

WERC Project Application – Part II

Application Guidelines for Fiscal Year 2009

A. Project Title: Improving urban wood utilization and forest products industry competitiveness in Southern Michigan through creation of a regional demonstration and training center

B. Submitted by: **In Cooperation With:**

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C. Length of Project: Eighteen months: July 1, 2009 – December 31, 2010

D. Costs: Federal Funds = \$98,100; Matching Funds = \$103,490; Total Cost = \$201,590 (*or \$134,393/annum*)

E. Abstract:

The Southeast Michigan Resource Conservation and Development Council began work on its Ash Utilization Options Project in early 2004 to develop a positive response to the area's emerald ash borer outbreak. This project focused on the Council's conservation and economic development goals, aiming to reduce wood waste disposal costs for communities, promote sustainable use of urban wood resources, and create new economic opportunities for the area. While this project has been very successful in creating some new markets for EAB-impacted ash wood and in building support for urban wood use programs, there is still much work to be done to encourage better utilization of the nearly five million board feet of quality timber estimated to become available each year from the area's dead and dying trees. The Council now proposes to create a large-scale wood recovery and utilization demonstration, complete with multiple training opportunities, to better educate both potential generators and processors of urban wood residues. In addition, this project aims to conduct an analysis to directly address the skepticism and concerns of potential partners regarding issues of 1.) the cost-benefit implications of wood recovery and processing and 2.) the total environmental life-cycle impacts of resulting products. Throughout the project period, the Council will also provide significant, individualized, technical assistance to interested industries, communities, and organizations in southeastern Michigan and beyond. These projects have the potential to not only increase the annual total volume of wood recovered from the region, but to increase the viability of the area's growing urban wood products and biomass energy industries.

F. Project Goals & Objectives:

Statement of Need #1: Despite its largely urban composition, wood resources are in large supply in southeastern Michigan, with nearly five million board feet of quality timber available annually from the dead and dying trees in and around developed areas (MacFarlane 2007). Forest health concerns such as the emerald ash borer add available resources to this already huge opportunity. Unfortunately, most of this wood is never considered for higher-value utilization. According to research by Sherrill and MacFarlane (2007), roughly half of the tree residues generated in the region are discarded as waste. While local wood generators often practice good urban forest management strategies, their plans rarely include activities related to wood recovery and value-added utilization. These operators generally lack the necessary examples, training, and information to successfully evaluate and handle the materials. Similarly, larger wood industries typically underestimate the quality and

availability of wood recovered from urban areas. Better information and examples need to be made available to potential partners so that they can make informed decisions about urban forest management, log handling, processing, and markets, rather than treating urban wood resources only as a disposal issue.

Goal #1: Improve urban forest stewardship and economic opportunities for public and private wood residue generators while increasing the viability of the urban hardwood industry through better urban wood recovery.

Objective #1: To increase the skills and job opportunities for city and private arborists, land managers, and members of the primary hardwood industry in urban wood utilization through demonstrations, trainings, networking, and partnership development.

Statement of Need #2: The utilization of urban wood still lacks legitimacy in many professional circles. Despite numerous local success stories, wood recovery and value-added product markets are often seen as niche strategies only to be used by hobbyists and small operations. Examples of successful higher-value or large-scale urban wood use are often anecdotal and unconvincing to larger industry professionals, municipal managers, or major users of wood products (such as builders). A thorough analysis of the utilization of urban wood at a demonstration site needs to be performed in order to directly address the skepticism and concerns of potential partners regarding issues of 1.) the cost-benefit implications of wood recovery and processing and 2.) the total environmental life-cycle impacts of resulting products. A cost-benefit analysis could be used to promote wood recovery as a more economical option for generators than traditional disposal. The life-cycle aspect of this analysis would be helpful in expanding markets by justifying the inclusion of urban wood products under the rigorous standards of many popular green building programs.

Goal #2: Create new economic opportunities for the wood industry, communities, and the green building industry through greater utilization of locally-generated urban wood.

Objective #2: To supply factual, cost-benefit, and life-cycle information about how the urban wood use industry can economically assist governments with wood recovery and better contribute to the green building movement.

Statement of Need #3: While still a developing concept in southeastern Michigan, interest and activity in urban wood utilization has significantly grown in the past several years. Through past demonstrations, trainings, research, and outreach, the Southeast Michigan RC&D Council has emerged as the region's primary provider of technical assistance for businesses and communities seeking guidance on recovering and processing urban wood residues and marketing value-added products. In 2008, the Council answered requests for individual technical assistance from approximately fifteen businesses, communities, and/or other customers each month. The Council's three informational websites (Ash Utilization Options Project – <http://semircd.org/ash>, Michigan Wood Energy – <http://michiganwoodenergy.org>, and Urbanwood – <http://urbanwood.org>) collectively attracted over 1000 visitors in January 2009 alone. Additionally, the Council has presented wood utilization information at over 100 local, state, regional, and national events since 2004. There is clearly an ongoing need for information and assistance on this topic, but without additional funding, the Southeast Michigan RC&D would be unable to continue to provide this technical assistance. While the Michigan Department of Natural Resources also plays a major role in supporting the growth of the emerging urban wood products industry in southeastern Michigan, additional leadership is necessary to capitalize on the current swell of interest given the public's response to the emerald ash borer crisis, the growing need for local economic development, and the importance of emerging biomass energy and green building markets.

Goal #3: Improve the response to the emerald ash borer outbreak, better support the local economy, and encourage the use of local wood resources in the emerging biomass energy and green building markets.

Objective #3: To increase the urban wood use capacity of businesses, communities, and others in southeastern Michigan and surrounding regions by providing technical assistance, online resources, and other support.

Statement of Need #4: The need for sustainable, affordable, local sources of energy in our state is well documented. According to a September 2008 Michigan Public Service Commission report, over 70% of the state's energy expenditures went to out-of-state providers. In response to this need, the Southeast Michigan RC&D has worked to promote the use of locally-generated wood chips in biomass boilers for the past several

years. As a result, several successful assessments have taken place in the region, with one boiler installation already in progress. Given the state's surplus of wood resources, disappearing pulp and paper industry, and continuing interest in new energy options, there is also need to look for ways to support Michigan's emerging wood pellet industry. Five new pellet fuel processing facilities have opened in the state within the last several years; however, wood residue markets have remained largely stagnant (particularly in southeastern Michigan's urban areas) and pellet fuel shortages remain common among consumer retail operations in the state. Together with the Potawatomi Resource Conservation and Development Council, the Southeast Michigan RC&D proposes to examine the issues affecting the growth and sustainability of the state's new wood pellet operations.

Goal #4: Create a more stable energy economy for the State of Michigan through a vibrant and growing wood energy industry.

Objective #4: To improve the viability of the wood pellet industry by creating workshops that address the challenges and opportunities facing this emerging sector.

G. Project Description:

This proposal aims to create a large-scale demonstration for urban wood utilization planning. The project will examine the potential for using a specific county, major city, or large recreation area in southeastern Michigan as a central wood use destination and training location, with benefits intended to extend to a wide range of local industries and communities. The following specific activities are planned as a part of this project:

Objective #1: To increase the skills and job opportunities for city and private arborists, land managers, and members of the primary hardwood industry in urban wood utilization through demonstrations, trainings, networking, and partnership development.

Planned Activities:

- Conduct actual utilization planning and implementation for the chosen demonstration site, including active educational demonstrations on topics such as forest management, wood processing, and green building and/or local wood use. The program will also explore opportunities for creating partnerships to improve wood utilization with the neighboring public landowners.
- Conduct training programs to improve local urban wood utilization and forest stewardship by educating local municipalities, organizations, and industries on topics such as:
 - Utilization-focused urban and woodlot forest management, evaluation, and inventories;
 - Log harvesting, handling, and collection;
 - Wood processing and working with industry partners;
 - Creative uses for value-added urban wood products; and
 - Marketing products and educating local residents.

Objective #2: To supply factual, cost-benefit, and life-cycle information about how the urban wood use industry can economically assist governments with wood recovery and better contribute to the green building movement.

Planned Activities:

- Contract with researchers to determine baseline data for 1.) the costs and benefits associated with a large-scale urban wood utilization operation (as contrasted with traditional wood grinding and disposal) and 2.) a life-cycle analysis of environmental impacts for the wood products created at the demonstration site.
- Explore partnerships with local higher education institutions for using local wood in green building construction courses and other related work.
- Conduct outreach to create awareness of the life-cycle analysis results in the green building community.

Objective #3: To increase the urban wood use capacity of businesses, communities, and others in southeastern Michigan and surrounding regions by providing technical assistance, online resources, and other support.

Planned Activities:

- Conduct networking and outreach to create:
 - Guides for neighboring communities to learn about resources available at the demonstration site;
 - Opportunities for volunteer and community involvement; and
 - Networks of interested wood industry partners and communities.
- Provide technical assistance to communities, businesses, and organizations throughout the region as they learn about urban wood use opportunities and develop their own working plans by:
 - Maintaining and updating existing educational websites and newsletters;
 - Providing assistance and support to existing and developing members of the wood industry, community groups, and others regarding markets, wood use planning, partnership development, wood processing, biomass energy, and value-added markets (such as green building);
 - Providing assistance to Southeast Michigan’s Urbanwood Project, a collective including sawmills, arborists, and wood users committed to bringing more urban wood products into the marketplace;
 - Presenting information at local, regional, and national events, as requested; and
 - Continuing to collaborate and share technical information with other regional urban wood use networks, such as the Illinois Emerald Ash Borer Wood Utilization Team.

Objective #4: To improve the viability of the wood pellet industry by creating workshops that address the challenges and opportunities facing this emerging sector.

Planned Activities:

- Conduct training programs to address the emerging wood fuel pellet sector by exploring topics such as wood residue collection, technology needs, market limitations and drivers, and expansion opportunities.

Additional Project Details:

Primary coordination of the project will occur through the Southeast Michigan RC&D Council, with Natural Resources Specialist, Jessica Simons, overseeing implementation of the project. Additional support will come from the Michigan DNR, the Potawatomi RC&D Council, and partners at the selected demonstration site.

Federal funds will primarily be used to conduct the cost-benefit and life-cycle assessment for urban wood products, to conduct training workshops, and to provide salary for the grant project coordinator. Additional funds and staffing needed to implement the demonstration and outreach activities will fulfill the project’s in-kind matching contribution. No equipment purchases are planned.

The planned activities outlined above address many of the priorities identified in this grant program, including:

- Bringing information about processing, marketing, and urban wood utilization to existing and emerging businesses and communities;
- Developing utilization options that improve forest stewardship and health;
- Increasing the knowledge and information about how the hardwood industry can contribute to the green building movement by conducting a life-cycle analysis for urban wood products;
- Developing markets for and using wood affected by the emerald ash borer and other unexpected events; and
- Increasing the sustainable use of woody biomass through workshops targeting the wood pellet industry.

Since 2004, the Council has exhibited a strong track record of working closely with local wood industries and community groups by providing training programs to 175 participants, giving no-cost technical assistance to ~200 individuals each year, and helping to develop the area’s only marketing network for urban wood products industries. Having already gained the trust and support of industry and community partners, the Southeast Michigan RC&D has a unique advantage to strengthen these networks through the work proposed here.

H. Methodology/Timetable:

Work Plan and Timetable: At the beginning of the grant period, a demonstration site will be selected as appropriate for this program. (Site recruitment talks have already begun, but no official commitment has been made at this time.) Extensive interviews will then be conducted to gather preliminary information about the site's current wood disposal strategy, training needs, staffing and equipment capacity, potential partners, and product needs. Next, a committee will be developed to create and implement a plan to conduct specific on-site demonstrations. Based on the training needs identified in interviews, a series of workshops will be developed to educate on-site staff, other communities, and industries. Throughout the entire process, the Council will also conduct the other outreach and technical support activities described above. Both the Southeast Michigan and the Potawatomi RC&Ds will work together to identify networking, information sharing, and training opportunities for the state's current and proposed pellet/densified wood fuel operations. Suitable workshops will then be developed to address the needs of fuel processors and those looking for additional wood residue markets. Preliminary surveys, development of the wood utilization demonstration plan, and scheduling of all training workshops will occur throughout the first six months of the project period, leaving the following one-year period for implementation of the actual wood use demonstration and workshops.

Measurement of Progress: Management and staff at the utilization demonstration site will be surveyed at six-month intervals to determine if the wood use program is adequately addressing the location's needs regarding wood disposal, cost, staffing, handling, and final products. Efforts will be made to also quantify the total amount of wood recovered at the demonstration site and utilized at a higher value through this program.

The results from the cost-benefit and life-cycle analyses will be another tangible deliverable from this program and will be shared widely through targeted outreach. Additional progress will be measured by the numbers of individuals reached through trainings, partnerships, and technical assistance.

Subcontracting Activity: There is one anticipated subcontracting activity associated with the proposed project. Early in the project period, the Council plans to release a Request for Proposals to recruit a research team to perform the cost-benefit and life-cycle analyses of urban wood use at the demonstration site.

I. Project Outcomes and Final Report:

The Council anticipates that, in addition to the benefits described above, the project will create the following:

- Information sharing among local business, municipal foresters, and governments.
- Greater movement of resources to industry and better match of products with markets.
- More trained workers and opportunities for job creation in local wood industries.
- Improvements in wood disposal, forest stewardship, and wood use in communities.
- Stronger marketing potential for urban wood products within the green building arena.
- Development of strong partnerships among various local and regional stakeholder groups.
- Additional support for emerging businesses.
- Systems applicable for handling invasive species outbreaks in other regions.
- A stronger wood biomass energy industry.

Upon project completion, a final report will be submitted that details the project's accomplishments, findings, conclusions, recommendations, and photographs. Effort will be made to ensure that the report will be Section 508 compliant by, at a minimum, creating a structured Microsoft Word document, providing descriptive alternative text for images, and properly creating and labeling tables. Additionally, all publications created as a part of this project will acknowledge the Wood Education and Resource Center's funding contribution and will include the required anti-discrimination and equal opportunity statements.

WERC Project Application – Part II (continued)

J. Budget Table:

<i>Categories</i>	I <i>FS Share</i>	II <i>Cooperator's Share</i>	III <i>Total</i>
1. Personnel	\$20,000	\$0	\$20,000
2. Fringe benefits	\$5,000	\$0	\$5,000
3. Travel	\$2,000	\$0	\$2,000
4. Equipment	\$0	\$0	\$0
5. Supplies/Materials	\$3,000	\$0	\$3,000
6. Contractual	\$60,000	\$103,490	\$163,490
7. Construction	Not Applicable	\$0	\$0
8. Other (identify)	\$0	\$0	\$0
9. Direct charges	\$90,000	\$103,490	\$193,490
10. Indirect	\$8,100	\$0	\$8,100
11. Total	\$98,100	\$103,490	\$201,590
12. % of Total	49%	51%	100%

Instructions for Table I:

- Lines 1-7: Enter the dollar amount for each item.
- Line 8: Identify charges. Additional lines can be added for budget items not listed.
- Line 9: Sum of 1 – 8
- Line 10: Charges not directly attributable to accomplishing the project such as overhead. You are encouraged to keep the Forest Service share of indirect charges to a minimum.**
- Line 12: Use total in Line 11, Column III to determine the percentage of each share.

II. Cooperator Contributions — (not including U.S. Forest Service contributions)

Cooperator	Cash	Materials	In-Kind Services	Total
Training attendees	\$7,500		\$36,000	\$43,500
Demo site in-kind			\$50,000	\$50,000
A. Weatherspoon			\$6,240	\$6,240
Outreach audience			\$3,750	\$3,750
Totals	\$7,500		\$95,990	\$103,490

Instructions for Table II:

Excluding U.S. Forest Service contributions, identify the value of all other cooperator contributions. Please value in-kind contributions and materials at reasonable and acceptable rates.



*A private, nonprofit
organization improving
environmental quality
through reuse, recycling
and effective energy use.*

January 30, 2009

Recycle Ann Arbor
2420 S Industrial Hwy
Ann Arbor, MI 48104

RE: Large-Scale Wood Recovery and Utilization Demonstration

To: The Review Team

Recycle Ann Arbor would like to express our support for the large-scale wood recovery and utilization demonstration proposal, submitted by the Southeast Michigan Resource Conservation and Development Council.

The primary objective of Recycle Ann Arbor's Environmental House program is to increase consumer and industry awareness of, and improve standards and practices relating to indoor air quality, effective energy use, and resource conservation in new and existing buildings. We continually seek partners and projects that promote awareness and implementation of green buildings in our community.

Since 2006, the Environmental House and Recycle Ann Arbor's ReUse Center, a 20,000 sf warehouse of "gently-used" merchandise and green products, have been working to promote the development and growth of an urban wood marketplace in southeast Michigan through retail sales. Working through a partnership with local sawmills, the ReUse Center has sold over \$30,000 in urban wood products since 2007. Furthermore, through its collaboration with the Southeast Michigan Resource Conservation and Development Council, Recycle Ann Arbor has been involved in outreach efforts to promote and market The Urbanwood Project to a wide range of potential customers.

Architects, builders, remodelers, and retailers are expressing more interest in urban wood products and momentum is building. However, questions persist regarding the issues of costs and benefits during wood recovery and processing and the total environmental life-cycle impacts of resulting products. Recycle Ann Arbor is convinced this project will address these concerns and foster an urban wood market that can flourish and help strengthen local economies. Furthermore, this project will demonstrate the potential for sustained success, by helping our partners - sawyers and local mills, to qualitatively improve the process and consistency in urban wood recovery.

Recycle Ann Arbor will support this project through participation in coordination, continued local market development, and tracking successes, obstacles and barriers in current market integration efforts.

Thank you for your attention. Please do not hesitate to call with any questions.

All Best Wishes,

A handwritten signature in dark ink, appearing to be "JB", is written over a faint, circular watermark or stamp. The signature is fluid and cursive.

Jason Bing, LEED AP
Program Manager, Recycle Ann Arbor
t. 734.662.6288



4100 Illinois Route 53
Lisle, IL 60532-1293

January 30, 2009

Steve Milauskas, Director
USDA Forest Service
Wood Education & Resource Center
301 Hardwood Lane
Princeton, WV 24740

Dear Mr. Milauskas:

I am writing to express my full support for the proposal titled, *Improving urban wood utilization and forest products industry competitiveness in Southern Michigan through creation of a regional demonstration and training center* submitted by the Southeast Michigan RC&D Council (SEMIRCD).

The Southeast Michigan RC&D Council's accomplishments the promotion of urban wood utilization has been very influential in the region. As Illinois wrestles to also manage urban wood material generated by the devastation of the emerald ash borer, we look to the Southeast Michigan RC&D Council for guidance. They have generously mentored us, sharing their experience and resources.

The Illinois Emerald Ash Borer Wood Utilization Team intends to share our experiences, ideas and resources with SEMIRCD as they work to create a large-scale wood recovery and utilization demonstration. Illinois has different challenges than Michigan, and also different strengths. Our communities seem more willing to consider urban wood reclamation, but clearly lack market opportunities. We might be able to share insights from some of our enthusiastic community leaders, such as the Village of Wilmette which made baseball bats from 'emerald ash board' and gained much local and national attention. On the other hand, SEMIRCD has a successful and well-established training program we will work to emulate.

The emerald ash borer (EAB) has cut a wide swath in the Midwest and is still on the move. Supporting the '*creation of a regional demonstration and training center in Southern Michigan*' in turn helps to grow a cooperative and collaborative movement to promote urban wood reclamation throughout the region. The knowledge gained in the Midwest then, will benefit the next state in EAB's path. Thank you for your past support of SEMIRCD's Ash Utilization Options Project. Please favorably consider their current grant request. Thank you.

Sincerely,

Edith Makra
Community Trees Advocate and Chairperson, Illinois EAB Wood Utilization Team

630-968-0074
Fax 630-719-2433
trees@mortonarb.org