COVER PAGE

University of Wisconsin Consortium for Extension and Research in Agriculture and Natural Resources (CERANR)

Project Title: *Project title should be a brief, clear, specific description of the research. The title is limited to 100 characters including letters, symbols, punctuation, and spaces.*

Targeting Working Lands and Operations to Protect Wisconsin Agriculture

Principal Investigators: *List all Principal Investigators and their University.*

Anna Haines, UW-Stevens Point
Steve Ventura, UW-Madison
Douglas Miskowiak, UW-Stevens Point
Asli Gocmen, UW-Madison
Tom McClintock, UW-Madison

Project Period:	☐	1 Year (07/01/07-06/30/08)	☑	2 Years (07/01/08-06/30/09)

Required Clearances:

1. Does the project involve toxic, infectious, or carcinogenic/mutagenic material of proven or potential hazard to humans, other animals, or to plants?	☐ YES	☑ NO
2. Does the project use recombinant DNA technology?	☐ YES	☑ NO
3. Does the project involve use of human subjects or human tissue?	☐ YES	☑ NO
4. Does the project involve the use of vertebrate animals?	☐ YES	☑ NO

Budget Summary:

Year 1					
UW-	Madison	Platteville	River Falls	Stevens Point	Extension
Faculty/Academic Staff Salary	$7,198	-	-	$16,909	In-kind
Research Assistant Salary	-	-	-	-	-
Hourly Student Labor	-	-	-	-	-
Supplies & Expenses	$200	-	-	$200	-
Travel	$128	-	-	$638	
Equipment	-	-	-	-	-
Campus Totals	**$7,526**			**$17,747**	
				Year 1 Total	**$25,273**

Year 2					
UW-	Madison	Platteville	River Falls	Stevens Point	Extension
Faculty/Academic Staff Salary	$8,905	-	-	$13,835	In-kind
Research Assistant Salary	-	-	-	-	-
Hourly Student Labor	-	-	-	-	-
Supplies & Expenses	$300	-	-	$200	-
Travel	$404	-	-	$872	-
Equipment	-	-	-	-	-
Campus Totals	**$9,609**			**$14,907**	
				Year 2 Total	**$24,516**
			Grand Total - All Years		**$49,789**

SIGNATURE PAGE

University of Wisconsin Consortium for Extension and Research in Agriculture and Natural Resources (CERANR)

Investigator's Certification: The Principal Investigators involved in this research proposal have jointly planned the research and have set forth in the proposal the responsibilities for conducting the research.
Dean's Certification: The Principal Investigators on the faculty at our institution have reviewed the proposal with their department chairperson and me or my designee. We have determined that the investigators will have the time available to conduct the workload identified in the proposal.

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Signature Date		

Justification Statement

Importance of the Problem

Agriculture is important to Wisconsin. Each year, Wisconsin's agricultural lands and businesses generate more than $51.5 million in economic activity. For every dollar of agricultural sales an additional 80 cents of economic activity is generated in other segments of the economy. The agricultural sector provides jobs for almost 420,000 people and contributes $16.8 billion to Wisconsin's total income. Agriculture provides the tax base for many rural communities generating more than $1.76 billion in local and state taxes (Deller, 2004). In addition, agricultural lands provide cultural and ecological value by protecting Wisconsin's farming heritage, rural character, open space, scenic views, wildlife habitat, and clean air and water (AFT, 2003a).

Reasons for Doing the Work

Agriculture, however, is vulnerable due to rapid changes in urban development and farm demographics. Since 1950, over 8 million acres of farmland have been lost to development in Wisconsin. The pace of conversion is accelerating – 400,000 Wisconsin agricultural acres were developed between 2001 and 2005 alone (USDA, 2005). As a result of demand, land prices are rising. Since 1974, land prices for agricultural use rose 600 percent and values for land sold for non-agricultural uses rose higher yet (Arts, 2006). Increasing land prices presents a major obstacle for entry into the industry and an even larger incentive to exit. Increased urban activity in rural areas and nuisance complaints make farming more difficult and exacerbate the cycle of farmland conversion (Daniels, 1997). These factors all pose significant obstacles to keeping Wisconsin's working lands productive and limit new opportunities in biomass for energy production.

The "Working Lands Initiative" (WLI) report, endorsed by Rod Nilsestuen, serving Secretary of the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), outlines goals and actions to preserve Wisconsin's agricultural industry. This proposal fulfills needs outlined in the WLI report. Specifically it develops the technical and institutional foundation to address: 1) the creation of Working Lands Enterprise Areas (WLEA) to foster clustering of priority agricultural lands and operations; and 2) the creation of a Purchase of Development Rights (PDR) program to permanently protect priority farmlands.

Advance Public Welfare and Scientific Knowledge

To understand and guide sustainable agriculture and rural development across extensive areas of Wisconsin, we propose using Geographical Information Systems (GIS), existing data, and refined spatial modeling. This project will have immediate benefits for pilot communities and will have long-term benefits for state-wide agricultural conservation and economic development. Our technical protocol and training will provide conservation and planning professionals with tools to support rational discussion at a local level. We will provide local leaders with objective methods and education to articulate and deliberate complex social and scientific factors important for local planning and policy-making. In the long term, we will conduct research that establishes the positive and negative consequences of these decisions on land use and fragmentation.

Statement of Previous Work and Present Outlook

Wisconsin's farmland preservation law, passed in July 1977, made defining and mapping priority farmlands a prerequisite for participating communities (Barrows, 1978). Soil surveys and USGS quadrangle maps, combined using transparencies, were the tools of the era (Barrows, 1979). Given the time needed to conduct analyses with these tools, it is not surprising that most communities did not prioritize agricultural lands and operations.

Available since the early 1980s, the Land Evaluation and Site Assessment (LESA) is a technically sound model to prioritize agricultural lands and operations worthy of protection (Grossi, 1994; AFT, 2004). Today's GIS software and computer hardware are firmly capable to analyze multitudes of data. Digital data in Wisconsin are now widely available. Most notably, soils data were recently completed statewide (NRCS, 2007). Together with GIS, LESA is a powerful tool to help address local agricultural goals.

A wide variety of biophysical and social factors can be incorporated and adjusted using LESA to reflect community priorities, but care should be taken to identify appropriate model parameters. Huddleston (1994) and Pease (1994a) indicate that LESA should identify priority farmlands based on focused parameters, such as agricultural productivity. Mixing agricultural factors, such as soil productivity, with non-agricultural factors, such as distance from urban services, requires careful interpretation to determine how each model factor and parameter influences results (Pease, 1994a).

Model assessment strategies are available to ensure model parameters are appropriate, measurable, and accurate. One such strategy emerges from Linn County, Oregon. This case study describes a benchmarking strategy using a local expert panel (Pease, 1994b). Pennsylvania case studies illustrate the applicability of LESA to support PDR programs at the state level – a current Wisconsin priority. Pennsylvania uses LESA as a foundation for distributing state funding to counties for purchase of conservation easements (Daniels, 1994; Day, 2000).

Ongoing needs for more effective use of LESA were identified at the Soil and Water Conservation Society conference in 2003. These include building a research base for rational and appropriate modeling, utilizing GIS, fostering links to land use planning, developing user education, and building a user support network (SWCS, 2003).

The Center for Land Use Education (CLUE) and the Land Information and Computer Graphics Facility (LICGF) are conducting independent, yet complementary research. CLUE's Costs of Community Services and Land Parcelization studies are uncovering the value of working lands to local communities and the factors that influence their fragmentation and eventual conversion. CLUE, together with UW-Extension, has built an extensive foundation of research and local partnerships related to comprehensive land use planning and management. LICGF is applying GIS to assess the suitability of parcels to achieve specific objectives, such as conserving agricultural lands (Niemann, 2000). They are also affiliated with a leading implementer of LESA at Pennsylvania State University through the Consortium for Rural Geospatial Innovations (RGIS: http://www.ruralgis.org).

Project Objectives

Ultimately, this project aims to provide local decision-makers with the research foundations, tools, and educational materials necessary to identify and prioritize agricultural lands and operations worthy of protection. By coordinating citizen stakeholders, government officials, and conservation professionals, our educational and dissemination strategy will enhance public-private partnerships to advance Wisconsin's bio-based economy. If implemented, our methods will address rural development issues and help to optimize the performance of agricultural resources to nurture a sustainable bio-based economy.

Objective One: Develop an Effective LESA Model Using GIS

Our technical protocol and research will focus on how GIS can be utilized to develop and deliver a LESA model effectively. We will develop a strong foundation of research and science to support the rational and locally appropriate application of the LESA model. Our approach aims to addresses three principles:

1. *The model must be flexible.* GIS application of the LESA model must be able to accommodate various local cropping systems, biophysical conditions, social circumstances, and community priorities. For example, corn might be an important crop for some communities while dairying or cranberries are important for others. Model parameters must recognize and accommodate these differences.
2. *Results must be accurate.* Scores that determine the priority of agricultural lands and operations resulting from the model must accurately identify local priority agricultural lands and operations on the ground. The model must include validation and verification procedures, and provide accurate and timely information.
3. *Results must be understandable.* It is not enough that the model is accurate if local staff, citizens, and officials don't understand or trust it. The model must also be easy to understand. Model parameters and their affects on agricultural scores must be transparent and easy to comprehend.

To ensure that our model achieves this objective and addresses these principles, it will be tested and refined in two pilot communities.

Objective Two: Build the Capacity for Implementing the LESA Model Locally

Secondly, this project aims to build the technical and leadership capacity for effectively implementing LESA using GIS locally through education and training. Two distinct user groups will be targeted, each with specific educational objectives.

1. Professionals: This group consists of resource conservationists, professional planners, and GIS analysts who are employed or contracted by communities to construct local LESA models. Our objective is to build their technical capacity to build flexible, accurate, and understandable models for local applications. We will address:
    - What data are needed?
    - Where are the sources of available data?
    - How is GIS used to construct and administer the LESA model?
    - How can model results be verified for accuracy?

- How should the public be involved?
- What are the underlying implications of the approach?
- How do data, ratings, and weightings affect model results?
- Which data, ratings, and weightings are locally appropriate and why? What are the underlying assumptions?
- How does research and science support model choices?

2. Local Decision Makers: Plan commissioners, county board members, and farmers among other related stakeholders define this group. They are responsible for selecting appropriate model parameters so that the LESA model can address local priorities. Our objective is to build their leadership capacity to understand the model, communicate local priorities to professionals, and build trust and acceptance of the model for use in the community. We will address:
    - What is LESA?
    - How can LESA help to achieve local goals and objectives?
    - How is GIS used to implement the LESA model?
    - How do our choices affect model results?
    - How do we make choices that will achieve local goals and objectives?
    - How does research and science support our model choices?
    - How do we know that LESA is accurately identifying agricultural lands and operations that will achieve our goals?
    - How can LESA results be incorporated into local programs such as PDR, transfer of development rights, or zoning?

Objective Three: Initiate an Informed Dialogue to Address LESA User Support
Finally, this project will initiate an informed dialogue to address LESA user support at the state level. Ultimately, we aim to cultivate institutional support and longevity to utilize and diffuse our approach for communities statewide. With assistance from DATCP, we will convene institutional partners from state, federal, and local government to:

1. Explore institutional, financial, and technical requirements for implementing a LESA user support network.
2. Identify appropriate institutional roles and tasks to implement a LESA support network.

Approach

Objective One: Develop an Effective LESA Model Using GIS

Step One: Community Selection

This proposal will identify two study areas, preferably at the county scale, to test and implement the LESA model. Project partners will select preferred communities based on the following criteria.

A. Community Typology: This project will identify communities rich in agricultural resources. Agriculture should be a significant land use measured by percent of agricultural land use. Communities threatened by farmland

conversion to non-agricultural development, as identified by the American Farmland Trust, will be preferred (AFT, 2003b).

B. Data Accessibility: Pilot communities must have and provide access to modernized land information for which they are responsible. These data, include, but are not limited to tax parcels, orthophotography, soils, topography, and land use. Communities should provide access to farm tracts and fields and other farm enterprise data, as appropriate or as privacy agreements allow.
C. Comprehensive Plans: Only counties that have completed or are committed to completing a comprehensive plan that complies with Wisconsin's Comprehensive Planning Law will be considered in the selection process.
D. Favorable Relationships: Support from local participants is necessary to contribute to the success of the project. Support from the county or town board, UW-Extension (UWEX) participation, a strong history of working together, and distance from project headquarters will be considered when selecting among communities meeting all other criteria.

Step Two: Local Panel Selection

A local expert panel from each pilot community will be selected to define LESA model parameters and ensure that the LESA model meets local objectives. The local panel should include a combination of farmers, plan commissioners, a county UWEX educator, a Natural Resource Conservation Service (NRCS) representative, a county planner, land and water conservation staff, or farmland tax assessor, among other possibilities (Barrows, 1979) (Pease, 1994). The County UWEX Agricultural or Community Development Educator will assist the project partners to identify appropriate panel members.

Step Three: Data Collection

Data used to support the LESA model will be collected from a variety of local, state, and federal sources. Data will be compiled in a geo-database format for use with ArcGIS 9.2 and other compatible GIS software. Available data will be analyzed and modified to ensure accuracy and timeliness. Data collection and modifications will be documented using ESRI metadata documentation tools. Data needs, sources, quality, and absence will be documented in a data analysis report. All data will be collected by CLUE staff and housed on staff computers. Data will be backed-up daily using UWSP backup services. Project activities and data will be documented for the community on a project website. Maps of the data will be made available to the community through the website, an internet mapping service, and printed hardcopy. Douglas Miskowiak from CLUE will lead data collection efforts.

Step Four: Garner Local Input

After initial data collection, project staff will examine emerging patterns and trends using GIS. Data findings will be shared at local panel meetings. The local panels will review data products and report discrepancies to investigators for documentation. Panels will also articulate local agricultural priorities and objectives to project staff. Minutes of panel discussions will be documented and used to direct model building efforts. Working

with the local panels is necessary to foster links to local land use planning efforts. Douglas Miskowiak will lead the effort to garner local input.

Step Five: Model Building
Model building will employ existing GIS tools and the LESA model developed by the NRCS. The initial model will be based on guidelines provided by the NRCS LESA guidebook (Pease, 1996). The initial model will incorporate an array of data parameters to choose from, based on data availability. Land Evaluation parameters measure inherent soil qualities and will be based on a combination of soil productivity of indicator crops, land capability, or important and prime farmland designations. They will be developed in consultation with state NRCS experts. Site Assessment parameters measure an array of social factors and may include such themes as economic productivity, on-farm investments, land prices, urban infrastructure, neighboring land uses, natural resources, and land regulations, among others.

Weighted overlay analyses with GIS will apply the model's scoring parameters. Scoring parameters will be based on a combination of "ratings" and "weightings." Ratings score individual data features within a major data theme. Weightings determine how much influence a major data theme has over the entire model. For example, soil mapping units are individual data features. Each would be "rated" for their suitability to support agriculture. Soils data, on the other hand, is a major data theme and is "weighted" against other data themes (e.g. competing land uses). Initial LESA models will be constructed by Douglas Miskowiak using ArcGIS 9.2 and its extensions. Community Viz software will be tested as an alternative to applying ArcGIS. Community Viz is a GIS based planning support system that conducts an array of suitability analyses and impact assessments. UW-Madison partners will provide oversight and support to development of the technical protocol. Technical partners from DATCP and NRCS will provide additional in-kind support to guide model building.

After developing the initial LESA model and populating it with GIS data, the model will be applied by the local panel in each pilot community. A presentation, delivered by project staff, will initiate the panel meeting. The presentation will restate local priorities and objectives and share data collection efforts, model parameters, and their implications. After the presentation the local panel will use the LESA model to identify priority agricultural lands and operations by selecting appropriate data and rating and weighting parameters. Douglas Miskowiak, with assistance from LICGF, will conduct model building efforts.

Step Six: Model Assessment
Subsequent to running the model with local inputs, the model results will be assessed for its ability to score agricultural lands and operations accurately (i.e. scores achieve local objectives). To measure accuracy, project partners at CLUE and LICGF will develop and employ a benchmarking strategy (comparing LESA results to a control) using the Delphi approach described below

- Ten to 15 agricultural parcels will be randomly selected from each pilot area.
- The local panels will individually score each parcel and share their reasoning.

- Scores and comments will be electronically compiled by the project partners and then shared electronically among panel members for deliberation.
- Panel members will have an opportunity to change their scores based on deliberations with other members.
- Modifications will be compiled and incorporated into the model by the project partners.

The entire Delphi process will remain anonymous. Compiled parcel scores, resulting from the Delphi process, will be compared to resulting LESA scores. The LESA model will be refined to achieve the accuracy defined by benchmarking. One panel meeting will be convened to explain the benchmarking strategy. Follow-up meetings will be convened in person and electronically to compare the Delphi control to the LESA model. The LESA model will be refined until it accurately meets community objectives.

Assessment procedures will also examine:

- *Sensitivity:* What effects do factor ratings and weightings have on model results? Sensitivity will be measured by comparing the scores of agricultural parcels after model parameters are modified.
- *Clarity:* Are model factors, influences, and results transparent and understandable? This factor will be measured in consultation with local panel members.
- *Redundancy:* Does the model contain data redundancies that add complexity to the model and applies more weight to certain factors? Each model parameter will be examined for its effect on the model.

Objective Two: Build the Capacity for Implementing the LESA Model Locally

Step One: Literature Review

Partners from CLUE and UW-Madison, led by Douglas Miskowiak, will conduct an extensive literature review. The literature review will help to build the intellectual foundation to conduct this project and address educational objectives. The literature review will provide guidance for data collection, model building, and model assessment procedures. Case studies from around the United States will be reviewed to help address our educational objectives. The literature review will also provide the foundation for publishing in UWEX and other scholarly journals. The literature review will commence immediately and continue until project objectives are sufficiently addressed.

Step Two: Pilot Documentation

Partners from CLUE, LICGF, and UW-Madison, led by Douglas Miskowiak will document procedures and assessments applied in the pilot communities. The procedures and assessments will be used to address capacity building and educational objectives first-hand. Pilot documentation will report on successes and challenges while constructing and executing the LESA model. Documentation products will be compiled in a technical report and will include, but are not limited to:

- Local community selection
- Local panel selection and responsibilities
- Data collection procedures and assessment
- Modeling procedures

- Local panel meeting agendas and minutes
- Benchmarking procedures
- Model assessment reports

Step Three: Dissemination of Results
Research findings will be disseminated through several methods. All dissemination materials will be available at a project website hosted by CLUE.

- A technical report will compile research findings from the pilot studies. Specifically it will document the study approach and results. The technical report will be delivered to all institutional partners, including, but not limited to DATCP and NRCS. Douglas Miskowiak is responsible for compiling the technical report.
- UWEX publications will be developed to address the learning needs of local officials, plan commissioners, and citizens. Asli Gocmen is primarily responsible for developing these publications with assistance from other project partners. We anticipate that County UWEX educators will also use these publications to inform local audiences.
- Half-day workshops, conducted by Asli Gocmen with assistance from Douglas Miskowiak, will be developed and conducted to inform local officials, plan commissioners, and interested citizens how to apply LESA parameters to effectively achieve local objectives. These workshops will also be an important training venue for County UWEX educators. We anticipate that they will use these presentation materials to inform their local audiences.
- Professional training workshops will be developed by Tom McClintock with assistance from Douglas Miskowiak to build the capacity of conservation and planning professionals to use GIS to build and deliver effective LESA models. Initially, one workshop will be delivered free-of-charge by CLUE and LICGF. We expect that additional technical workshops will be delivered to professionals by LICGF staff for a fee.
- Faculty and staff from UW-Madison and UW-Stevens Point will jointly prepare and deliver project findings in scholarly journals and at least one professional conference.

Objective Three: Initiate an Informed Dialogue to Address LESA User Support
Step One: Organize a Meeting with State and Local Officials
With help from DATCP, project partners will jointly convene a meeting with appropriate institutional staff and members from the local panels. The purpose of the meeting is to:

- Present our research findings
- Initiate exploration of institutional, financial, and technical requirements for implementing a LESA user support network.
- Initiate exploration of the appropriate institutional roles and tasks to implement a LESA support network.

Step Two: Integrate Meeting Findings
Information and recommendations gleaned from the meeting will be documented and integrated into the technical report.

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Probable Duration

We anticipate this project will last a total of two years. We are allocating time in the first year to an extensive literature review and extensive data collection, modeling and assessment in two pilot areas. In the second year, our focus will be on refining the approach and developing educational and training materials based on research findings. Findings will be disseminated through scholarly journals, UWEX publications, training workshops, and conferences. In culmination, we will convene institutional partners from state government to initiate an informed dialogue regarding a support network for Wisconsin LESA users.

Personnel

Anna Haines, Ph.D., Director of the Center for Land Use Education and Associate Professor at the University of Wisconsin – Stevens Point will serve as the study co-director. Currently she is involved in CLUE's parcelization study. Anna will be responsible for project administration and will guide dissemination efforts. In addition, she will help to secure community partnerships, provide guidance to team members, and assist with the design of community outreach activities and case study reports.

Steve Ventura, Ph.D., Director of the Land Information and Computer Graphics Facility, and Professor at the University of Wisconsin – Madison will serve as the study co-director. Steve conducts ongoing research focused on the application of GIS for spatial process modeling, land records modernization, and land use planning. Steve will oversee and provide guidance on the technical aspects of the project.

Douglas Miskowiak, Outreach Specialist with the Center for Land Use Education at the University of Wisconsin – Stevens Point will lead and coordinate all technical aspects of the project. These include data collection, model building, and model assessment and benchmarking. Douglas will coordinate efforts in pilot communities to implement and refine the model for local use and testing. He will attend each local panel meeting in both pilot communities. He will coordinate with other team members to identify data collection needs, develop model parameters, assess models, and document procedures. In year two, Douglas will work closely with Asli Gocmen to prepare research findings for publication in scholarly journals and UWEX publications and attend at least one conference to present research findings. Douglas will work closely with Tom McClintock to develop a GIS training course designed to teach professionals the LESA approach using GIS.

Tom McClintock, Outreach Program Manager at the Land Information and Computer Graphics Facility at the University of Wisconsin – Madison will provide technical assistance for modeling with GIS. Tom will provide researchers at CLUE technical guidance and oversight to ensure efficient data collection and accurate GIS modeling. He will bring the latest technology resources to bear on the project including web-based GIS tools. Tom will work cooperatively with project partners to develop and implement model assessment procedures to test model accuracy, sensitivity, ambiguity, and redundancy. In year two, he will lead efforts to develop a GIS training course designed to teach professionals the LESA approach using GIS.

Aslı Göçmen, Ph.D., Assistant Professor at the University of Wisconsin – Madison and Extension will lead research dissemination efforts. She will craft UWEX publications that serve the learning needs of local educators, officials, and citizens. She will work closely with Douglas Miskowiak to review existing literature and synthesize the findings from the local pilot projects. She will participate with one pilot community to oversee implementation of the LESA model. Finally, she will conduct UWEX educational workshops and attend at least one professional conference to present research findings.

Letters of Collaboration

Please see enclosed letters of collaboration from James Arts, Department of Trade and Consumer Protection, and from Carl Wacker, Wisconsin Natural Resource Conservation Service.

Budget Justification

Year One

A. Faculty/Academic Staff Salary. One academic staff member at UWSP will spend 550 hours conducting a literature review, collecting data, model building, model assessment, and local outreach for two pilot communities (estimated at annual rate of $43,597 and 46.5% fringe rate). One academic staff member at UW-Madison will spend 179 hours to guide data collection, model building, and model assessment efforts (estimated at annual rate of $61,617 and 35% fringe rate). Salaries for remaining UWSP and UW-Madison faculty will be provided in-kind.

B. Research Assistant Salary. None requested.

C. Hourly Student Labor. None requested.

D. Supplies and expenses. Miscellaneous office supplies, presentation materials, and printing costs estimated at $200 each for UWSP and UW-Madison

E. Travel. Staff from UWSP will travel to eight local panel meetings in the pilot areas (four estimated at 75 miles each and four estimated at 250 miles each at $0.425/mile) and one partner meeting in Madison (estimated at 200 miles at $0.425/mile). UW-Madison faculty will travel to four local panel meetings in one pilot area (estimated at 75 miles each at $0.425/mile).

F. Equipment. None requested.

Year Two

A. Faculty/Academic Staff Salary. One academic staff member at UWSP will spend 423 hours finalizing model assessments, compiling research, and developing and disseminating educational materials including publications, presentations, and workshops (estimated at annual rate of $45,777 and 48.5% fringe rate). One academic staff member at UW-Madison will spend 208 hours to finalize model assessments and develop training materials designed to build professional capacity to build and implement the LESA model (estimated at annual rate of $64,698 and 37% fringe rate). Salaries for remaining UWSP, UW-Madison, and UWEX faculty and staff will be provided in-kind.

B. Research Assistant Salary. None requested.

C. Hourly Student Labor. None requested.

D. Supplies and expenses. Miscellaneous office supplies, presentation materials, and printing costs estimated at $200 for UWSP and $300 for UW-Madison

E. Travel. Staff from UWSP will travel to four local panel meetings in the pilot areas to disseminate findings (two estimated at 75 miles and two estimated at 250 miles at $0.425/mile), one partner meeting in Madison (estimated at 200 miles each at $0.425/mile), four educational workshops (estimated at 200 miles each at $0.425/mile), and one training workshop (estimated at 200 miles at $0.425). UW-Madison faculty will travel to three panel meetings in the pilot areas to disseminate findings (two estimated at 75 miles and one estimated at 250 miles each at $0.425/mile), and four educational workshops (estimated at 200 miles each at $0.425). To present at professional meetings, a request will be made by UWSP and UW-Madison faculty and staff to their respective Deans for special travel awards.

UWSP and UW-Madison faculty and staff will make a request to their respective Deans for special travel awards to conduct professional meetings.
one conference (estimated at 200 miles at $0.425/mile, lodging and meals at $192 and conference fees at $100),
F. Equipment. None requested.