2 years	\$32,000		\$32,000
BFM Crew Chief: \$35,200 (72% wages, 28% benefits); .3 FTE each year for 2 years	\$35,200		\$35,200
BFM Work Crew: \$180,800 (81% wages, 19% benefits); 2.6 FTE each year for 2 years	\$180,800		\$180,800
NWICDC Deconstruction Director: \$150,260 (72% wages, 28% benefits); .7 FTE each year for 2 years.	\$150,260		\$150,260
NWICDC Work Crew: \$27,740 (81% wages, 19% benefits); .8 FTE each year for 2 years	\$27,740		\$27,740
Equipment/Tools/Supplies	\$7,500		\$7,500
Replacement of tools due to wear and tear, storage containers, safety gear, forklift rental when needed			
Professional Services and Contracts	\$354,000	\$0	\$354,000
1. Steve Thomas, The Next Frontier, LLC, to be retained by Better Futures as a consultant to serve as Project Manager for two years (\$84,000)			
2. Incentive funds to counties and/or municipalities to help implement deconstruction policies and practices (\$130,000); funds to be distributed based on level of commitment to implement material reuse standards for public and private building removal projects			
3. Funding for the Natural Resources Research Institute to complete tasks described in Activity 3; includes \$30,000 in funding for Tim Roman, Eco-Tone (a social benefit corp.) to develop and complete impact analyses (\$135,000) (See separate budget for NRRI expenses			
4. Contracts with trainers for deconstruction certification (\$5,000)			
Travel expenses in Minnesota	\$12,500	\$0	\$12,500
Site visits and meetings between NWICDC (Bemidji), NRRI (Duluth), and BFM (Mpls). In-state travel to workshops, community meetings and trade shows. 20 overnight trips in State for presentations; will use travel formula prescribed by the DNR			
Other			
COLUMN TOTAL	\$800,000	\$0	\$800,000

Attachment A:

Environment and Natural Resources Trust Fund

M.L. 2018 Budget Spreadsheet

Project Title: Expand Materials Reuse and Recycling Jobs Program

Legal Citation: M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 05k

Project Manager: Victor Krause

Organization: Regents of the University of Minnesota, University of Minnesota Duluth

College/Department/Division: Natural Resources Research Institute

M.L. 2018 ENRTF Appropriation: \$135,000

Project Length and Completion Date: 2 Years, June 30, 2020

Date of Report: March 6, 2018

	TOTAL BUDGET	AMOUNT SPENT	TOTAL BALANCE
ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET			
BUDGET ITEM			
Personnel (Wages and Benefits)	\$95,195	\$0	\$95,195
<i>PI, Scientist 1 (V. Krause): \$40,773 (79.2% salary, 20.8% benefits), 25% FTE for 2 yrs</i>			
<i>Scientist 2 (S. Johnson): \$10,685 (79.2% salary, 20.8% benefits), 8% FTE for 2 yrs</i>			
<i>Coordinator (T. Hagen): \$7,361 (74.7% salary, 25.3% benefits), 3% FTE for 2 yrs</i>			
<i>Researcher: \$17,756 (79.2% salary, 20.8% benefits), 20% FTE for 2 yrs</i>			
<i>Technician: \$11,913 (79.2% salary, 20.8% benefits), 18% FTE for 2 yrs</i>			
<i>Undergraduate student (1 student): \$6,707 (100% salary 0.0% fringe), 19% FTE for 2 yrs</i>			
Professional/Technical/Service Contracts	\$30,000	\$0	\$30,000
<i>Consultant, Ecotone Partners GBC, Inc. will assist with the development of a tool for calculating the yield and environmental impact of materials harvested from buildings, including reduced greenhouse gas emissions, energy savings, reduced landfill use, and the reuse of natural resources. LCCMR contracting rules will apply</i>			
Equipment/Tools/Supplies	\$2,000	\$0	\$2,000
<i>General woodworking supplies, saw blades, adhesives, wood finishes, cutting bits, stains, hardware,</i>			
Capital Expenditures Over \$5,000	\$0	\$0	\$0
Fee Title Acquisition	\$0	\$0	\$0
Easement Acquisition	\$0	\$0	\$0
Professional Services for Acquisition	\$0	\$0	\$0
Printing	\$0	\$0	\$0
Travel expenses in Minnesota	\$6,205	\$0	\$6,205
<i>Travel to Minneapolis and Bemidji area for project activities associated with deconstruction of buildings. Mileage: \$2,565 (10 trips to MSP, 5 to Bemidji); Lodging: \$1,240 (20 nights); and Meals: \$960 (20 days)</i>			
Other	\$1,600	\$0	\$1,600
<i>Shipping of samples and prototypes</i>			
COLUMN TOTAL	\$135,000	\$0	\$135,000