

COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION

PROGRAM ANNOUNCEMENT/SOLICITATION NO./CLOSING DATE/if not in response to a program announcement/solicitation enter NSF 08-1 NSF 08-1					FOR NSF USE ONLY	
FOR CONSIDERATION BY NSF ORGANIZATION UNIT(S) (Indicate the most specific unit known, i.e. program, division, etc.) BCS - CULTURAL ANTHROPOLOGY					NSF PROPOSAL NUMBER 0900891	
DATE RECEIVED	NUMBER OF COPIES	DIVISION ASSIGNED	FUND CODE	DUNS# (Data Universal Numbering System)	FILE LOCATION	
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NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE Western Illinois University			ADDRESS OF AWARDEE ORGANIZATION, INCLUDING 9 DIGIT ZIP CODE Western Illinois University 1 University Circle Macomb, IL. 614551390			
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TITLE OF PROPOSED PROJECT Resiliency of agricultural communities after the 2008 Mississippi floods						
REQUESTED AMOUNT \$ 135,550	PROPOSED DURATION (1-60 MONTHS) 24 months		REQUESTED STARTING DATE 10/15/08		SHOW RELATED PRELIMINARY PROPOSAL NO. IF APPLICABLE	
CHECK APPROPRIATE BOX(ES) IF THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW						
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<input type="checkbox"/> DISCLOSURE OF LOBBYING ACTIVITIES (GPG II.C)			Exemption Subsection _____ or IRB App. Date 09/11/08			
<input type="checkbox"/> PROPRIETARY & PRIVILEGED INFORMATION (GPG I.D, II.C.1.d)			<input type="checkbox"/> INTERNATIONAL COOPERATIVE ACTIVITIES: COUNTRY/COUNTRIES INVOLVED (GPG II.C.2.j)			
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<input checked="" type="checkbox"/> SMALL GRANT FOR EXPLOR. RESEARCH (SGER) (GPG II.D.1)						
<input type="checkbox"/> VERTEBRATE ANIMALS (GPG II.D.5) IACUC App. Date _____ PHS Animal Welfare Assurance Number _____			<input type="checkbox"/> HIGH RESOLUTION GRAPHICS/OTHER GRAPHICS WHERE EXACT COLOR REPRESENTATION IS REQUIRED FOR PROPER INTERPRETATION (GPG I.G.1)			
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CERTIFICATION PAGE

Certification for Authorized Organizational Representative or Individual Applicant:

By signing and submitting this proposal, the Authorized Organizational Representative or Individual Applicant is: (1) certifying that statements made herein are true and complete to the best of his/her knowledge; and (2) agreeing to accept the obligation to comply with NSF award terms and conditions if an award is made as a result of this application. Further, the applicant is hereby providing certifications regarding debarment and suspension, drug-free workplace, and lobbying activities (see below), nondiscrimination, and flood hazard insurance (when applicable) as set forth in the NSF Proposal & Award Policies & Procedures Guide, Part I: the Grant Proposal Guide (GPG) (NSF 08-1). Willful provision of false information in this application and its supporting documents or in reports required under an ensuing award is a criminal offense (U. S. Code, Title 18, Section 1001).

Conflict of Interest Certification

In addition, if the applicant institution employs more than fifty persons, by electronically signing the NSF Proposal Cover Sheet, the Authorized Organizational Representative of the applicant institution is certifying that the institution has implemented a written and enforced conflict of interest policy that is consistent with the provisions of the NSF Proposal & Award Policies & Procedures Guide, Part II, Award & Administration Guide (AAG) Chapter IV.A; that to the best of his/her knowledge, all financial disclosures required by that conflict of interest policy have been made; and that all identified conflicts of interest will have been satisfactorily managed, reduced or eliminated prior to the institution's expenditure of any funds under the award, in accordance with the institution's conflict of interest policy. Conflicts which cannot be satisfactorily managed, reduced or eliminated must be disclosed to NSF.

Drug Free Work Place Certification

By electronically signing the NSF Proposal Cover Sheet, the Authorized Organizational Representative or Individual Applicant is providing the Drug Free Work Place Certification contained in Exhibit II-3 of the Grant Proposal Guide.

Debarment and Suspension Certification

(If answer "yes", please provide explanation.)

Is the organization or its principals presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency?

Yes

No

By electronically signing the NSF Proposal Cover Sheet, the Authorized Organizational Representative or Individual Applicant is providing the Debarment and Suspension Certification contained in Exhibit II-4 of the Grant Proposal Guide.

Certification Regarding Lobbying

The following certification is required for an award of a Federal contract, grant, or cooperative agreement exceeding \$100,000 and for an award of a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000.

Certification for Contracts, Grants, Loans and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Certification Regarding Nondiscrimination

By electronically signing the NSF Proposal Cover Sheet, the Authorized Organizational Representative is providing the Certification Regarding Nondiscrimination contained in Exhibit II-6 of the Grant Proposal Guide.

Certification Regarding Flood Hazard Insurance

Two sections of the National Flood Insurance Act of 1968 (42 USC §4012a and §4106) bar Federal agencies from giving financial assistance for acquisition or construction purposes in any area identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards unless the:

- (1) community in which that area is located participates in the national flood insurance program; and
- (2) building (and any related equipment) is covered by adequate flood insurance.

By electronically signing the NSF Proposal Cover Sheet, the Authorized Organizational Representative or Individual Applicant located in FEMA-designated special flood hazard areas is certifying that adequate flood insurance has been or will be obtained in the following situations:

- (1) for NSF grants for the construction of a building or facility, regardless of the dollar amount of the grant; and
- (2) for other NSF Grants when more than \$25,000 has been budgeted in the proposal for repair, alteration or improvement (construction) of a building or facility.

AUTHORIZED ORGANIZATIONAL REPRESENTATIVE		SIGNATURE		DATE	
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Project Summary

The goal of this research is to develop a quantifiable approach for modeling the resiliency of agricultural communities in western Illinois as they attempt to recover from the summer floods of 2008. We define community resiliency as a dependent variable comprised of five quantifiable social characteristics: 1) social equity as a function of income; 2) reproduction of population; 3) institutional reproduction of social skills through local schools; 4) ability to buy food, hardware, and medical services locally; and 5) quality of life. Past research by the applicants indicates that community resiliency is influenced by four key independent variables: knowledge of past disasters and responses, depth of kin networks, access to capital, and cultural models of social responsibility. Whether models of social responsibility are orientated primarily towards kin, community, or the nation influences community resiliency.

Intellectual merit

A primary contribution of ecological conceptualizations of resiliency has been to explain or understand unpredictable behaviors of systems. Our research builds on this success by developing a model applicable to human communities that is compatible with ecological analyses. A major impediment to modeling resiliency is that it is often not known which variables are most important for maintaining system integrity until after the system undergoes a major transformation. We draw on our observations of communities on the Gulf Coast that have, or have not, recovered from disasters to identify key variables. We will test how broadly applicable these variables are by using them in an analysis of the Midwest. Past qualitative anthropological approaches by others have been helpful for contextualizing resilience. We plan to build on this work by using qualitative analysis of discourse to develop a large-scale, quantitative, structured survey to model community resilience.

Planned activities

The researchers will electronically record semi-structured interviews and focus groups with 60 families and community meetings pertaining to reconstruction during the months of October, November, and December 2008. We will transcribe and thematically analyze discursive data to determine how people talk and think about the variables of analysis. We will use the results of the qualitative analysis to develop a structured survey to be administered via mail to 2000 families in 20 different communities during spring and summer 2009; one year after the floods. We will conduct a follow-up survey of a subset of the 2009 respondents in summer 2010. The rural communities in western Illinois are an ideal research setting for community resiliency research because of the proximity to the researchers and their familiarity with the cultural and socio-economic systems. The communities are small, ranging from 700-2500 residents and are of appropriate size for obtaining a representative sample.

Broader impacts

The research described in this proposal will benefit society at large by explicating a social science approach to resiliency that is compatible with ecological conceptualizations and is therefore more likely to influence policy. In June 2008 Illinois Governor Rod Blagojevich's office requested that Western Illinois University provide expertise and technical assistance in determining the economic, environmental and social impact of the flooding in the region. This research will be integrated into recovery policy as requested by the governor and will also be presented to the communities themselves in a series of informational meetings. This proposed research is also integrated with university-wide undergraduate research training at Western Illinois University.

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*Proposers may select any numbering mechanism for the proposal. The entire proposal however, must be paginated. Complete both columns only if the proposal is numbered consecutively.

Heather McIlvaine-Newsad & David G. Casagrande

Resiliency of agricultural communities after the 2008 Mississippi floods

Research Question and Methods

Western Illinois is comprised primarily of small, kin-based, rural farming communities that have been sustainable for many generations. Extensive flooding of communities along the Mississippi River in June 2008 threaten their sustainability and raises questions as to why some communities may be more resilient to such disasters than others. Studies of coastal fishing communities, post hurricanes Katrina and Rita, showed that some towns were more resilient than others. Grand Isle, LA is an example of one community that rebounded after hurricane Katrina, yet the livelihood system shifted to include a much larger recreational fishing sector than before the hurricane (Ingles and McIlvaine-Newsad 2007). This is an example of how the affects of external assistance can differ based on community characteristics.

Resiliency theory as conceptualized by ecosystem ecologists is gaining influence in public policy because it helps explain or understand unpredictable behaviors of ecosystems (Trosper 2003). This success has been difficult to replicate by social scientists because of challenges in identifying and quantifying appropriate variables of analysis (Cook et al. 2004; Davidson-Hunt & Berkes 2003; Peterson 2000). Anthropologists are uniquely prepared to contribute to ecosystem theory and policy (Casagrande et al. 2007) – in this case by developing a quantifiable approach to human community resiliency (Jones 2006). The research described in this proposal explicates a new anthropological approach to resiliency that is compatible with ecological conceptualizations and is integrated into recovery policy at the request of the governor of Illinois in response to the 2008 floods.

Our unit of analysis is the community, which we define as a group of people interacting closely with each other over generations to reproduce their livelihood, population, quality of life, and cultural values and beliefs. Quality of life is particularly important for structuring community processes and establishing goals in response to disasters. Our sampling and some variables will be measured by municipality. While it is true that kin networks may span municipalities, access to resources and government assistance are administered based on municipal boundaries. Our analysis focuses on a household's access to a kin network, whether or not that network is contained within a particular municipality.

Ecosystem ecologists have defined resilience as: "...the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks" (Walker et al. 2004). Understanding why one system may be organized in such a way that it is more or less resilient than another, or which disturbances most threaten resilience, requires identifying which components of a system and interactions between these components most affect resiliency. Unfortunately, it is usually impossible to know which components and interactions between components of a human system are most important until after the system has experienced a major disturbance. Our approach here draws on McIlvaine-Newsad's analyses of Gulf Coast fisheries recovering from hurricanes to identify systemic components important for community resilience and to test these in Illinois.

The research will be based on a multivariate model that includes independent variables and community resiliency as the dependent variable. The dependent variable is a composite of five social characteristics that describe cultural reproduction in Midwest farming communities: social equity as a function of income, reproduction of population, institutional reproduction of social

skills through local schools, ability to buy food, hardware, and medical services locally, and quality of life. We will use the GINI coefficient to estimate social equality (Ogwang 2000). The GINI coefficient is a measure of the distribution of income. Equality of income decreases with farm consolidation in rural farming communities as fewer farmers have access to land. Geisler and Daneker (2000) report that in the United States from 1940 to 1992, the number of farms decreased by 75% and the ownership of farms declined by 50%. Yet, during the same time period the average size of farms increased three fold (McLaughlin 2002; Geisler and Daneker 2000).

As income equality decreases, it becomes difficult for many in the community to maintain quality of life or procure basic necessities. This causes emigration and decreasing population. Communities lose local services and institutions like schools or locally owned businesses. Thus, reductions in social equity correlate with reduced resiliency. We include access to schools in our analysis because they are a primary institution for culturally transmitting skills and values necessary to secure livelihoods. As rural communities shrink, schools are consolidated and students must travel longer distances to attend. According to Orenstein (1992) in rural Illinois in 1930, there were more than 130,000 school districts. By 1950, the number diminished to 83,718; by 1980 to 15,625; by 1990 it was 15,500. Locally-owned stores that provide micro-credit opportunities and nearby access to products like groceries or hardware also disappear as rural communities are in decline. Community residents can find themselves traveling up to an hour to shop at nationally-owned retailers, attend school, or secure off-farm employment (Blanchard and Matthews 2008). We will also estimate quality of life using the happiness survey methodology (Myers & Diener 1995; Veenhoven 2002).

Family income, traveling distance required to buy necessities, and the quality of life based on the happiness index will be solicited in the structured survey. Population change and school consolidation will be calculated using municipality and county data available from Western Illinois University's Institute of Rural Affairs. Combining the values of the five social characteristics will allow us to determine points on a continuum at one end of which we find thriving communities with high quality of life and the other end which represents the complete disappearance of a community as we have defined it above. For example, if only a few farmers are farming all the land, overall livelihood opportunities and quality of life decline and the population density declines as people move away. Schools and stores close, and it is no longer possible for people to interact with each other to reproduce their livelihood, population, cultural values and beliefs, or quality of life. In short, the community disappears. This process is common as a result of farm consolidation in the rural Midwest (McIlvaine-Newsad et.al 2004; McIlvaine-Newsad et.al 2008).

Based on McIlvaine-Newsad's work we have identified four independent variables that influence resilience: knowledge of past disasters and response, amount of kin in social network, whether cultural models of social responsibility are oriented toward kin, community, or the nation, and access to capital. Anecdotal evidence from Grand Isle, LA indicates that people's concepts of social responsibility can be oriented towards the Cajun kin-based fishing community or can be oriented towards the broader nationally organized social safety nets like the Salvation Army, Red Cross, or government assistance (Ingles and McIlvaine-Newsad 2007). Cajun fishermen form a kin-based economy. After hurricane Katrina, one of the fish houses in Grand Isle, LA strongly considered not reopening. However, the social responsibility expressed by elder Cajun fishermen to their younger counterparts resulted in the reopening of the second fish house. Individual fishermen invested their own money in the reconstruction of the business. This example demonstrates the concept of social responsibility to ones kin and community. In comparison, Vietnamese fishermen in Venice, LA had no knowledge of past hurricanes. Unlike the Cajun

fishermen they could not rely on their own or kins past knowledge of issues such as where to take boats to ride out the storm.

Data for the multivariate model will come from structured surveys mailed to 5000 households. The wording of the questions used in the structured survey will be developed from qualitative analysis of recorded and transcribed interviews and focus groups.

Research Setting

On June 11, 2008 Illinois Governor Rod Blagojevich designated the counties of Clark, Coles, Crawford, Cumberland, Jasper and Lawrence counties disaster areas. Hundreds of municipalities are included. Levee breaks flooded portions of Lawrence County near Lawrenceville forcing the evacuations of 200 homes, and numerous small towns along the Mississippi river in West Central Illinois were notified by the National Weather Service that crests along the river would exceed the record crests of 1993. Multiple levees were breached and on at least three occasions levees failed, inundating rural communities and farm land. More than \$7.2 million in federal disaster assistance grants and loans were approved by the Federal Emergency Management Agency and the U.S. Small Business Administration for Illinois residents who suffered damages and losses (FEMA 2008).

These rural communities are small, ranging in population from 700-2500 residents. Thus they are small enough to obtain representative samples. Medium annual income ranges from \$32,500 to \$38,152 (US Census 2008). Residents are primarily engaged in farming or the supporting agricultural services sector. We have identified ten municipalities (Hamilton, Oquawka, Keithsburg, Warsaw, Gladstone, Gulfport, Carman, Lomax, Dallas City, and Meyer) whose population is predominately white and English speaking. We will conduct focus groups and interviews for qualitative analysis in these ten municipalities. All interviews will be conducted in English. Ten additional municipalities have been identified to allow for a total of twenty to receive structured mail surveys.

Plan of Action

Although we have identified key variables, these variables and the way people talk and think about them may be different than we have previously experienced. Therefore the researchers will conduct interviews with 60 families during the months of October, November, and December 2008 using semi-structured interviews and focus groups. In addition, we will attend community meetings conducted by local, state, and federal officials focusing on reconstruction efforts. During spring of 2009 audio recordings will be transcribed and thematically coded for the variables using NVivo (Gibbs 2002). Statements made by interviewees will be used to develop the structured survey to be administered to 2000 families during spring and summer 2009. We will also analyze the transcriptions to determine if our variables are appropriate or need to be changed.

We are applying for funding under the SGER program because timing is essential. October, November, and December 2008 are the ideal months for interviewing. August and September were too soon for interviews as many households are just now regaining access to land, equipment, and housing. Government programs that affect recovery processes are just beginning to be implemented. These will offer opportunities for focus groups. We cannot wait for a full review because it is important to do these interviews soon since farmers are beginning to quantify their losses as the harvest comes in and market prices are established. It is also our goal to conduct interviews early enough to allow data to be analyzed in time to develop and implement a structured survey within twelve months of the floods, so that respondents' memories of events are recent.

Located on campus, the Western Survey Research Center (WSRC) has extensive experience with large scale surveys on rural social issues. Our arrangement to sub-contract the structured survey implementation will significantly increase the speed and efficiency of the survey process. The WSRC will develop the survey, mail it, and enter data for analysis.

In June and July 2009 WSRC will mail the survey instrument to 5000 households in 20 communities with a goal of 2000 responses. Between August 2009 and May 2010 researchers will analyze the data and report back initial findings to panels of research participants. Between June and July 2010 a secondary mail survey of selected households with a goal of 1000 responses will be administered to determine which responses, if any, change over the subsequent year. From August-November 2010 researchers will analyze the data. In December 2010, we will report back findings to a panel of research participants.

Qualifications and broader research agendas of the principle investigators

McIlvaine-Newsad has worked with a wide variety of rural and indigenous peoples and published on their relationship to the environment (McIlvaine-Newsad 2003). She received her Ph.D. in 2000 from the University of Florida under the direction of Russell Bernard and has extensive training, teaching experience, and publications on research methods (McIlvaine-Newsad 2006, McIlvaine-Newsad and Clark 2006, McIlvaine-Newsad et al. 2003). She has recently been the recipient of five one-year grants from the National Oceanographic and Atmospheric Association's Department of National Marine Fisheries Service to document the changing ecological knowledge of Gulf Coast fishing communities in Louisiana and Texas. She is among a handful of anthropologists who have researched and published on the aftermath of hurricanes Katrina and Rita in rural fishing communities (Ingles and McIlvaine-Newsad 2007). Her work is based on both quantitative and qualitative data; much of it used to test fishing community resilience (Ingles and McIlvaine-Newsad 2007), and she has published on rural agricultural communities (McIlvaine-Newsad, et.al 2004; McIlvaine-Newsad, et.al 2008). Her research and teaching combines quantitative and interpretative analysis of data gathered through ethnographic fieldwork.

Casagrande's primary research interest is to continue developing the anthropological approach to human ecosystem ecology (Casagrande 1999; Stepp et al. 2003). He received a Ph.D. in anthropology in 2002 under the direction of Dr. Brent Berlin with field work on Tzeltal Mayan ecology funded by a NSF Doctoral Dissertation Improvement Grant. He has experience building theoretical and methodological bridges between many academic disciplines (Casagrande 1997; Cook et al. 2004; Casagrande et al. 2007; Rands et al. 2007). Developing the concept of resiliency will benefit from his strong background in ecosystem ecology, including a master's degree in forest science from Yale University. Since 1996, Casagrande has been involved in various applied research projects that attempt to restore human social communities after long-term disturbance using the concept of restoration ecology (Casagrande 1996, 1997; Casagrande and Vasquez 2006). Casagrande has extensive experience conducting qualitative content analysis using the NVivo software and has coded over 150 hours of transcribed interviews as part of his research in the American Southwest and among migrants from the Republic of the Marshall Islands (Rands et al. 2007). He has extensive experience with quantitative analysis, including cultural consensus analysis and other ANTHROPAC applications (Casagrande 2004). From 2002 to 2004 he was a post-doctoral research associate on a National Science Foundation grant (the Central Arizona-Phoenix Long-Term Ecological Research project at Arizona State University) where he used multivariate analyses to model human social organization as a response to environmental stress in metropolitan Phoenix (Cook et al. 2004; Yabiku et al 2008).

Broader impacts

The research proposed here has significant potential to benefit society at large by developing a social science approach to resilience theory. Formal treatments of resilience are gaining acceptance in policy analysis. Interdisciplinary collaborations between ecology and anthropology provide opportunities for theoretical development and for anthropology to influence policy (Casagrande et al. 2007). Casagrande's long history of interdisciplinary collaboration and publication in non-anthropology journals provides opportunities to disseminate findings outside the field of anthropology.

This research is integrated with university-wide undergraduate research initiatives at WIU and the commitment of the College of Arts and Sciences to developing an undergraduate anthropology program. WIU does not have a graduate anthropology program. Undergraduate students from communities affected by the floods will be recruited to assist with interviews and data analysis. Additional undergraduate students will be recruited to analyze data for their own research projects. Students will be highly encouraged to present their research at WIU's annual Spring Undergraduate Research Day and regional professional meetings. The College of Arts and Sciences provides small scholarships for original research and travel to meetings. McIlvaine-Newsad and Casagrande have been highly effective in developing undergraduate research, including having advised over 90 students presenting research at Western Illinois University's annual Undergraduate Research Day and placing students in the field with undergraduate research scholarships.

This research will have direct impact on state disaster recovery policy. In June 2008 Illinois Governor Rod Blagojevich's office requested Western Illinois University to provide expertise and technical assistance in determining the economic, environmental and social impact of flooding in the region.

Dissemination plans

Resiliency theory is mainly used by ecosystem ecologists. Our use of this research broadens the scope of resiliency theory by applying it to human communities, thereby bringing to the forefront some of the challenges associated with identifying and quantifying appropriate variables of analysis. As more and more anthropologists study disasters, the use of this conceptualization may prove useful. Research results will also be disseminated to the municipal, regional, and state level governing bodies. McIlvaine-Newsad and Casagrande will collaborate with staff and faculty from the Illinois Institute for Rural Affairs (IIRA) at Western, as well as the Institute for Environmental Studies (IES) and Geographic Information Systems (GIS) Center to assess damage and recommend future recovery plans. Once the assessment phase is completed, a committee of state agencies, including Western's faculty, will develop a plan that would ideally assist in recovery efforts after another flood. This research described in this proposal will be reported back to panels of participants, as well as integrated into state policy, providing an outstanding opportunity to address issues of social justice and human quality of life in long-term planning. At the national level, FEMA will also have access to final reports. Finally, research results will be disseminated to students by integrating them into the anthropology curriculum at WIU.

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Yabiku, S., D. G. Casagrande and E. Farley-Metzger. 2008. Preferences for landscape choice in a Southwestern desert city. *Environment and Behavior* 40: 382-400.

Biographical Sketch: Heather L. McIlvaine-Newsad

I. Professional Preparation

Denison University	German	BA	1990
Universität Heidelberg	German	Certificate	1988-1989
Ohio University	International Studies	MA	1995
University of Florida	Applied Anthropology	PH.D.	2000

II. Appointments

2004-present	Associate Professor, Western Illinois University
2000-2004	Assistant Professor, Western Illinois University

III. Publications

i. publications most closely related to the proposed project

- McIlvaine-Newsad, H., C. D. Merrett, W. Maakestad, and P. McLaughlin. 2008. *Slow Food Lessons in the Fast Food Midwest*. *Southern Rural Sociology*. 23(1) 72-93.
- Ingles, P. and H. McIlvaine-Newsad. (2007) Any Port in the Storm: The Effects of Hurricane Katrina on Two Fishing Communities in Louisiana. *NAPA Bulletin 28: Anthropology and Fisheries Management in the United States: Methodology for Research Issue*.
- Rands, G., B. Ribbens, D. Casagrande, and H. McIlvaine-Newsad. 2007. Envisioning an ecologically sustainable society: An ideal type and an application. Pp. 22-59 in S. Sharma, M. Starik and B. Husted (Eds.), *Organizations and the Sustainability Mosaic: Crafting Long-Term Ecological and Societal Solutions*, Edward Elgar Publishing.
- McIlvaine-Newsad, H. C. Merrett, and P. McLaughlin. 2004. Direct from Farm to Table: Community Sponsored Agriculture in Western Illinois. *Culture and Agriculture*. Vol. 26, No. 1-2, pp. 149-163.
- McIlvaine-Newsad, H., M. Dougherty, and A. Sullivan. 2003. Operationalizing the Household Timeline. *Field Methods*. Vol. 15, No. 3, pp. 305-317.

ii. other significant publications

- Martinelli-Fernandez, S., L. Baker-Sperry, and H. McIlvaine-Newsad, (Eds.) 2009. "Interdisciplinary Views on Abortion: Essays from Philosophical, Sociological, Anthropological, Political, Health and Other Perspectives." McFarland Press. (In press)
- McIlvaine-Newsad, H. 2007. *Unravel the Gordian Knot*. in 147 Practical Tips for Teaching Sustainability: Connecting the Environment, the Economy, and Society. Timpson, W., B. Dunbar, G. Kimmel, B. Bruyere, P. Newman, and H. Mizia Eds. Madison, WI: Atwood Publishing.
- McIlvaine-Newsad, H. and M. J. Clark. 2006. Community Health Mapping: Participation, Collaboration and Positive Outcomes. *Public Health Practice in Illinois*. Volume 6, Number 2, pp. 41-48.
- McIlvaine-Newsad, H. 2003. Ojalá que lluevÉ algo en el campo: Cultural Influences of Development. *International Journal of Agricultural Resources, Governance and Ecology*, Vol. No. 2, pp. 153-166.

IV. Synergistic Activities

- 1) McIlvaine-Newsad is currently engaged in a longitudinal study with an interdisciplinary group of researchers from the NMFs (National Marine Fisheries) division of NOAA (National Oceanic and Atmospheric Association) to study the changing livelihood strategies of small scale fishermen in the Gulf Coast region. Since 2004 she has worked with partners in NMFs assessing the changes in coastal livelihood as the result hurricane damage, longitudinal changes in the natural environment, coastal development, and economic downturns.
- 2) In her Ph.D. dissertation research, McIlvaine-Newsad developed methods to study the effect of changes in household composition overtime on the agricultural production and forest extraction activities of smallholder farm households. *Ethnographic linear programming* uses both quantitative and qualitative data to estimate the nutritional and cash need of resource poor farmers.

3) McIlvaine-Newsad's pre-academic work as a Peace Corps Volunteer in the Dominican Republic (1991-1993) as a community forestry project coordinator provided her with an applied understanding of the physical, economic, and environmental constraints placed on tropical island nations. Subsequent work on a United Nations/FAO grant in St. Lucia addressed issues of environmental and economic sustainability among banana farmers. Her work in western Illinois includes research on local food systems, including CSA (community supported agriculture) sustainable farms.

4) McIlvaine-Newsad's service to the broader scientific community includes membership in the American Anthropological Association, Society for Applied Anthropology, International Farming Systems Research Association, and National Women's Studies Association. She has reviewed manuscripts for *Culture & Agriculture*, *Fisheries*, *Women's Studies Quarterly*, *Transforming Anthropology*, and *NWSA Bulletin*.

5) To more effectively bring social science into the classroom, McIlvaine-Newsad requires undergraduate students to conduct original research in his Anthropological Methods course. She has taken undergraduate students to the field with her in 2005 and subsequently adopted these students as "peer mentors" in her undergraduate introductory level classes. Students in her Gender, Race, & the Environment class utilize data gathered during annual fieldwork to understand the real life effects of gender and race on livelihood strategies post natural disasters like hurricane Katrina. McIlvaine-Newsad is also a member of the university's sustainability committee.

V. Collaborators & Other Affiliations

i. Collaborators and Co-Editors: David Casagrande (Western Illinois University), Mary Jane Clark (Illinois Institute for Rural Affairs/Western Illinois University), Michael Dougherty (University of Florida), Palma Ingles (National Marine Fisheries) Patrick McLaughlin (Western Illinois University), Christopher Merritt (Illinois Institute for Rural Affairs/Western Illinois University), Gordon Rands (Western Illinois University), Barbara Ribbens (Western Illinois University), Amy Sullivan (International Water Management Institute, South Africa),

ii. Graduate and Postdoctoral Advisors: H. Russell Bernard (University of Florida), Ann Corrine Freter-Abrahams (Ohio University), Peter Hildebrand (University of Florida), and Marianne Schminck (University of Florida),

Biographical Sketch: David G. Casagrande

I. Professional Preparation

Southern Connecticut State University	Geography	B.Sci.	1984
Yale School of Forestry and Environmental Studies	Ecology and Policy	M.F.Sci.	1996
University of Georgia	Ecological Anthropology	Ph.D.	2002
Arizona State University (Postdoctoral Associate)	Human Ecology		2003-2005

II. Appointments

2005-present	Assistant Professor, Western Illinois University
2003-2005	Post-doctoral Research Associate, Central Arizona-Phoenix Long-Term Ecological Research Program, Arizona State University
Spring 2003	Visiting Instructor, Department of Anthropology, Appalachian State University
1996 – 1997	Staff Ecologist & Policy Analyst, Yale School of Forestry and Environmental Studies
1986 – 1993	Policy Analyst, Connecticut Department of Transportation
1984 – 1986	Transportation Planner, South Central Council of Governments (Connecticut)

III. Publications

i. publications most closely related to the proposed project

- Casagrande, D. G., D. Hope, E. Farley-Metzger, W. Cook, S. Yabiku, and C. Redman. 2007. Problem and opportunity: Integrating anthropology, ecology, and policy through adaptive experimentation in the urban American Southwest. *Human Organization* 66(2):125-139.
- Haenn, N., and D. G. Casagrande. 2007. Citizens, Experts, and Anthropologists: Finding Paths in Environmental Policy. *Human Organization* 66(2):99-102.
- Rands, G., B. Ribbens, D. Casagrande, and H. McIlvaine-Newsad. 2007. Envisioning an ecologically sustainable society: An ideal type and an application. Pp. 22-59 in S. Sharma, M. Starik and B. Husted (Eds.), *Organizations and the Sustainability Mosaic: Crafting Long-Term Ecological and Societal Solutions*, Edward Elgar Publishing.
- Cook, W., D. Casagrande, D. Hope, P. M. Groffman, and S. L. Collins. 2004. Learning to roll with the punches: Adaptive experimentation in human-dominated systems. *Frontiers in Ecology and the Environment* 2(9): 467-474.
- Casagrande, D. G. 1999. Information as verb: Re-conceptualizing information for cognitive and ecological models. *Journal of Ecological Anthropology* 3:4-13.

ii. other significant publications

- Yabiku, S., D. G. Casagrande and E. Farley-Metzger. 2008. Preferences for landscape choice in a Southwestern desert city. *Environment and Behavior* 40: 382-400.
- Hope, D., C. Gries, D. Casagrande, C. L. Redman, N. B. Grimm, and C. Martin. 2006. Drivers of spatial variation in plant diversity across the Central Arizona-Phoenix ecosystem. *Society and Natural Resources* 19(2):101-116.
- Casagrande, D. G. 2004. Conceptions of primary forest in a Tzeltal Maya community: Implications for conservation. *Human Organization* 63(2):189-202.
- Stepp, J. R., E. C. Jones, M. Pavao-Zuckerman, D. Casagrande, and R. K. Zarger. 2003. Remarkable properties of human ecosystems. *Conservation Ecology* 7(3): 11
- Casagrande, D. G. (Ed.). 1997. *Restoration of an urban salt marsh: An interdisciplinary approach*. Bulletin No. 100, Yale School of Forestry and Environmental Studies, New Haven, CT.

IV. Synergistic Activities

- 1) In his Ph.D. dissertation research, Casagrande developed methods to study migration as a controlled, comparative approach for understanding human adaptation to different environments and using information theory to bridge scales of analysis from individual cognition, to distributed cognition and informational properties of systems that include humans.

2) Casagrande has integrated these and other social science principles and methods into several interdisciplinary research projects. Between 1995 and 1997 he led a team of researchers at Yale University studying wetland restoration as an ecosystem process of which humans were an integral part, and edited a published volume on the subject with contributions from team members in 1997. As a post-doctoral research associate at Arizona State University studying Phoenix, Arizona as an urban ecosystem, Casagrande collaborated with a biology post-doctoral associate to develop the concept of 'adaptive experimentation.' Using information theoretic concepts that span scales of analysis developed for his dissertation, Casagrande integrated a team of social and natural scientists into an experiment manipulating neighborhood landscapes in which humans are in situ human subjects. This ongoing experiment includes analysis of effects on individual cognition, shared cognition and ecosystem properties like plant recruitment and microclimate.

3) Professional experience as a policy analyst combined with interdisciplinary teamwork has enabled Casagrande to effectively integrate social science into public policy. Some examples include using cognitive approaches to reconcile conflicting cultural perceptions of natural resources in the cases of wetland restoration in Connecticut and forest conservation in Chiapas, Mexico and integrating folk ecological knowledge and cultural models into water policy decisions in Phoenix, Arizona. In 2007, Casagrande (with Dr. Nora Haenn) guest-edited a special issue of *Human Organization* dedicated to anthropology and public policy.

4) Casagrande's service to the broader scientific community includes serving as editor-in-chief of the *Journal of Ecological Anthropology* from 1999-2003. He is currently production editor of the *Journal of Ecological Anthropology*, associate editor of the *Journal of Ethnobiology & Ethnomedicine* and topical editor of environmental anthropology and human ecology for the wiki-based *Encyclopedia of Earth*. He is a founding member of the Society for Anthropological Sciences. Among other conference activities, he chaired a special session on "Manipulative experiments with in situ human subjects" at the first General Scholarly Meeting of the Society for Anthropological Sciences, co-organized a session on human ecosystems at an annual meeting of the Ecological Society of America, and was presidential session chair and co-organizer of a session dedicated to Gregory Bateson at the Annual Meeting of the American Anthropological Association in 2004. He has reviewed manuscripts and grant proposals for *American Anthropologist*, *Current Anthropology*, *Ecological Applications*, *Conservation Ecology*, *Economic Botany*, *Mountain and Research Development*, the *Journal of Ethnopharmacology*, the National Science Foundation, and the Social Sciences and Humanities Research Council of Canada.

5) To more effectively bring social science into the classroom, Casagrande requires undergraduate students to conduct original research in his Ethnobotany and Environmental Anthropology courses. Casagrande co-teaches ethnobotany with a biologist. Students in this course are challenged to integrate Western scientific principles with indigenous ways of knowing using plants as a common denominator. Biology and sociology graduate students taking this split-level course are required to mentor undergraduates from a discipline other than their own. As a member of the advisory board and curriculum committee for Western Illinois University's Institute of Environmental Studies, Casagrande also advocates for an interdisciplinary, science-based, environmental curriculum that includes social sciences.

V. Collaborators & Other Affiliations

i. Collaborators and Co-Editors: William M. Cook (St. Cloud State University), Elizabeth Farley-Metzger (Arizona State University), Corinna Gries (Arizona State University), Nancy B. Grimm (Arizona State University), Nora Haenn (Arizona State University), Diane Hope (Arizona State University), Eric C. Jones (University of North Carolina at Greensboro), Christopher Martin (Arizona State University), Heather McIlvaine-Newsad (Western Illinois University), Gordon Rands (Western Illinois University), Charles L. Redman (Arizona State University), Barbara Ribbens (Western Illinois University), Michael Vasquez (Northern Arizona University), Scott Yabiku (Arizona State University), Rebecca Zarger (University of South Florida)

ii. Graduate and Postdoctoral Advisors: Steven R. Beissinger (University of California, Berkeley), Brent Berlin (University of Georgia), Charles L. Redman (Arizona State University)

iii. Thesis Advisor and Postgraduate-Scholar Sponsor: None

SUMMARY PROPOSAL BUDGET

YEAR 1

ORGANIZATION Western Illinois University				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Heather McIlvaine-Newsad				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
				CAL	ACAD	SUMR	
1. Heather McIlvaine-Newsad - PI				0.00	1.50	2.00	\$ 23,949
2. David G Casagrande - Co-PI				0.00	1.50	2.00	19,411
3.							
4.							
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00	0
7. (2) TOTAL SENIOR PERSONNEL (1 - 6)				0.00	3.00	4.00	43,360
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL SCHOLARS				0.00	0.00	0.00	0
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00	0
3. (1) GRADUATE STUDENTS							7,920
4. (1) UNDERGRADUATE STUDENTS							7,920
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							0
6. (0) OTHER							0
TOTAL SALARIES AND WAGES (A + B)							59,200
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							10,746
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							69,946
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT							0
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							1,683
2. FOREIGN							0
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ _____ 0							
2. TRAVEL _____ 0							
3. SUBSISTENCE _____ 0							
4. OTHER _____ 0							
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS							0
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							4,500
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0
3. CONSULTANT SERVICES							0
4. COMPUTER SERVICES							0
5. SUBAWARDS							0
6. OTHER							16,938
TOTAL OTHER DIRECT COSTS							21,438
H. TOTAL DIRECT COSTS (A THROUGH G)							93,067
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
MTDC (Rate: 33.5000, Base: 93067)							
TOTAL INDIRECT COSTS (F&A)							31,177
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							124,244
K. RESIDUAL FUNDS							0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)							\$ 124,244 \$
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$			
PI/PD NAME Heather McIlvaine-Newsad				FOR NSF USE ONLY			
ORG. REP. NAME* Beth Seaton				INDIRECT COST RATE VERIFICATION			
		Date Checked		Date Of Rate Sheet		Initials - ORG	

SUMMARY PROPOSAL BUDGET

YEAR 2

ORGANIZATION Western Illinois University				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Heather McIlvaine-Newsad				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
		CAL	ACAD	SUMR			
1.	Heather McIlvaine-Newsad - PI	0.00	0.00	0.00	\$ 0	\$	
2.	David G Casagrande - Co-PI	0.00	0.00	0.00	0		
3.							
4.							
5.							
6.	(0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00	0		
7.	(2) TOTAL SENIOR PERSONNEL (1 - 6)	0.00	0.00	0.00	0		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1.	(0) POST DOCTORAL SCHOLARS	0.00	0.00	0.00	0		
2.	(0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00	0		
3.	(0) GRADUATE STUDENTS				0		
4.	(0) UNDERGRADUATE STUDENTS				0		
5.	(0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)				0		
6.	(0) OTHER				0		
TOTAL SALARIES AND WAGES (A + B)					0		
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					0		
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					0		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT					0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)					0		
2. FOREIGN					0		
F. PARTICIPANT SUPPORT COSTS							
1.	STIPENDS \$ _____				0		
2.	TRAVEL _____				0		
3.	SUBSISTENCE _____				0		
4.	OTHER _____				0		
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS					0		
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES					0		
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					0		
3. CONSULTANT SERVICES					0		
4. COMPUTER SERVICES					0		
5. SUBAWARDS					0		
6. OTHER					8,469		
TOTAL OTHER DIRECT COSTS					8,469		
H. TOTAL DIRECT COSTS (A THROUGH G)					8,469		
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) MTDC (Rate: 33.5000, Base: 8469)							
TOTAL INDIRECT COSTS (F&A)					2,837		
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)					11,306		
K. RESIDUAL FUNDS					0		
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)					\$ 11,306	\$	
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$			
PI/PD NAME Heather McIlvaine-Newsad				FOR NSF USE ONLY			
ORG. REP. NAME* Beth Seaton				INDIRECT COST RATE VERIFICATION			
		Date Checked	Date Of Rate Sheet	Initials - ORG			

SUMMARY PROPOSAL BUDGET Cumulative

ORGANIZATION Western Illinois University				FOR NSF USE ONLY		
				PROPOSAL NO.	DURATION (months)	
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Heather McIlvaine-Newsad				AWARD NO.	Proposed	Granted
					NSF Funded Person-months	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				CAL	ACAD	SUMR
1. Heather McIlvaine-Newsad - PI				0.00	1.50	2.00
2. David G Casagrande - Co-PI				0.00	1.50	2.00
3.						
4.						
5.						
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00
7. (2) TOTAL SENIOR PERSONNEL (1 - 6)				0.00	3.00	4.00
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)						
1. (0) POST DOCTORAL SCHOLARS				0.00	0.00	0.00
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00
3. (1) GRADUATE STUDENTS						7,920
4. (1) UNDERGRADUATE STUDENTS						7,920
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)						0
6. (0) OTHER						0
TOTAL SALARIES AND WAGES (A + B)						59,200
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)						10,746
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)						69,946
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)						
TOTAL EQUIPMENT						0
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)						1,683
2. FOREIGN						0
F. PARTICIPANT SUPPORT COSTS						
1. STIPENDS \$ _____ 0						
2. TRAVEL _____ 0						
3. SUBSISTENCE _____ 0						
4. OTHER _____ 0						
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS						0
G. OTHER DIRECT COSTS						
1. MATERIALS AND SUPPLIES						4,500
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION						0
3. CONSULTANT SERVICES						0
4. COMPUTER SERVICES						0
5. SUBAWARDS						0
6. OTHER						25,407
TOTAL OTHER DIRECT COSTS						29,907
H. TOTAL DIRECT COSTS (A THROUGH G)						101,536
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)						
TOTAL INDIRECT COSTS (F&A)						34,014
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)						135,550
K. RESIDUAL FUNDS						0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)						\$ 135,550 \$
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$		
PI/PD NAME Heather McIlvaine-Newsad				FOR NSF USE ONLY		
ORG. REP. NAME* Beth Seaton				INDIRECT COST RATE VERIFICATION		
		Date Checked	Date Of Rate Sheet	Initials - ORG		

C *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

Budget justification

A. Senior Personnel

WIU is primarily an undergraduate education institution with a heavy teaching load (3 courses per semester), which precludes the extensive field work required for the proposed research. Also, the lack of doctoral students to cover classes compromises the institution's ability to provide course release. The faculty course buy-outs requested in this proposal will be used to hire an adjunct instructor. Both Senior personnel are full-time faculty on 9-month contracts.

During Year 1, Dr. Heather McIlvaine-Newsad and Dr. David Casagrande require 1 course buy-out each during the Spring 2009 semester to transcribe the data gathered during the Fall 2008 semester, conduct qualitative analysis of the data, and construct the survey (1/6 of nine-month salary based on a 3/3 teaching load). Drs. Heather McIlvaine-Newsad and David Casagrande require two months of paid summer salary each during the time they are conducting field work in rural Illinois at a rate of 2/9 of nine-month salary.

No course buy-outs or summer salaries are requested during Year 2 of the project.

B. Other Personnel

In Year 1, a graduate student assistant will be paid 9 months of base salary (November 2008-July 2009) at \$880/month (\$7920). Also in year 1, an undergraduate student assistant will be funded for 9 months of base salary at \$880/month (\$7920).

No funding for additional personnel is requested during Year 2 of the project.

C. Fringe Benefits

Fringe benefits are calculated at 42% for academic year salaries and 12% for summer salaries.

D. Equipment

None requested.

E. Travel

At the study onset, two senior researchers (McIlvaine-Newsad and Casagrande) will travel to 20 different research sites in Illinois with one graduate research assistant and one undergraduate research assistant to conduct interviews and focus groups. Motor vehicle costs in Year 1 are \$505. Lodging for all researchers is \$700. Per diem for all researchers totals \$128. Food for the focus group interviews totals \$350.

No travel costs are associated with year 2 of the project.

F. Participant Support Costs

None requested.

G. Other Direct Costs

1. Materials and Supplies

Year 1 purchases will include two laptop computers for data entry and analysis (\$2,600) and two digital voice recorders (\$200), and a video camera (\$1700). We will use digital video recorders for focus groups because we know from previous research that it is often difficult to tell who is talking when transcribing group interviews.

2. *Publication costs*

None.

3. *Consultant Services*

None.

4. *Computer Services*

None.

5. *Subawards*

None.

6. *Other*

Year 1 the Western Survey and Research Center (WRSC), a unit of Western Illinois University, will administer a mail survey to residents from 20 communities affected by the 2008 floods, with a target of approximately 100 respondents from each community. A total of \$16,938 is requested.

During Year 2 the WSRC will administer a follow-up survey to a sub-sample of Year 1 respondents in Spring 2010, to assess change in their livelihood status over time. A total of \$8,469 is requested.

H. Indirect Costs

A significant of advantage of this project is the proximity to research sites. As a result, our travel budget is much lower than on campus costs. Use of the University's federally-negotiated on-campus rate of 33.5% is based on the greater amount of time (24 person-months) allocated to the on-campus work versus off-campus work (3 person-months).

FACILITIES, EQUIPMENT & OTHER RESOURCES

FACILITIES: Identify the facilities to be used at each performance site listed and, as appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Use "Other" to describe the facilities at any other performance sites listed and at sites for field studies. USE additional pages as necessary.

Laboratory:

Clinical:

Animal:

Computer: The PI and Co-PI have computers with NVivo and ANTHROPAC software to process the data.

Office: Office space is available for the PI, Co-PI, undergraduate and graduate research assistants to transcribe interviews, enter and analyze data and develop the mail survey.

Other:

MAJOR EQUIPMENT: List the most important items available for this project and, as appropriate identifying the location and pertinent capabilities of each.

OTHER RESOURCES: Provide any information describing the other resources available for the project. Identify support services such as consultant, secretarial, machine shop, and electronics shop, and the extent to which they will be available for the project. Include an explanation of any consortium/contractual arrangements with other organizations.

The Western Survey Research Center (WSRC), which is located on campus, has extensive experience with large scale surveys on rural social issues. We will sub-contract the structured survey with them. This arrangement will significantly increase the speed and efficiency of the survey process. The WSRC will develop the survey, mail it, and enter data for analysis.



**WESTERN
ILLINOIS
UNIVERSITY**

September 11, 2008

Dear Dr. McIlvaine-Newsad and Dr. Casagrande,

It is my pleasure to submit a proposal for the implementation of a panel survey as part of your larger project designed to study of the resiliency of communities affected by the 2008 floods. The survey would entail a random sample survey of residents from 20 communities affected by the Mississippi floods of 2008 with approximately 100 respondents from each community. The first survey will take place in the spring of 2008 and a follow-up survey will be administered to the same respondents in the spring of 2010, to assess change over time.

The Western Survey Research Center (WSRC) was instituted in 2004 with a mission to provide student training in survey methods and survey services to rural communities in the area. Our services include mail, telephone, Internet, and in-person surveys. This project fits into our strategic plan in that it will focus on the needs of local communities, support primary research of university professors, and students from all of the social sciences will take part in its implementation.

At the WSRC, we are committed to supporting projects like the Resiliency of agricultural communities after the 2008 Mississippi floods. This project brings together the best of quantitative and qualitative research and allows researchers to assess change in communities over time. The WSRC is committed to the help this project by completing all aspects of the survey portion of the project.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'D. Rohall', written in a cursive style.

David Rohall, Director

Date of Preparation:

WIUIRB #: (Include, if known)



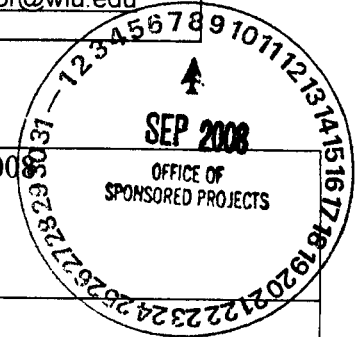
**WESTERN ILLINOIS UNIVERSITY
INSTITUTIONAL REVIEW BOARD
(FWA 00005865)**

Sherman Hall, Room 320, Macomb, IL 61455-1390

Phone: 309/298-1191 FAX: 309/298-2091

Website: <http://www.wiu.edu/users/misp/> E-mail: IRB-Administrator@wiu.edu

**Human Subjects in Research
Expedited Review**



Project Title:	Community Resiliency and the Floods of 2008		
Principal Investigator/Faculty	Heather McIlvaine-Newsad		
Address:	404 Morgan Hall, Department of Sociology & Anthropology		
Telephone Number:	309.298.1264	Fax Number:	309.298.1857
E-Mail Address:	h-mcilvaine-newsad@wiu.edu		
Co-PI or Student Investigator	David Casagrande		
Address	404 Morgan Hall, Department of Sociology & Anthropology		
Telephone Number:	309.298.1567	Fax Number:	309.298.1857
E-mail Address:	dg-casagrande@wiu.edu		
Primary Contact Person:	Heather McIlvaine-Newsad		

II. Funding

<input checked="" type="checkbox"/> External Funding Agency (Name) National Science Foundation	
<input type="checkbox"/> Internal Grant Program <input type="checkbox"/> None	
Contract or Grant Title if applicable*:	Small Grants for Exploratory Research (SGER)
Contract or Grant if applicable #:	

PRINCIPAL INVESTIGATOR'S ASSURANCE AND SIGNATURES

Signature certifies that the Principal Investigator understands and accepts the following obligations to protect the rights and welfare of research subjects in this study.

- ◆ I recognize that as the Principal Investigator it is my responsibility to ensure that this research and the actions of all project personnel involved in conducting the study will conform with the IRB approved protocol, IRB requirements/policies, and all applicable HHS/FERPA/PPRA/HIPAA regulations.

- ◆ I recognize that it is my responsibility to ensure that the study has been reviewed for scientific merit.
- ◆ I recognize that it is my responsibility to ensure that the study has been reviewed for ethical content.
- ◆ I recognize that it is my responsibility to ensure that there is constant open dialogue between myself and the co-investigators to ensure that the study is conducted correctly, and the safety and protection of the subjects are ensured.
- ◆ I recognize that it is my responsibility to ensure that valid informed consent/assent has been obtained from all research subjects or their legally authorized representatives. I will ensure that all project personnel involved in the process of consent/assent are trained properly and are fully aware of their responsibilities relative to the obtainment of informed consent/assent according to the IRB guidelines and applicable federal regulations. I will use only the currently approved, IRB stamped informed consent form or script for recruiting subjects.
- ◆ I will promptly inform the IRB of any event that requires reporting in accordance with IRB policies and procedures on Unanticipated Events Involving Risks to Subjects or Others and Adverse Events (Serious and/or unexpected).
- ◆ I will not initiate any change in protocol without IRB approval except when it is necessary to reduce or eliminate a risk to the subject in which case the IRB will be notified as soon as possible.
- ◆ I will maintain all required research records and recognize the IRB is authorized to inspect these records.
- ◆ I will inform the IRB immediately of *any* significant negative change in the risk/benefit relationship of the research as originally presented in the protocol and approved by the IRB.
- ◆ I understand that IRB approval is valid for no more than one year with continuing review by the IRB required at least annually in order to maintain approval status. I will not enter subjects on the study before IRB approval or if IRB approval expires. In the latter case, I will immediately contact the IRB to obtain permission to continue subjects in the research study.
- ◆ I will inform the IRB immediately if I become aware of any violations of HHS regulations (45 CFR 46), FERPA regulations (34 CFR 99), PPRA regulations (34 CFR 98), HIPAA regulations (45 CFR 164.530), or IRB Policies and Procedures for the protection of human subjects.
- ◆ I understand that failure to comply with all applicable HHS/FERPA/PPRA/HIPAA regulations, IRB Policies and Procedures and the provisions of the protocol as approved by the IRB may result in suspension or termination of my research project, notification of appropriate governmental agencies by the IRB, and/or suspension of my freedom to present or publish results.
- ◆ I certify that as faculty sponsor that the student investigator is knowledgeable about the IRB Policies and applicable federal regulations governing research with human subjects and has sufficient training and experience to conduct this study in accord with the approved protocol. In addition I will meet with the student investigator on a regular basis to monitor study progress. Should problems arise I agree to be available personally to supervise the student investigator in solving them. If I will be away, I will arrange for an alternate faculty sponsor to assume my responsibilities.

- ◆ I certify that all study personnel have completed the HIPAA education program and are certified.
- ◆ I understand that, per OHRP/FDA guidelines, the IRB will be monitoring adherence to approved research protocols. The oversight process does not end with approval of a proposal. I understand that I am part of the collaborative effort to maintain the integrity of the human subjects' research approval process and procedures to ensure continuous quality improvement and academic excellence at WIU.

Heather McIlwaine-Newsad	Heather McIlwaine-Newsad	5 Sept. 08
PRINCIPAL INVESTIGATOR'S NAME	SIGNATURE	DATE
David G Casagrande	David G Casagrande	9/5/08
CO-INVESTIGATOR'S NAME	SIGNATURE	DATE
FACULTY ADVISOR'S NAME	SIGNATURE	DATE

Student Investigator's (Co-Investigator's) Assurance: By my signature as student investigator, I certify the above applicable assurances and that I will meet with my faculty sponsor on a regular basis to monitor study progress. If my faculty sponsor is away, I will meet with his/her arranged alternate faculty sponsor who will assume his/her responsibilities.

CO-INVESTIGATOR'S Printed Name, Signature & Date

TO BE COMPLETED BY INSTITUTIONAL REVIEW BOARD CHAIR:

A. Date materials transmitted to IRB members 9/8/08

B. Date reviewed by IRB 9/11/08

C. Action taken by IRB: (attach minutes)

Disapproved Approved or Approved conditionally at:

Minimal Risk More Than Minimal Risk (Note conditions here)

For a period beginning 9/11/08 and ending 9/10/09

Approved: _____

Date: 9/11/08

Chair, Institutional Review Board

GUIDELINES

In order to ensure a timely review, investigators are encouraged to be **brief, clear, and concise. Avoid the Use of Discipline Specific Language.** The narrative statement of protocols should be typewritten and numbered according to the following requirements in the order in which they appear here. If a particular item does not relate to your study, indicate "not applicable" next to the item number. If you have further questions please consult the Policy and Procedure Manual for Human Subjects.

The narrative statement of the protocol must include:

1. A brief description of the purpose of the proposed research project, including approximate beginning and ending dates of data collection. Include a brief and specific description of procedures and/or activities which subjects will undergo.

During spring and summer of 2008, western Illinois and eastern Iowa experienced extensive flooding along the fertile bottom lands along the Mississippi River. State and federal policies promoting development of economically profitable agricultural land will significantly affect recovery in

Plan of Research

Phase I:

	October 2008	November 2008	December 2008
I.	Interviews with 20 families in 2 communities	Interview with 20 families in 4 communities	Interview with 20 families in 4 communities
II.	Review local newspapers, USDA, and FEMA news releases	Attend local, state, and federal level meetings in communities regarding recovery	

Phase II:

	January-March 2009	April –May 2009	June-July 2009
I.	Transcribe and qualitative analysis of interviews	Construct survey instrument based on interviews	Mail survey instrument to 5000 households in 20 communities with a goal of 2000 responses.
II.		Pretest survey instrument	
		Refine survey instrument	

Phase III:

	August-October 2009	November 2009	December 2009 – May 2010
I.	Analyze data	Analyze data	Analyze data
II.	Report findings to panel of participants	Report findings to panel of participants	Report findings to panel of participants

Phase IV:

	June-July 2010	August-November 2010	December 2010
I.	Follow up with secondary mail survey of selected households with a goal of 1000 responses.	Analyze data	Report findings to panel of participants