

**Environment and Natural Resources Trust Fund
2016 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 106-C

Public Benefits of Metropolitan Community Agricultural Land Access

Category: C. Environmental Education

Total Project Budget: \$ 147,017

Proposed Project Time Period for the Funding Requested: 2.5 years, July 2016 to December 201

Summary:

Securing land tenure takes on core challenges to agricultural resource stewardship in urban regions. Our network of food producing sites demonstrates education, recreation, and habitat benefits of urban agricultural land.

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Location

Region: Metro

County Name: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Washington

City / Township:

Alternate Text for Visual:

Three activities: 1. Metropolitan land use and agricultural soils maps (July 2016-Dec 2017): lays groundwork, creates map, identifies key change & sustained agricultural land access areas in fringe. 2. Community agriculture public benefit measurement and demonstration sites (July 2016-Dec 2018): environmental education and research process, building effective data tools for informing efficient implementation of metropolitan agriculture and land use planning policies that have already been made. 3. "What does our garden yield?" educational field guide & field trips (June 2017-Sep 2018): provides outdoor environmental education and citizen science opportunities for students and public to get involved in community agriculture public benefits measurement.

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ TOTAL	_____ %



Environment and Natural Resources Trust Fund (ENRTF)

2016 Main Proposal

Project Title: *Public Benefits of Metropolitan Community Agricultural Land Access*

I. PROJECT STATEMENT

Instability of land tenure is cited as a core challenge to agricultural resource stewardship in urban regions. The Twin Cities Agricultural Land Trust will coordinate a pilot network of demonstration sites measuring the public benefits of long term access to metropolitan agricultural land, conducting a citizen science program that tests whether—and how—long term access to land enables food producers in metropolitan contexts to better conserve land resources. As the Metropolitan Council grapples with the renewal of development pressure on urban-edge farmland and as urban agriculture gains new policy support (St. Paul, Minneapolis, and the Minneapolis Parks and Recreation Board have all just adopted new rules governing agricultural land use), this project will provide experiential education and research about the impact of metropolitan planning policy and metropolitan agricultural land use practices on Minnesota resources.

Recognizing that urban centers concentrate both soil nutrients and social issues that can be tied to the lack of access to healthy fresh food and environmental quality disparities, we will focus this pilot study on the ability of different land use practices related to community and urban food production to improve soil (reducing urban nutrient outflows), enrich habitat, intercept water, and provide opportunities for environmental interactions and learning through recreation in food-oriented greenspace. Project results will be shared via interactive public maps showing the relationship between land use plans, soils of statewide significance, and the preservation of farmland across the metro region—and also filling in data for missing values for soils in urban areas of the Natural Resources Conservation Service soil surveys, areas that have historically not been considered for food production and that are hence missing crucial baseline data needed to assess interventions in soil conservation.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Metropolitan land use and agricultural soils maps (Susan Stokes of FLAG) **Budget: \$20,155**

Farmers’ Legal Action Group (FLAG) researches and builds maps interpreting the relationship between land use plans, soils of statewide significance, and the preservation of farmland, and writes an accompanying report. This project allows them to provide the same service that they achieved in their 2012 LCCMR-funded report *Preserving Minnesota’s Agricultural Land: Proposed Policy Solutions*, and to extend the work started there to apply to the current comprehensive plan. Results will inform policymakers about the impact of their decisions on the future of food production in the metropolitan area.

Outcome	Completion
1. Research Metropolitan Council planning processes for 2010, 2020, 2030, and 2040 comprehensive plans (\$2,300)	Oct 2016
2. Research current and historical land use maps in Metropolitan Region used for 2010, 2020, 2030, and 2040 comprehensive plans (\$3,500)	Feb 2017
3. Research, locate and review current & historical maps showing Soils of Statewide Significance correlating with timing of comprehensive planning processes (\$2,300); Work with GIS data & GIS specialist(s) to locate & review current & historical data showing farmland preservation & development over relevant time frame (\$3,500; \$1,500 GIS Specialist, \$55 MN travel)	June 2017
4. Evaluate trends in overlay of Metropolitan Council land use plans, Soils of Statewide Significance, and farmland development (\$2,300)	Sep 2017
5. Draft and peer review report (\$4,600, plus \$100 in photocopies)	Dec 2017

Activity 2: Community agriculture public benefit measurement and demonstration sites **Budget: \$82,900.50**
(Alex Liebman of U of M and Stones Throw Urban Farm coordinating)

Analysis of where and how land tenure decisions have affected resources (soil, water, greenspace access) will be conducted through community-based research & education on a network of demonstration sites and will build an effective tool for informing efficient implementation of recently made agricultural land use policies.

Outcome	Completion
1. Interactive map including both long term metro agricultural & more recent urban agricultural	Dec 2018



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<p>sites identify potential “most promising” urban agricultural land sites for intercepting nutrient-rich water, building soil organic matter, providing greenspace for habitat, recreation, and mitigation of urban heat, and providing food security and focus for food literacy building (GIS/archive RA \$9000; archive server \$3500; \$3000 partners organizing demonstration sites into a learning network; Management of current SRC, Alliance and two publically owned sites to document best practices models for urban agriculture. (75% of project management, \$53,584.50)</p>	
<p>2. Empirical data on the role of urban agriculture’s contribution to public benefits (measurement costs \$3,016 materials plus \$10,800 in research services to 12 garden teams across 3 15-week field seasons)</p>	<p>Oct 2017</p>
<p>3. Scenarios and management plans built with agencies using collected data</p>	<p>May 2018</p>

Activity 3: “What does our garden yield?” educational field guide & field trips **Budget: \$43,961.50**

(Valentine Cadieux of Hamline University and University of Minnesota coordinating)

Beyond the demonstration sites, this project will engage students and interested members of the public by developing a series of environmental education field trips and guides for metropolitan education institutions (particularly via service learning courses already engaged with the demonstrations sites through Frogtown Farm, the broader Urban Farm and Garden Alliance, and the the Food & Society Workshop network of schools). These field trips and field guide modules will be used in existing food-and-environment-based teaching (such as the garden-based curriculum at Maxfield) and will also be available through public programming and online.

Outcome	Completion
<p>1. Field guide modules developed with the Storymobile project of the St. Paul Almanac (undergraduate and high school students using documentation skills to craft learning materials about project @ each of the 12 sites) & the Urban Farm and Garden Alliance / Master Gardeners engagements with metropolitan schools (focused in St. Paul Promise Neighborhood and North Minneapolis & extending to a network of MN teachers trained in equity around teaching food and agriculture topics at the Science Museum of Minnesota) (\$5000 for Storymobile + \$50 travel to get Storymobile trailer to each of the 12 sites (\$600); \$3000 Alliance, CLCLT, HACER for field guide work; education RA \$9000), 25% project management \$17861.50; \$4000 booklets)</p>	<p>Jun 2018</p>
<p>2. Field trips developed to provide opportunities to interact with the demonstration sites, and to try out the measurement techniques and contribute to the crowd sourced maps (we will work with the Waste Not project and the U of M’s USpatial program to validate data: \$4500 RA)</p>	<p>Sep 2018</p>

III. PROJECT STRATEGY

A. Project Team/Partners

The team includes 3 TCALT members who also work with UofM and who will collaborate with the *Food and Society Workshop* and the *Waste Not: Closing the Loop on Organics Waste* project there to support measurement without requiring resources. Funding is requested for TCALT project management, the Alliance Research Team of the Urban Farm and Garden Alliance (a network of garden leaders participating in community-based food production research around sites including Frogtown Farm), Farmers’ Legal Action Group, and the collaboration of City of Lakes Community Land Trust members, the Storymobile project of the St. Paul Almanac, and HACER (Hispanic Advocacy and Community Empowerment through Research).

B. Project Impact and Long-Term Strategy

This proposal is intended to assist the local and regional policy makers throughout the state in considering and devising implementation strategies for metropolitan agricultural and planning policies, to protect and identify top priorities for agricultural land in the metro area, to demonstrate land management practices that optimize environmental and social benefits, and to engage students and members of the public in experiential education about these topics in ways that we hope will continue to be integrated in curricula & gardens.

C. Timeline Requirements: Activity 1 will help frame the demonstration of Activity 2, and Activity 3 will follow.

2016 Detailed Project Budget

Project Title: *Public Benefits of Metropolitan Community Agricultural Land Access*

IV. TOTAL ENRTF REQUEST BUDGET over 2.5 years, July 2016 to December 2018

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel:	
Program manager: \$22/hour plus 26.3% fringe (\$27.80/hr) x 3 field seasons (25 weeks x 30 hrs/week = \$62,550) plus 2 winters (8 hrs/week x 20 weeks = \$8,896)	\$ 71,446
One semester UofM Computer Science or GIS 25% grad RA (\$9000) to build interactive archive map for Activities 2 & 3; one semester 25% Education grad RA (\$9000) to work with Storymobile students to build Activity 3 field trips & guide with program manager; .5 semester 25% RA to help	\$ 22,500
Professional/Technical/Service Contracts:	
Farmers' Action Legal Aid Group contract, Activity 1	\$ 20,100
Server space and programming support to build interactive archive map for Activities 2 & 3	\$ 3,500
Storymobile contract to document process and build associated curriculum, Activity 3	\$ 5,000
3 x \$2000 contracts for partners developing measurement processes, field guide explanations, and integrating this as outdoor environmental education as part of existing garden curriculum, Activities 2 & 3 (Urban Farm and Garden Alliance, City of Lakes Community Land Trust, Hispanic Advocacy and Community Empowerment through Research)	\$ 6,000
Research services fee paid to garden site measurement managers for finishing 15 week field season of measurement (\$300 x 12 sites measurement x 3 field seasons), Activity 2	\$ 10,800
Equipment/Tools/Supplies:	
Measurement equipment for 12 sites: cost for measurement equipment for 36 volunteers @ 12 gardens (12 x outdoor hanging scoop spring scales to measure produce \$120 = \$1440; 12 x soil thermometers \$20 = \$240; water gauges can be made from recycled materials), soil organic matter test kits x 3 seasons (\$850), 36 field books (plus 18 replacements) x \$9 (\$486).	\$ 3,016
Field trip and field guide booklets for Activity 3 (for schools, printing \$1000, web edition, \$3000 for programming).	\$ 4,000
Travel:	
MN travel for FLAG to complete Activity 1, mapping farmland preservation plus transport of Storymobile to 12 demonstration sites over course of project (12 x \$50)	\$ 655
Additional Budget Items:	
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	
	\$ 147,017

V. OTHER FUNDS *(This entire section must be filled out. Do not delete rows. Indicate "N/A" if row is not applicable.)*

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ To Be Applied To Project During Project Period: \$35,000 applied for via National Institute of Food and Agriculture Community Food Planning Grant	\$ 35,000	<i>Applied for</i>
Other State \$ To Be Applied To Project During Project Period:	NA	
In-kind Services To Be Applied To Project During Project Period: Land use (SRC parcels \$7,000); 2 Graduate Student Assistants, funded (@\$5,000 each for 260 hours of work, by the University of Minnesota Center for Urban and Regional Affairs and Food and Society Workshop), \$8,752 TCALT Volunteer time: (@MN Volunteer time rate of \$24.31/hr) Committee working on demonstration project of 3 people x 5hrs/m x 24 months (360 hours) (this is half of this committee's time during the period of this project, and it will be their central project).	\$ 25,752	<i>Secured</i>
Funding History: CURA assistanceship setting up basic toolkit, \$5000; TPL raised \$120,000 to secure the SRC parcels	\$ 125,000	
Remaining \$ From Current ENRTF Appropriation:	NA	

Activity 1: Metropolitan land use and agricultural soils maps
(Susan Stokes of FLAG coordinating, July 2016 to Dec 2017)

Map and report lay groundwork for demonstration sites

Activity 2: Community agriculture public benefit measurement and demonstration sites
(Alex Liebman of U of M and Stones Throw Urban Farm coordinating, July 2016 to Dec 2018)

Demonstration sites provide environmental education
and analysis of public benefits of urban agriculture

Interactive map shows what practices have what benefits

Field guides and field trips
disseminate education around demonstration sites,
provide opportunities for public and student involvement

Activity 3: "What does our garden yield?" educational field guide & field trips
(Valentine Cadieux of Hamline University and University of Minnesota coordinating,
June 2017 to Sep 2018)

Timeline: Jul16 - Aug16 - Sep16 - Oct16 - Nov16 - Dec16 - Jan17 - Feb17 - Mar17 - Apr17 - May17 - Jun17 - Jul17 - Aug17 - Sep17 - Oct17 - Nov17 - Dec17 - Jan18 - Feb18 - Mar18 - Apr18 - May18 - Jun18 - Jul18 - Aug18 - Sep18 - Oct18 - Nov18 - Dec18



Environment and Natural Resources Trust Fund (ENRTF)

2016 Project Manager Qualifications & Organization Description

Project Title: *Public Benefits of Metropolitan Community Agricultural Land Access*

The Twin Cities Agricultural Land Trust (TCALT) is a consortium effort to support long term access to agricultural land in the Metro Minneapolis-St. Paul region, and to work with state-wide initiatives to preserve long-term access to land. As a community land trust, TCALT focuses on agricultural practices that benefit the public and on food producers who experience challenges accessing land. TCALT functions as a collaboration of several nonprofits who share an interest in preserving access to agricultural land in the Twin Cities Metropolitan Region. Their geographical service area is the seven county metropolitan region of the Twin Cities. Their primary mission is to facilitate long-term access to land for urban agricultural purposes, such as farmers markets, market gardening, urban farms and community gardens; with the goal of fostering stewardship of soil resources and making more feasible commitments to long-term land and infrastructure improvements--enhancing productivity, season extension, and preservation of healthy land for future food production. To that end they work on a variety of projects to acquire, hold, and steward land for urban and rural farming and community gardens, manage conservation easements, provide educational, legal and structural support. The TCALT also serves as a clearinghouse for those needing access for land for urban agricultural purposes, providing guidance, information, and assistance to practitioners in owning or leasing land.

TCALT formed out of a partnership of groups concerned about securing metropolitan land for agriculture, including Gardening Matters (supporting community gardening), Land Stewardship Project (supporting land stewardship in relation to agriculture), and City of Lakes Community Land Trust (supporting affordable community access to housing in Minneapolis). Subsequent work has connected TCALT with the Center for Urban and Regional Affairs and several research groups at the University of Minnesota, the Urban Farm and Garden Alliance and their Alliance Research Team, & community partners interested in land access for food production and related research, such as HACER (Hispanic Advocacy and Community Empowerment through Research).

In 2015-2020, a central TCALT project will be the development of demonstration projects documenting and sharing what can be achieved when long-term access to agricultural land is secured. This will be achieved through partnerships with Farmers Legal Action Group, Sustainable Resources Center, the Urban Farm and Garden Alliance and a host of supporting scientists, community leaders and professionals. Food production sectors are currently grappling with two major problems: how to produce enough food to feed us without destroying the planet, and how to sustain healthy food production that provides livelihoods for the people who work in agriculture. Community agricultural land trusts are working with a wide range of innovative food and environment organizations to experiment with and document different models of land access that protect and restore soil and habitat, support both urban agricultural livelihoods and recreation, and provide opportunities for environmental education and community research. Since that role is not being filled in the upper midwest - TCALT and its partners will provide that demonstration and model for Minnesota communities.

Project manager Alex Liebman is both an agroecology researcher at the University of Minnesota and one of the principal partners of Stone's Throw Urban Farm (<http://stonethrowurbanfarm.com>), a 3-acre diversified vegetable operation focused on transforming vacant lots into local food-producing assets. He has also worked with the Latino Economic Development Center developing a larger network of farms into a metropolitan food cooperative, and has been involved with the Twin Cities Agricultural Land Trust since its founding. Liebman is responsible for all aspects of the day-to-day operations and long-term planning of this agricultural cooperative business, including financial management, and the training and management of seasonal employees. Liebman has a life-long interest in the hands-on aspects of food production and gained practical farm experience working on vegetable, fruit and livestock operations in Massachusetts and California. He is excited to be creating real solutions to the problems of how to farm profitably in the urban environment. His focus is on developing creative urban food systems that work in conjunction with rural farms to provide fresh, healthy produce to all people and that provide a profitable return on investment for the farmers. All of these qualifications make him an excellent coordinator for the activities proposed in this project.