

Helping Disadvantaged Populations Prepare for Disasters

Assessing the Efficacy of the Emergency Preparedness Demonstration Framework



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Key Sections of Our Report

Here's a brief overview of the key components that our report seeks to address:

First, we offer a **brief synthesis** of important social science-based research that has been completed on disasters. In particular, we showcase findings that offer important insights of the differential impacts of disasters on **low-wealth and disadvantaged** individuals and communities. We note some of the key recommendations emerging from these studies, especially strategies that might help **ameliorate the negative outcomes** of disasters among disadvantaged people and places.

Second, we highlight the **step-by-step** features of the EPD process, an approach for mobilizing low-wealth people and other disadvantaged individuals and groups to take an **active part** in local emergency planning and response activities.

Third, we showcase the major "on the ground" work we launched to capture the inputs and insights of a wide array of people and organizations in **ten communities across five states** regarding the EPD process. Our intent was to listen to the voices of real people in real communities – both urban and rural – about the **features of the EPD process** they were inclined to embrace or likely to find problematic.

The fourth and final section of our report outlines some of the important ways in which the EPD program can be strengthened – improvements that can further promote its value and utility to communities and neighborhoods that are interested in becoming more active players in shaping local emergency preparedness plans in their communities.

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Introduction

The devastating impacts resulting from hurricanes, tornadoes, floods and other natural disasters have translated into major disruptions for countless neighborhoods and communities that dot America's urban and rural landscapes. Not only have such events impacted the physical character of these places, they have strained the social, economic, environmental, and political infrastructures of these areas as well. Especially hard hit have been neighborhoods and communities with limited capacity to prepare for, respond to, and rebound from such natural catastrophes.

It was Hurricanes Katrina and Rita that made the struggles of our nation's disadvantaged and vulnerable populations and communities most visible to the

national news media, public, and legislative leaders. Who constitutes our nation's pool of disadvantaged people? They include the poor and those who straddle the poverty line, those who struggle with physical or mental disabilities, the elderly, those who are place-bound, single parents with young kids, racial and ethnic minorities, non-English speaking individuals, and adults with low levels of education. Furthermore, they include households embedded in low-wealth neighborhoods or communities – areas that tend to have poor housing, limited availability of affordable and dependable transportation options, and a spotty history of working together on key local issues. The disadvantaged are also people who live in isolated or remote rural areas that have a limited set of human, physical, and fiscal resources that can be tapped when disasters are imminent or when they do strike.

Natural disasters translate into major disruptions especially



Biloxi, Mississippi, November 3, 2005 – The Hwy 90 bridge from Biloxi to Ocean Springs lies in a twisted mass as result of catastrophic wind and storm surge from Hurricane Katrina. Road closure along the coastal area has complicated recovery efforts. FEMA Photo by George Armstrong

Valley City, North Dakota, April 12, 2009 – A house sitting in backed-up Sheyenne River floodwater in Valley City, ND. A cascade of unusual weather events in the region is resulting in historical flooding; warmer spring temperatures are melting the winter snow pack contributing to the disaster. FEMA Photo by Mike Moore



This report is not intended to be a retrospective analysis of past natural catastrophic events and their deleterious effects on our nation's most vulnerable populations or places. Rather, it is designed to look ahead – to explore the right mix of strategies that can help disadvantaged people neighborhoods and communities be better prepared and positioned to respond to disasters whenever they occur. We do so by focusing attention on the Emergency Preparedness Demonstration (EPD) Project, an effort funded by the Department of Homeland Security/FEMA in 2005. Carried out by a team from MDC, Inc. and the University of North Carolina, this initiative has produced a set of resources and procedures for spurring locally driven planning activities, especially in low-wealth neighborhoods and communities that are frequently vulnerable to natural disasters.

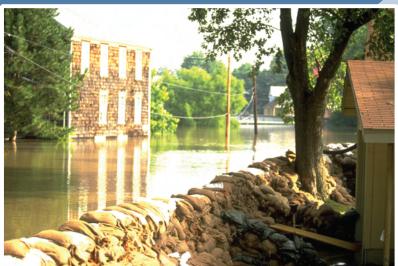
Working with FEMA and USDA's National Institute of Food and Agriculture (NIFA, formally known as CSREES), the Southern Rural Development Center (SRDC) was asked to take a critical look at the EPD process and to see just how well it played out in a variety of urban and rural communities across a mix of states. Our work began in the Fall of 2008 and was completed over the span of a year. This report showcases the process we employed and key results of our meetings and interactions with local emergency management personnel and broad-based groups of local residents. In the end, the intent of our work is to offer FEMA and NIFA a core set of recommendations on how to advance emergency awareness and preparedness targeted to disadvantaged people and communities via the use of their respective delivery channels.

for the nation's disadvantaged and vulnerable populations.



Sevier County, Arkansas, April 13, 2009 – Very little remains of a chicken farm operation destroyed by a tornado that struck in Sevier County on April 9th. Five documented tornadoes struck several western Arkansas counties and caused widespread damage that night. FEMA Photo by Win Henderson

St. Genevieve, Missouri, July 9, 1993 -- Residents and volunteers work to fill sandbags in an effort to stop the flood from causing further damage. A total of 534 counties in nine states were declared for federal disaster aid. As a result of the floods, 168,340 people registered for federal assistance. FEMA Photo by Andrea Booher



SECTION ONE:

Research Highlights: Being Disadvantaged and Disaster Awareness/Response

Studies have shown that resilient communities are those that can prepare for, respond to, and rebound quickly from natural disasters. Resilient communities share the following common features: (1) sound and/or fortified physical infrastructure and community assets; (2) diversified resources (i.e., people, organizations, financial) that can assist when disaster events occur; and (3) processes for providing households and businesses with the information, knowledge and tools they need for preparing and recovering more quickly from damages.

The presence of these three features does not happen by luck. It's the result of continued attention being given to improving the ability of local leaders, agencies, residents and other local groups to plan and act in a coordinated and seamless fashion on all facets of disaster management.

What do we mean by disadvantaged populations?

It represents individuals or communities with key social, demographic, economic and physical attributes that intensify their risk of being negatively affected by major hazards. They include persons living in poverty, those with limited levels of education, non-English speaking individuals, racial/ethnic minorities, the elderly, female-headed householders with young children, these who are disabled (i.e. due to physical or mental challenges), persons who are homebound, homeless, or living in remote or isolated areas of their community or county/parish.

In particular, it requires:

- Conducting pre-disaster planning and preparedness activities with a wide array of local organizations having a role in disaster response activities;
- Having access to the financial and human resources
 that can secure the materials and expertise for
 repairing systems that might be disrupted or
 destroyed in a catastrophic event. This includes
 developing and rehearsing well thought-out plans
 for mobilizing utility crews, food, medical supplies,
 expertise and other recovery needs.

Unfortunately, even with these features in place, the community's capacity to respond to and recover from extreme events can be affected by the demographic characteristics of a community. Simply put, some local populations are more vulnerable to catastrophic events than others. Factors that may interfere with a resident's ability to prepare, respond and recover in the face of disaster include:

- Having young children, especially in single femaleheaded households
- Being elderly
- Status as a racial/ethnic minority
- Living in rural vs. urban areas
- Living in institutions or congregate care

At the same time, the social sciences literature notes that a host of socioeconomic and health factors can interfere with the ability of residents to prepare for and recover from disasters. Some of these characteristics include:

- Living in poverty
- Residing in low-wealth neighborhoods or communities
- Having lower educational attainment
- Living in homes or apartments that are in poor condition

- Limited ability to speak English
- Suffering from a physical or mental disability
- Having a need for ongoing medical assistance
- Having limited transportation options

The mix of factors noted above, either in isolation or in combination, can influence the degree to which residents, neighborhoods and communities are likely to be more or less vulnerable to disasters, or be able (or not) to prepare for or take action in the face of extreme events. These same characteristics come into play in terms of the ability of residents, neighborhoods and communities to secure recovery assistance from governmental agencies.

What is critical to remember, however, is that these population and socioeconomic characteristics do not in and of themselves, render people or places vulnerable. Rather, their vulnerability is due to the fact that these features limit their access to the type of resources necessary for preparedness, response and recovery from extreme events. For example, low-income families may not have transportation or financial resources to evacuate in the face of a natural disaster. Single parents may likewise have limited income and opportunities for planning, preparing, response and recovery. Residents that are recent immigrants, non-English speaking, or poorly educated might face greater challenges seeking assistance after a disaster, such as negotiating with insurance companies or filling out paperwork for public assistance. Rural communities in particular, tend to be more vulnerable to disasters than their urban counterparts because of their geographic isolation and limited resources for assistance.

So, what can communities do to reduce their vulnerability to natural disasters and improve their ability to bounce back? The research literature provides a number of recommendations:

- Build local capacity for planning, responding and recovery from extreme events through local leadership training.
- Educate policy-makers about vulnerability and resilience.
- Focus on asset-building to improve organizational capacity.
- Develop and implement a strategic plan for disaster.
- Engage disadvantaged populations in the planning process.
- Build social networks to provide a platform for community action.
- Develop and/or maintain Community Emergency Response Teams (CERTS).

Communities that do not build the social and economic capacity of their residents will suffer disproportionately from damages inflicted by catastrophic events. We saw recent evidence of this when those people living in older and poorer neighborhoods in South Louisiana and Mississippi struggled to access critical resources in the aftermath of Hurricanes Katrina and Rita.

Unfortunately, emergency preparedness planners usually create plans without input from disadvantaged and vulnerable populations. Lack of input from those at most risk can easily yield plans that the target audience can neither understand nor follow. It is this reality that prompted FEMA to give special attention to the needs of disadvantaged populations. The EPD initiative is one process launched by FEMA to help promote disaster preparedness on the part of disadvantaged populations.

SECTION TWO:

Building Capacity: The Emergency Preparedness Demonstration (EPD) Project

In an effort to better understand the factors impeding emergency awareness and preparedness efforts on the part of disadvantaged populations and communities, the Federal Emergency Management Agency (FEMA) launched a new program in 2005 titled the *Emergency Preparedness Demonstration* (EPD) *Project.* FEMA's intent was to help advance the capability and capacity of disadvantaged groups to develop and actively participate in promoting disaster awareness and preparedness, be it their households, neighborhoods and/or communities.

To ensure that this program would be launched in the most expedient manner, FEMA established a cooperative agreement with MDC, Inc. a nonprofit organization with a strong history of improving opportunities for low-wealth people and communities across the South and nation. MDC partnered with the University of North Carolina's Center for Sustainable Community Design (CSCD) and together, they began to pursue pilot efforts in key communities across seven states. The central goals of the MDC/UNC pilot projects were threefold: (1) uncover why disadvantaged communities and people are less prepared for disasters; (2) examine possible ways to strengthen disaster planning and preparedness on the part of these individuals and localities; and (3) implement promising strategies for improving disaster planning and preparedness in disadvantaged communities. (Go to http://www.mdcinc.org/programs/fema.aspx for a more extensive discussion of the MDC, Inc. led EPD initiative). The information and insights the team assembled as a result of these case studies served as the foundation for the development of a variety of resources by MDC, Inc. and the University of North Carolina.

One of the key products developed by MDC, Inc. was the EPD Planning Tool, a step-by-step product that provides disadvantaged groups with a roadmap on how to organize, plan, coordinate, and implement emergency awareness and preparedness activities, especially in vulnerable areas of the community. The planning tool they developed encompasses a variety of key steps. We capture the core elements of these steps in the accompanying panel.

Step 1: Find Viable Community Sites

It's important to start by doing some homework. The process begins by identifying communities that have been heavily impacted by natural disasters, especially those with sizable numbers of disadvantaged people. Once a pool of viable places have been delineated, meet with state and local leaders, emergency management personnel, and key informants to identify the pool of communities/neighborhoods that are ready and committed to launching the EPD project. Select a manageable number of sites.

Step 2: Get Bay In, Broaden Engagement & Organize a Local Task Force

Once sites have been delineated, broaden the commitment and involvement of local individuals and groups. It is especially critical to reach out and engage individuals/ groups who represent the diversity of disadvantaged populations that are part of the fabric of the community. Establish and launch an EPD Task Force in each target site. Host an inaugural meeting of the Task Force and develop a calendar of times and places when the team can meet. Determine who else needs to be at the table (i.e., whose voices are not yet represented on the Task Force, but need to be an active part of the team?).

An Overview of the Six-Step EPD Process

Step 3: Host a Community Meeting & Provide an Orientation to the EPD Program

Introduce local residents to the EPD program and its goals – especially the focus on developing and implementing promising strategies for increasing emergency awareness and preparedness among disadvantaged residents. Seek input on past disaster experiences, including what worked and didn't work well. Moreover, invite participants to offer ideas on possible community-centered approaches for promoting disaster awareness and preparedness, especially among disadvantaged populations. If appropriate, invite a small number of the community meeting attendees to become members of the Task Force.

Step 4: Learn More about the Community and Its Vulnerability to Disasters

It's at this point that the Task Force delves into the nitty gritty of the community's emergency management system. The team takes a hard look at the strengths and limitations of the current emergency management plan. Among the questions they consider are the following: "Do people and organizations know about the plan and what it contains? Are the special needs of disadvantaged people, neighborhoods and communities addressed in the plan?" It's also at this stage of the EPD process that the Task Force takes a careful look at statistical data and maps that can help profile people and places that are more vulnerable to disasters. This type of vulnerability assessment includes information on the type of hazards faced by target sites; the potential risks to existing buildings, businesses, key services, and local infrastructure (such as roads and bridges); and land areas that are at risk as a result of current and projected development.

Next, the Task Force reaches out to local people, groups, and neighborhoods to help fine tune the vulnerability assessment map. What's correct/incorrect on the map, what items on the map need to be updated, and what's not on the map that needs to be added (such as people with special needs or certain local areas that are at risk but don't appear to be visible on the map)? Vetting and validating the vulnerability map with the help of local people is crucial at this stage of the EPD effort.

Step 5: Develop a Plan that Addresses the Needs of Disadvantaged Populations

The hard work in Step 4 serves as the framework for building a plan that gives explicit attention to the needs of local disadvantaged populations. In some cases, the Task Force may work in partnership with state and local emergency management leaders and others to build a brand new plan. In other cases, the existing emergency management plan may be on target and may simply require some additional tweaking. The key is to have an action plan that reaches out to disadvantaged people and communities and sustains their involvement in various local disaster planning activities. Furthermore, it is important to identify appropriate capabilities; then determine adequate capacity to meet needs in response to a catastrophic disaster.

Step 6: Implement the Plan

The Task Force, in concert with local people and groups, should put the plan in action. Start with the priority items that are readily achievable and that can help build the team's confidence and skill levels. Next, tackle priorities that are more challenging. Monitor how well the community is improving awareness and preparedness among disadvantage people and in disadvantaged neighborhoods. Seek to secure resources needed to sustain the EPD initiative.

In many respects, the six-steps we describe constitute a sound community development process – one in which individuals are guided through key stages. It offers individuals and communities a way to pursue a careful and systematic assessment of their locality and to act on those issues they see as most important and pressing. Every time community-based teams work through these types of planning efforts, they strengthen their ability to tackle the many issues local residents, neighborhoods and communities face every day, including being better able to prepare and respond to disasters. The ultimate goal is to achieve adequate capacity (how much can be done) in needed capabilities (knowledge and awareness of how things are to be done).

An additional element of the EPD process is the use of a community coach, a topic that we will address later in this report.

SECTION THREE:

Digging Deeper: Gathering "On the Ground" Feedback on the EPD Process

To gain clarity on how best to assist disadvantaged individuals, households and communities to prepare and respond to natural disasters, SRDC staff and landgrant university Cooperative Extension Service (CES) educators in five key states undertook community-based field assessments of disaster awareness and preparedness activities in 10 strategically selected communities. Within each of these localities, the land-grant team engaged in fruitful discussions with emergency management personnel and a wide-ranging group of local residents. The central focus was to involve them in a careful appraisal of the Emergency Preparedness Demonstration (EPD) process. Simply put, we wanted to know the following: "Does the EPD process make sense for communities? Can it provide

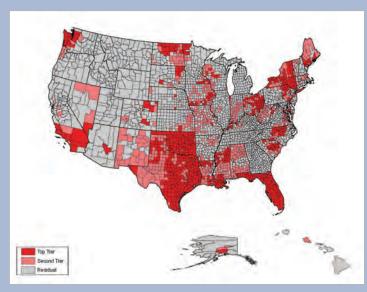
valuable insights on the needs of disadvantaged audiences, needs that should be incorporated into the local emergency disaster management plan? Does it provide a vehicle for disadvantaged groups to be better prepared for disasters? Should communities consider the use of a coach to guide them in the EPD effort? Is the use of a 'vulnerability assessment' map a valuable tool to enlighten the community on the mix of people and places that are at high risk during times of disasters?"

Here are the key activities we undertook over the course of a year to launch a sound assessment and evaluation of the EPD process:

- a. Completed a National Vulnerability Assessment to

 Determine Pilot Sites
- Developed the Protocol for Evaluating the EPD
 Process
- c. Recruited and Trained Cooperative Extension Service (CES) Colleagues in Key States
- d. Launched EPD Field Assessments: Community
 Roundtables
- e. Hosted Synthesis Meeting with Project Team Members

Map 1



Total Number of Presidentially-Declared Disasters Experienced by U.S. Counties, 1998-2008

We now provide a more in-depth description and discussion of each of these major activities.

Conducting a National Vulnerability Assessment: A Key Step in Selecting Pilot Sites

As we noted in our introduction to Section Three, five states were selected to be part of the vetting of the EPD framework. The choice of these five states was not done in a haphazard or arbitrary manner. Rather, they were identified as a result of sound information that we sought to assemble on disaster occurrences and social vulnerability of the population. Let us explain a bit more about how this was done.

First, we secured information on all *Presidentially-declared* disasters in the U.S. over the span of the 1998-2008 period. The sidebar provides a listing of all disasters that were incorporated into our index. We then classified all counties in the nation into quartiles. The top quartile experienced the largest number of disasters over the decade (in this case, 4 disasters). The second quartile experienced three disasters during that time period. Map 1 showcases counties across

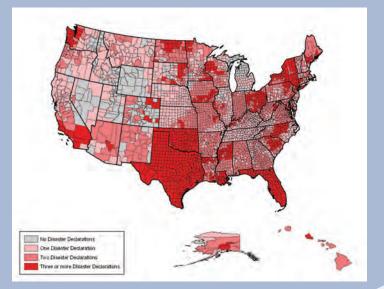
the nation who fell into the two top tiers with regard to the level to which they experienced Presidentially-declared disasters. The dark red represents counties placing in the top tier while the lighter shaded counties are those falling into the second tier. Disasters were most prominent in such core Southern states as Alabama, Florida, Louisiana, North Carolina, South Carolina and Texas. As for the Northeast region, New York and portions of Pennsylvania tended to place in the top two tiers, while Iowa,

The following hazards are included in the list of Presidentiallydeclared disasters: tornadoes, floods, hurricanes, freezes, snow, severe storms, earthquakes, droughts, fires, volcanoes, fish loss, ice storms, coastal storms and miscellaneous (i.e., dam/levee breaks, human causes such as terrorist activities, mud/landslides, toxic substances, typhoons).

Ohio and North Dakota appeared to be the most impacted states in the North Central region. In the West, Southern California and a good portion of the western area of Washington experienced frequent disasters.

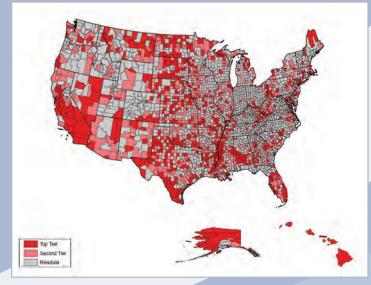
Staying with the data on Presidentially-declared disasters, we explored the variety of disasters experienced by counties

Map 2



The Variety of Presidentially-Declared Disasters Experienced by U.S. Counties, 1998-2008

Map 3



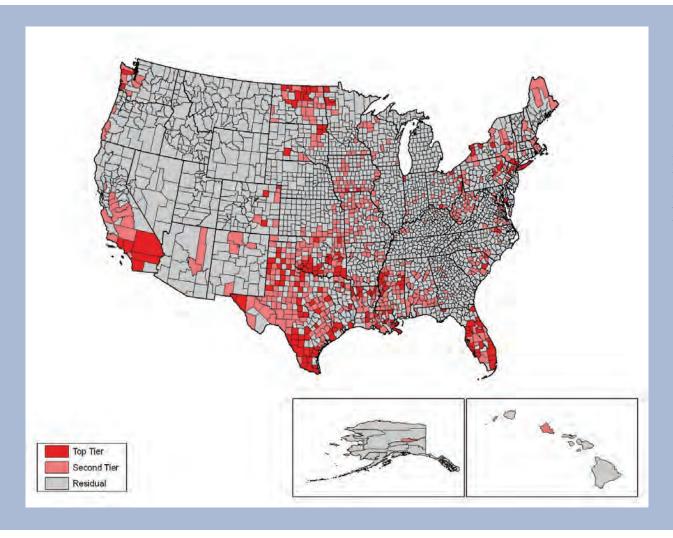
The Social Vulnerability Index Associated with U.S. Counties (based on Cutter et al., 2003)

across the nation. While Map 1 captures the total number of Presidentially-declared disasters experienced by U.S. counties, Map 2 examines the variety of disasters that counties endured, such as hurricanes, tornadoes, floods, droughts, fires, or whatever. While many counties were never impacted by disasters of any type over the 1998-2008 period, some suffered up to five types of disasters. Map 2 highlights counties with no disasters as light gray and those at the other extreme (3 or more distinct types of disasters) in dark red.

The second set of data we studied was based on the "Social Vulnerability Index" (SoVI) created by Cutter et al. (2003). SoVI provides a numeric score for each county based on the following eleven categories: personal wealth, age, density of the built environment, single-sector economic dependence, housing stock and tenancy, race (i.e., African-American

and Asian), ethnicity (i.e., Hispanic and Native American), occupation, and infrastructure dependence. The index encompasses 42 socioeconomic and built environment variables, items that the research literature notes can compromise a community or county's ability to prepare, respond, and recover from hazards (Cutter et al. 2003). Scores were largely based on 2000 data. We examined the SoVI scores for all counties and classified them into quartiles.

Map 3 provides a visual portrayal of the social vulnerability of more than 3,100 counties in the United States. Unlike Maps 1 and 2, the SoVI map reveals that a wide assortment of states and counties may be at risk in terms of their ability to handle environmental hazards. The darkest-shaded areas reflect the top 25 percent of all U.S. counties that are the most socially vulnerable.



Map 4

Counties in the
Top Two Tiers
in Terms of the
Number and
Variety of Disasters
Experienced, and
with High Social
Vulnerability

The last step we undertook was to create a map that captured and synthesized the key data reflected in Maps 1, 2, and 3. Three key pieces of data served as the building blocks for Map 4:

- Counties that placed in the top tier (i.e., top 25 percent of all counties) in terms of the NUMBER of Presidentiallydeclared disasters experienced between 1998 and 2008 (Map 1);
- Counties that placed in the top tier in terms of the VARIETY of Presidentially-declared disasters experienced over the 1998-2008 period, for example, counties that suffered from tornadoes, floods, and ice storms over the 1998-2008 time period (Map 2);
- 3. Counties that placed in the top tier on the Social Vulnerability Index (Map 3).

Map 4 showcases U.S. counties in the top quartile on all three indices (number, variety, SoVI). They are represented by the dark red color in the map. "Second tier" counties placed in the top quartile on two of the indices and in the second tier on one of the measures, OR were in the top tier for one of the measures, and in the second tier for two of the indexes. The "residual category" captures counties that did not meet the requirements for inclusion in our top or second tier categories.

It is Map 4 that served as one of the vital pieces of information we studied carefully to select states to recruit for our project. But, other items weighed into the choice of sites as well, such as states with a strong cadre of land-grant faculty engaged in the Extension Disaster Education Network (EDEN), a good core of CES community development educators, and land-grant university Extension

Roundtable Overview

First Roundtable

Invited individuals and groups having formal or voluntary roles in local disaster preparedness, response, and/or recovery activities. These included local emergency management personnel, law enforcement and other public safety officials, county/city government leaders, school leaders, representatives of nonprofit organization (such as the local chapter of the American Red Cross and Salvation Army), Community Emergency Response Teams (CERTs), transportation system coordinators, local representatives of the state's Department of Health and Social Services, and business leaders.

Second Roundtable

Reached out to individuals, households, and neighborhoods that are part of, or are representative of, vulnerable audiences. These included faith-based representatives, elderly and youth-serving organizations, nursing facility representatives, racial/ethnic minorities, lowwealth individuals, social/civic groups, and homeless shelter personnel.

Third Roundtable

Served as a "Bridge Meeting," – one that provided an opportunity for participants drawn from each of the two prior roundtables to meet and share their respective insights and, if feasible, build stronger working ties with one another. The hope was that the meeting would allow those charged with the responsibility for managing/responding to disaster activities to strengthen their ties with local residents that face major challenges whenever disasters strike.

Table 1.

Topics Addressed in the First and Second Community-Based Roundtables with Emergency Management Representatives, Local Citizens and Disadvantaged Populations

Outline of Roundtable Topics/Issues

Examining Recent Experiences with Natural Disasters in Our Community

- Disaster that impacted the community
- Damages suffered, neighborhoods impacted
- How prepared was the community?
- Who was least able to prepare/respond?
- What went right, what went wrong?

Assessing the Existing Resources in Our Community

- Local organizations involved in helping the community prepare, respond and recover
- Organizations that could be of help but not yet engaged in disaster preparedness
- People and organizations that could serve as the best and most trusted sources of information on the needs of disadvantaged people and neighborhoods

Assessing the EPD Project

- Are the EPD steps appropriate? Anything missing in the EPD process?
- Is the idea of a community "coach" a good one?
- Does the community have an up-to-date emergency disaster plan?
- If so, is it comprehensive? Who developed it? Who was involved?
- Does the plan give adequate attention to disadvantaged populations? If so, were they involved in shaping the plan?
- Is the vulnerability assessment tool a useful way to identify at-risk people and neighborhoods?
- Should individuals living in disadvantaged neighborhoods be urged to develop a disaster plans for their locality?
- How can stronger ties be developed between emergency management personnel and disadvantaged populations?

Table 2.

Topics in the Bridge Meeting of Participants in the Emergency Management and Citizens/Disadvantaged Population Roundtables

Outline of Topics/Issues Discussed in the Bridge Meeting

Community Similarities (list of items from the two roundtables that were comparable)

• Areas of agreement, and which ones were most important to highlight

Community Differences

- Items/issues that were significantly different
- Ways to tackle these key differences
- Individuals and organizations that could help address these differences

EPD Project Responses

- Areas where both groups agreed on the EPD framework; areas where they disagreed
- Steps in the EPD process that the groups still had concerns about, if any
- Reactions to the concept of a community coach; pluses and minuses of having someone in this role
- Best way for communities to buy-in to the EPD process

Final Discussion

- The 3-5 most important things a community can do to help disadvantaged populations be prepared for, and able to respond to, disasters
- The extent to which the roundtables were perceived as a valuable activity
- Other issues on the minds of participants

administrators/directors (from the 1862 and 1890 system) that were supportive of this type of initiative. It was after careful analysis of these important elements that a decision was made to invite the following five states to be part of our EPD project: *Arkansas*, *Florida*, *Louisiana*, *Oklahoma*, *and Missouri*.

b. Developing the Protocol for Evaluating the EPD Process

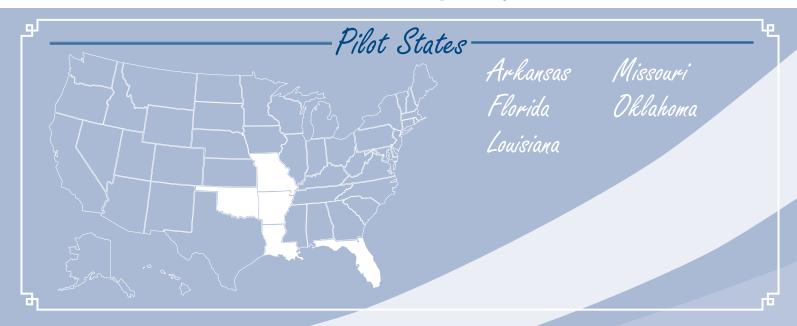
The SRDC was charged by FEMA and NIFA to assess how well a select number of communities in the five pilot states were doing in terms of recognizing and incorporating the needs of disadvantaged populations into their local emergency management plans. In addition, these federal agencies wanted to know whether the methodology and resources developed as part of FEMA's Emergency Preparedness Demonstration (EPD) Project would be embraced by local people and organizations as a viable approach for promoting disaster preparedness on the part of disadvantaged audiences.

In order to gather rich inputs and insights from local individuals in a sound and cost-effective manner, the SRDC worked with pilot states to organize and host three

roundtables in two distinct communities in each state. To ensure that these sites were diverse in size and complexity, we recommended that one site be located in a metropolitan county and the second in a nonmetropolitan area.¹ The Roundtable Overview on page 13 provides a quick overview of the people and groups who were invited to take part in each one.

Tables 1 and 2 highlight the core topics and questions that were addressed in the three roundtables. The first two roundtables were expected to take about four hours to complete, while the length of the "bridge" meeting was expected to last about 2 ½ hours. As these tables on the previous page reveal, the topics discussed by the roundtable attendees were quite extensive, addressing how well past disasters were handled in the community and what groups or neighborhoods were impacted most severely. Furthermore, we wanted to assess to what extent local assets in the community (whether they were people, voluntary organizations, and/or institutions) were effectively

¹ Metropolitan counties represent central counties with one or more urbanized areas of 50,000 or more residents and outlying counties that are economically tied to the central counties (i.e., 25% of workers living in the outlying counties commute to the central counties, or 25% or more of the employment in the outlying counties are made up of commuters from the central counties). Nonmetro counties are ones that do not meet the metropolitan designation.



tapped to assist with disaster preparations and response activities. We also wanted to know what resources should be used more effectively in future disaster preparedness efforts. We then honed in on the EPD process, exploring the core components of this framework. We wished to examine whether the six EPD steps made sense to local communities, if the idea of a community coach would garner the endorsement of local people, and whether there was any value in creating a map that would delineate the mix of places, people, neighborhoods, services, and buildings that would be at elevated risk in times of disasters.

The bridge meeting was designed to provide a trusting environment for the two distinct groups of roundtable participants to share their views on the important questions discussed and debated during their respective prior roundtable meetings. We were particularly interested in exploring areas of agreement and instances where the two groups were clearly at odds with one another.

c. Recruiting and Training of Extension Colleagues in the Five Pilot States

Having selected the five states to be part of the EPD assessment process, the SRDC worked closely with the project Advisory Team (see list of members on page 27) and key CES leaders in the five states to identify the best CES candidates to serve on our project team. Our hope was to attract state-based Extension specialists and district/county-based CES educators to be a part of the team. Moreover, we wanted individuals with solid community development experiences/background and with a strong commitment to improving disaster preparedness efforts targeted to disadvantaged people and communities.

With the valuable help of CES Community

Development Program Leaders in the pilot states, we were able to secure the commitment of two Extension educators from each pilot state. Six of these individuals were serving as state specialists, two operated as district (multi-county) faculty, and two as county-based Extension educators. As such, the team we assembled provided a good mix of perspectives and insights – from those working on a statewide level to those with an established record of working with Extension stakeholders at the local level.

In order to acquaint and orient the newly formed EPD project group to the SRDC's project with FEMA/NIFA, the Center hosted a formal meeting of the EPD project team in Atlanta, Georgia in December 2008. The workshop was attended by representatives from MDC, Inc., the University of North Carolina (UNC), as well as the project managers from FEMA and NIFA. The MDC/UNC team provided an overview of the project it carried out as part of their Cooperative Agreement with FEMA.

Meeting participants reviewed the EPD process developed by MDC, Inc. and the vulnerability assessment tool created by the UNC's Center for Sustainable Community Design. Other items discussed over the course of the meeting included: (1) an overview of the FEMA/NIFA Interagency Agreement and the contract with the SRDC; (2) a review of the criteria for selecting county/community sites for the roundtables; (3) the protocol for organizing the community roundtable sessions, including recruitment of individuals to participate; (4) the responsibilities of the state teams in terms of updating the SRDC on dates and location of their roundtable sessions and the completing of reports that would capture the key information generated in each of their roundtable meetings; (5) the timeline for completion of all roundtables and submission of completed reports to

Table 3. A Statistical Profile of the Metro and Nonmetro Counties Taking Part in the EPD Assessment in the Five Pilot Sites

	Population Characteristics (2008)			Socioeconomic Characteristics			
State/County Type	Number	% White	% Black	% Hispanic	% L.T. H.S. (2008)	% Persons in Poverty (2007)	Median Household Income (2007)
Arkansas • Metro	78,373	43.8	52.9	1.5	19.0	23.3	\$36,293
Nonmetro Florida	25,770	58.0	39.5	1.2	20.3	22.7	\$33,418
Metro Nonmetro	302.939	69.7	22.4	3.7	10.9	13.9	\$41,772
	47,560	38.7	54.8	9.0	18.7	23.7	\$35,322
Louisiana	150,051	62.4	34.9	1.7	17.2	20.2	\$37,147
	20,501	61.2	37.1	1.4	32.3	22.9	\$29,394
Missouri	89,408	92.8	4.6	3.7	12.0	14.0	\$39,638
	9,046	97.0	1.0	1.7	17.5	15.2	\$36,693
Oklahoma • Metro • Nonmetro	111,772	62.4	17.6	9.9	10.5	17.1	\$42,972
	11,172	63.6	9.9	2.3	22.3	20.2	\$29,516

the SRDC; (6) **specifics** about the subcontracts that the SRDC was awarding to the pilot states and SRDC's financial reporting requirements; and (7) **future dates** for conference calls and a face-to-face meeting with project team members. By the time our Atlanta meeting was completed, the team had a well-developed action plan to guide their project activities over the next six months.

d. Launching the EPD Field Assessments: The Community Roundtables

The SRDC and its land-grant partners began

gearing up for the final selection of sites and the

scheduling of community roundtables sites in

January 2009. The five state teams worked hand-in-hand

with the SRDC in the selection of metro and nonmetro

counties in their states that placed in the "Top" or "Second

Tier" categories in Map 4. A brief profile of each pilot site is

presented in Table 3.

Table 4. Participation in the Roundtable Meetings by County Type in the Five Pilot States

State/County	Emergency Management	Residents & Disadvantaged Populations	Bridge Meeting	Total Participation*
Arkansas	16	11	7	34
	27	17	19	63
Florida • Metro • Nonmetro	12	12	12	36
	16	18	32	66
Louisiana • Metro • Nonmetro	17	2	10	29
	11	4	16	31
Missouri Metro Nonmetro	21	9	18	48
	9	16	13	38
Oklahoma • Metro • Nonmetro	10	8	14	32
	18	22	18	58
TOTAL	157	119	159	435

^{*} These do not represent unique individuals since several people attended both a roundtable meeting and a bridge meeting.

Using the roundtable guidelines and methodology discussed in the previous section of this report (see item (c) under Section Three), project team members from each of the five states organized and held three roundtables during the Winter-Spring 2009 timeframe. By the end of May 2009, project team members had completed 30 roundtable sessions. A snapshot of the number of people participating in the community-based meetings is shown in

Table 4. Nearly 160 individuals took part in the roundtable sessions targeted to emergency management personnel and other responders, 119 residents representing the broader community and disadvantaged residents were involved in the second roundtables, and 159 people took part in the bridge meeting – the setting that offered an opportunity for representatives from the two previous roundtables to meet and dialogue on disaster preparation issues. When all was said and done, a total of 435 individuals took part in the three roundtables. (Note: this number includes some double counts for those who attended both a roundtable session and the bridge meeting).

e. Project Synthesis Meeting with Project Team Members

In order to wade through the extensive amount of information generated in the 30 roundtable meetings, the SRDC organized a "Project Synthesis" meeting in Atlanta, Georgia in late June 2009. Prior to this meeting, to ensure consistency in the reporting of information generated at all 30 roundtable meetings, the SRDC prepared a reporting template that all pilot states were asked to complete for each site. The template requested information on a number of items, such as:

- A summary of the participants who took part in the roundtable sessions
- A discussion of disasters impacting the county over the last 3-5 years
- A description of the county's preparation and response to these disasters (preparedness, nature and quality of its disaster plan, inclusion of the needs of at-risk or vulnerable populations in the plan, the public's main source of information on disasters, and areas needing improvement in the local disaster plan)

- Listing of local organizations and resources currently involved (and that could be involved) in disaster preparation, response, and recovery
- The most trusted and respected sources of information on disasters
- Reactions to the EPD process

The key goal of the synthesis meeting was to carefully study the breadth of information collected as a product of these meetings and to delineate the core themes and issues that permeated many of the roundtable documents. The meeting served as an excellent forum for debating and ultimately producing the key recommendations that we planned on communicating to our FEMA and NIFA colleagues. Let us now turn to a discussion of these recommendations in the concluding section of this report.

SECTION FOUR: Results and Recommendations

The SRDC project team secured valuable information on a variety of topics and issues in the 10 sites in which the roundtable sessions were held. In some respects, one could argue that the insights gathered were not all entirely relevant to the Emergency Preparedness Demonstration Project. On the other hand, the additional information we gathered offered our team a better understanding of the dynamics at play in each of the 10 ten sites, factors that had some bearing on the emergency preparedness capacity of these communities – including the degree to which they understood and effectively addressed the unique needs of local disadvantaged populations in times of disasters.

Section Four represents a synthesis of the information collected in the 30 roundtable sessions, with special attention given to the following subjects:

- Awareness of the Local Emergency Management Plan
- What Worked/Didn't Work in Past Disasters
- The Metro/Nonmetro Status of the Counties: Did It Matter?
- The Emergency Preparedness Demonstration Process: Its Strengths, Its Shortcomings
- Community Coach: How Local Sites Responded to the Idea
- Key Recommendations for FEMA and NIFA
- Ideas on How the Cooperative Extension Service Might be an Asset

Awareness of the Local EM Plans

In the larger metro-based communities in which roundtables were held, the lion's share of the emergency management plans were developed by local individuals and agency representatives having strong backgrounds in emergency management planning. As a general rule, those engaged in emergency disaster management and responders were aware of the existence of a local emergency plan. In smaller (nonmetro) counties, plans were frequently developed by consultants or regional planning councils with only modest involvement by local officials. As a result, even those with formal roles in the local emergency planning effort were not always fully aware of what was contained in their county's plan.

In most of the 10 pilot sites, disadvantaged populations and their representatives had limited awareness of the existence of any emergency plan or specific details of that plan. Furthermore, they rarely were invited to assist in building a local emergency plan or to offer their inputs on how the plan could address the needs of at-risk populations. In addition, many admitted they had no personal plan in

place for responding to some type of disaster. At the same time, many larger counties had well-developed registries of individuals and places (such as nursing homes) that would need extra attention during disaster episodes. In smaller counties, local public safety officials had informal networks in place that helped them remain attuned to the needs of disadvantaged individuals, households, or communities.

Despite these major barriers to community-wide disaster awareness and preparedness, several emergency management personnel participating in our roundtables expressed a strong desire to strengthen their communications and interactions with local residents. They felt such exchanges would help them to reach out in a more effective manner to those with special needs. However, the local residents made it clear that the emergency management representatives needed to ramp up their efforts to communicate the critical elements of the local plan to residents and to do so in a manner that is understood and can be acted upon by local residents. This includes efforts to better tailor messages to the broad array of disadvantaged populations, such as those with low literacy, people who are non-English speaking, or those who are hearing/vision impaired.

What Worked/Didn't Work in Past Disasters

Disasters that struck our pilot sites were quite varied, including hurricanes, tornadoes, floods, ice/hail/wind storms, and fires/wildfires. Overall, roundtable participants – whether they were emergency management personnel/ volunteers or local residents/disadvantage populations – were satisfied with their community's response to disasters. Many felt that the various organizations with emergency management responsibilities did a good job coordinating their activities. What they found essential was

having a trusted person in place who could communicate information to local residents. Finally, they felt the needs of many vulnerable populations were addressed by most communities – either by formal emergency management officials or by voluntary and faith-based organizations.

At the same time, the roundtable participants generated a list of concerns that they felt emergency management officials and other appropriate parties should carefully consider, such as the need to:

- Communicate more frequently with the public
- Integrate city/county planning activities and resources with those of local grassroots/informal organizations
- Better coordinate donations and volunteers
- Keep the registry of populations with special needs up-to-date
- Be more open to gathering input from local residents
- Make more effective use of social networking links to share timely information on possible approaching disasters
- Address needs of pets and livestock
- Streamline the assistance process and paperwork for those impacted by disasters

Where You Live (Metro or Nonmetro Area) Makes a Difference

On a host of measures – such as educational attainment, quality of jobs, income level, access and availability to public services, and health care – metro areas tend to outpace nonmetro areas. It's these types of ongoing socioeconomic disparities between metro and nonmetro areas that prompted us to explore disaster preparedness capacity across geographic locations. The following is a snapshot

of the key feedback we received from our roundtable participants living in metro and nonmetro areas of the pilot sites, insights that demonstrate the distinct features of disaster preparation and response activities in these different county types:

Features of Metro Areas:

- Greater resources are available in metro areas, including a wider array of physical buildings, greater financial resources, and larger pool of formal organizations that position metro areas to respond more effectively to disasters.
- Emergency management planning and response
 is more likely to be carried out by formal
 organizations within the community. As such,
 emergency management-related activities are
 typically carried out by the employment of a "topdown" style of leadership.
- People often don't know their neighbors on a
 personal level; they are often socially isolated from
 people living in close proximity. Thus, they tend to
 rely on the formal system for information regarding
 strategies for responding to disasters.

Features of Nonmetro Areas:

- Tend to feel neglected or overlooked by the formal emergency management system during times of disasters.
- Lack the financial resources or tax base to create
 a large formal response capacity. Moreover, the
 human capital resources are not extensive. A small
 pool of people play multiple roles in the community
 and not enough individuals are trained

- to take on the host of activities needed to better prepare and respond to local disasters.
- Higher levels of social capital tend to be present in nonmetro areas, so people often help neighbors with whom they interact in a variety of settings. At the same time, they are likely to be self-sufficient and independent-minded and less likely to depend on outsiders for assistance. As a result, neighbors and friends are seen as trusted sources of information when it comes to disaster awareness and response. So too are key local institutions, such as local churches and law enforcement/fire officials.
- Quick response by the formal emergency
 management system is difficult due to distance and
 isolation of people and communities. As a result,
 many local people have to fend for themselves until
 help arrives many hours (or days) later.
- Local emergency management plans are often developed by regional governmental, quasigovernmental entities or consultants, not by local people and groups. As a result, little locally specific input or investment exists in the plan.
- Access to heavy equipment, if needed to aid in recovery, is often available from local residents who are engaged in farming.
- Radio and television are common sources of information to keep abreast of potential disasters, such as hurricanes or floods. But, stations are typically based in larger cities and don't provide timely information that can be tailored to the needs of surrounding nonmetro areas.

The Emergency Preparedness Demonstration Process: Its Strengths, Its Shortcomings

The SRDC Project Team devoted considerable time and attention to the EPD Process developed by MDC, Inc. and their University of North Carolina partners. After discussing the framework in the various roundtables and bridge meetings, we were able to develop a core set of items that the participants in pilot sites felt were reflective of the major strengths and shortcomings of the EPD Process. Here is a brief synopsis of their feedback:

Strengths of the EPD Process:

- The EPD process is seen as sensible and useful.
- Requires/demands local input, something that is valuable and vital.
- Seeks to involve a broad-based group of people in disaster preparedness, an element often lacking in many local disaster plans.
- Sensitizes local leaders, agencies, organizations and residents to the needs of disadvantaged populations.
- Helps to re-examine the local disaster plan in order to ensure that it accommodates the needs of vulnerable populations.
- Strengthens communications among local organizations and agencies by bringing them to the table, exploring how they can work together in a more coordinated fashion, and working to minimize conflicts when disasters might strike.
- Identifies areas of concern through the mapping of at-risk areas in the community which is viewed as a valuable process and "eye opening" activity.
- Is an important "value-added' process that can complement existing emergency efforts.

Shortcomings of the EPD Process:

- Current EPD documents are not integrated into a well organized curriculum resource. This will be critical in order to promote and facilitate their use at the local level.
- An excellent guide book for conducting the vulnerability assessment exists, but no such guidebook has been developed to guide the overall EPD process.
- An outline of core topics that should be covered in a 1-to-3 days training on the EPD process would be a valuable document that local groups could use to launch community-based training on the EPD framework.
- Communities will need technical assistance for both producing accurate GIS maps of local areas that are vulnerable to disasters and also keeping these maps up to date.
- Launching the EPD effort could create turf issues
 if it is done with little or no involvement of those
 having formal or voluntary emergency management
 responsibilities.
- The process is time consuming, so the challenge will be how to recruit and keep participants actively

- involved in the EPD effort (especially among local residents who are disadvantaged).
- Some states have strict guidelines regarding the
 process to be followed for developing disaster
 preparedness plans. It will be important to
 determine how the outputs generated from the EPD
 process might be woven into these state and local
 guidelines.
- Local communities, especially those in nonmetro areas, remain concerned about the level of resources that will be needed to undertake the EPD effort.

Community Coach: How Local Sites Responded to the Idea

MDC, Inc. views community coaching as a valuable resource for communities. We discussed this concept with roundtable participants, and they had favorable comments about the role of a coach. At the same time, they had some important concerns. The following are the key points they offered:

What's the Role of a Community Coach?

What is the role of the coach and why could it be an asset to those pursuing disaster preparedness using the EPD process? According to Hubbell and Emery (2009:1), "coaching . . . means offering an empathetic ear, finding the coachable moments and engaging in joint learning. Coaches are not the answer people; they support capacity building by helping community members learn from one another and from their own experiences."

Hubbell and Emery note that coaches carry out the following activities when they work with local people and groups: (1) they improve lines of communication among local people/groups; (2) they work to address and resolve community conflicts; (3) they identify and connect resources available within and outside the community, including locating individuals who can provide technical assistance; (4) they help improve the ability of individuals and groups to work together in addressing important local issues; (5) they work to build stronger working relationships among local people and organizations; and (6) they assist communities to respond to changes impacting their communities. These are important roles that could prove valuable for any community, neighborhood or group that is contemplating the possible implementation of the EPD process.

What They Liked About Coaching:

- People felt good about having a person who can guide the process, mediate conflicts and differences among local residents, and help people take responsibility for different aspects of the EPD plan.
- A coach would help examine issues in a neutral and unbiased manner. A coach would not have any political "baggage."
- If the right person is functioning in this role, the individual could help build trust among local residents.
- For roundtable participants living in metro counties, most thought having an outsider serving as a coach would be a good idea.
- In the nonmetro counties, participants would be inclined to recruit an insider – someone who knows the community – to serve as a coach.
- The individual serving as coach could help mobilize a wider array of people to be involved if they possessed strong group building skills.

What Concerned Them about the Coaching Role:

- The person must have the right mix of education and experience in order to be an effective coach.
- A clear definition of the roles the coach is expected to play, coupled with the set of qualifications needed to serve in this role, is essential in order for communities to know what they should be looking for in a community coach.
- They are uncertain as to the benefits and costs of having an insider (someone from the community) or an outsider serving in this role. The pros and cons of an insider versus an outsider is something with which the community would have to wrestle.

- Some are worried that emergency management officials will be hesitant to support the efforts of the coach.
- Others are concerned that local political agendas could thwart the effectiveness of the coach.
- In some communities, participants were concerned there were no coaches available; thus, training of individuals to function in the role of a coach would be required.
- Paying for the services of a coach is a big issue of concern, especially among the less wealthy communities taking part in the roundtables.

Key Recommendations for FEMA and NIFA

A number of important issues have been delineated in this report that we hope prove useful to our FEMA and NIFA partners. Given that the central purpose of our work was to give focus to the EPD framework, the final section of our report outlines a series of recommendations that are vital to the successful launching of the EPD effort in communities. The issues we outline are especially applicable to communities or neighborhoods that are not well-equipped to prepare for and respond to disasters:

- The Emergency Preparedness Demonstration (EPD)
 Project represents a valuable process that should be introduced to communities and neighborhoods, especially those with sizable numbers of disadvantaged people. However, to strengthen the adoption of this framework by these localities, FEMA should consider:
 - Producing a tighter and better integrated curriculum product that can be used to train individuals in the EPD concepts and process and to train and develop community coaches;

- Developing a short and easily understood document that describes the concept of a community coach, including the key roles that coaches play in the EPD process and core competencies that coaches must possess in order to be effective and successful;
- Cataloguing and sharing with communities
 launching the EPD program a list of resources that
 exist in the county, state, the nearest community
 college, or at state universities and how they can be
 tapped to help develop the GIS maps of vulnerable
 populations, buildings, services, businesses, and
 other key populations and resources;
- Preparing guidelines on how to secure local buy-in and participation in the EDP process and presenting it to emergency managers so that it is readily apparent that the EPD process will help them pursue and meet their objectives. These include ways to gain the support of local leaders and those serving in key emergency management positions at the local and state levels;
- 2. Invest funds to launch a series of train-the-trainer workshops across the country that would help strengthen the capacity of individuals and organizations to introduce and launch the EPD program in a variety of disadvantaged neighborhoods and communities that are at risk of experiencing disasters.
- 3. Consider launching a competitive grants program that invests funds in communities and/or counties that propose to initiate the EPD program. The grant program could give priority to localities that are at risk of experiencing disasters and that have a high

- proportion of socially vulnerable populations. Based upon our roundtable results, nonmetro areas may warrant special attention for this grant program given the lower institutional capacity and fiscal resources that exist in many of these counties. The competitive grants program should allow the use of a portion of these funds to pay for a community coach.
- 4. Change the emergency preparedness and emergency management "culture" that currently exists in many states and counties regarding. The development, refinement, and updating of disaster plans should not be limited to those working (or serving as volunteers) for disaster preparedness/response agencies or organizations. Local plans should be the product of an open and active discourse of such individuals/organizations along with local residents and disadvantaged populations (or their representatives). It is through embracing an "inclusive" process that a dynamic and effective disaster preparedness plan that garners the full support of the wider community can best be realized.

Furthermore, sufficient time should be set aside for the development of a community disaster plan. Developing a strong, well-balanced, and inclusive plan takes time if the community is genuine in its desire to address the needs of various sub-populations. No doubt, this means completing a plan will take more time in order to ensure that more people and groups have a stake in building a plan. But, it in the end, it will be a product that is better understood and more likely to be embraced by the community at large.

How the Cooperative Extension Service Might be an Asset

In light of the recommendations noted above, we offer for consideration by FEMA and NIFA the important ways that our nation's land-grant universities, especially its Cooperative Extension Service (CES) system, could advance the EPD effort across the U.S.:

- CES could facilitate dialogue between emergency management officials and diverse local residents for the purpose of ensuring that the insights of local residents and disadvantaged groups are incorporated into local emergency preparedness plans;
- They could develop educational programs
 that would help strengthen the capacity of
 disadvantaged communities to develop and act on
 important emergency preparedness plans (such
 as offering community leadership development
 programs that build the skill levels of a large cadre
 of local residents);
- CES could assist communities in carefully assessing the talents and resources of individuals, organizations, and neighborhoods that can be tapped to support emergency awareness and preparedness efforts;

- They could draw on the specialized mapping (GIS)
 capabilities of their land-grant universities to help
 identify specific neighborhoods, communities
 and populations that are at elevated risk of being
 affected by natural disasters;
- Because CES enjoys a high level of trust at the state and local levels, CES educators could serve as "coaches" for communities. Moreover, they could be viewed as a source of unbiased information that communities could use at various stages of the EPD process;
- Finally, because of the important roles they play as educators, CES specialists could: (a) help develop and expand EPD-related curricula; (b) organize and deliver "train-the-trainer" workshops in their respective states, or at the regional and/or national levels; and (c) develop, track, and evaluate the impact of the EPD program in communities or neighborhoods that have launched this initiative.

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Advisory Council

A National Advisory Council provided valuable oversight and guidance on this important initiative. Membership was comprised of: (a) persons with an active research and/or Extension program related to natural and/or technological disasters; (b) Extension educators with a strong background in community development; (c) individuals with a history of working in low-wealth communities; and (d) persons active in the Extension Disaster Education Network (EDEN) system. Representatives from the NIFA and FEMA served in ex officio capacity on this council. The members are as follows:

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In Appreciation

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