Writing about the chronically homeless from a disaster perspective, Kai Erikson links place, housing, and identity (1994:159):

> One can find asylum in a barracks or a dormitory, a prison cell or hospital ward, a crisis shelter or a flophouse. One can double up in the margins of someone else's household. But a true home—a place of one's own—is an extension of the individuals who live in it, a part of themselves. It is the outer envelope of personhood. People need location almost as much as they need shelter, for a sense of place is one of the ways they connect to the larger human community...You cannot be a member unless you are grounded somewhere in communal space. That is the geography of self.

Research across the disciplines has demonstrated that this "geography of self" is constructed in gendered space: geographers explore how differently women and men use space as well as time (e.g. Rose 1993); sociologists and anthropologists how women work and earn inside the home (e.g. Tinker 1990; Boris and Prügl 1996); and historians how women have organized to secure safe housing in toxic-threatened environments (e.g. Rodda 1994), create "safe space" from male violence (Schecter 1981), and enhance personal autonomy through equitable land and property rights (e.g. United Nations Centre for Human Settlements/Habitat 1990). In short, housing matters to women.

Located self-evidently at the heart of what is lost in disaster and what is understood as recovery, housing also matters to emergency planners. Political, economic, and cultural issues in evacuation, emergency shelter, temporary housing, relocation, and reconstruction have long interested disaster researchers (e.g. Davis 1978; Quarantelli

1982; Bates 1982; Peacock, et.al. 1987; Aysan and Oliver 1987; Oliver-Smith 1990). Recent studies from the United States have identified lack of affordable housing as a factor in the slow recovery of low-income neighborhoods hit by earthquake (Bolin 1993); documented ethnic and class conflict over culturally appropriate temporary shelter and reconstruction (Phillips 1993; Bolin and Stanford 1991, 1998); and addressed the postdisaster housing needs of the homeless and elderly (Phillips 1991, 1996; Eldar 1992). A gendered perspective on disaster housing is conspicuous by its absence.

This paper examines housing as part of a larger project to illuminate "shadow risks and hidden damages" (Hewitt 1995) and to specify root causes reproducing women's disaster vulnerability in developed nations (Blaikie et.al. 1994), among them the gendered division of labor, economic dependency, male violence, and housing insecurity. I begin by grounding disaster housing theoretically in gender relations and global development patterns and then focus on the United States, drawing on census data and qualitative field studies to address two key questions. First, what structural trends and patterns suggest women's housing insecurity in this context? Second, what emergency management issues emerge from empirical investigations of women's disaster housing experiences? The final section outlines women's housing needs and strategic interests and offers guidelines to practitioners.

Women's Housing Insecurity and Disaster Vulnerability in Developing Countries

Gender and development studies in the world's poorest nations provide a useful perspective for analyzing women and housing crisis in the United States. The gendered division of labor accords women responsibility for maintaining safe and clean households

and for using and managing life-giving environmental resources; this role is pivotal when communities face severe housing damage or loss (Steady 1993). Secure shelter is also an essential foundation for women's autonomy in every society and its absence an indicator of crisis (Tinker 1993). Impacted both by gender inequality (economic dependence, male violence, unequal access to land, tools, credit and training) and by global development patterns (increasing poverty, hyperurbanization, changing family structures, environmental degradation, migrant labor and population displacement), increasing numbers of women around the world are insecurely housed on marginal lands (Chant 1996; Sweetman 1996; Momsen 1991; Moser and Peake 1987).

Global studies of disaster-impacted communities demonstrate the salience of housing issues for women through the disaster cycle. Women's more homebound lives make them more vulnerable to injury or death under some conditions. For example, the practice of sex segregation placed women and children, but not men, indoors when dwellings collapsed in the 1993 Latur earthquake (Krishnaraz 1997). Women's losses may also be economic as women's home-based work increases internationally. In the 1985 Mexico City earthquake, the majority of houses destroyed were headed by low-income single women who supported their families through informal sector work based in and around their houses (Dufka 1988). During the emergency shelter phase, cultural barriers may place women more than men at risk; where the norms of female seclusion are strictly enforced, for example, emergency evacuation warnings are less likely to reach women and community shelters are less accessible to them than to men (Ikeda 1995). Later, women more than men may find it difficult to leave accommodations meant to be

'temporary,' as Geipel (1991) noted in the case of senior women following an earthquake in rural Italy.

International studies also document women's active participation during the rebuilding stage, both materially and as political actors. Following the Latur earthquake, Indian women organized in neighborhood groups to monitor construction work for corruption, collectively purchase construction materials, and build model homes adapted to their needs (Krishnaraj 1997). Women also shape the politics of reconstruction in impacted communities. Following a recent earthquake in Colima, Mexico, Serrat Viñas (1998) found women highly active in organizing community resistance to enforced relocation, echoing the activism of women around housing issues in the wake of the 1985 Mexico City earthquake (Momsen 1991: 101).

Gender and development theory draws a useful distinction between women's "practical needs" to meet the demands of daily life and their "strategic interests" in challenging gender inequalities (Molyneux 1985; Moser 1991). The gender-aware disaster practices of Pattan, an NGO working with flooded Southeast Asian communities, led them not only to meet women's practical needs by rebuilding houses but to record ownership of these new homes in both partners' names (Bari 1998), arguably rebuilding a more egalitarian and hence less disaster-vulnerable community. I return below to this paradigm of women's practical needs and strategic interests in disaster housing.

Comparable investigations of women's housing issues have not yet been conducted in the wealthy nations of the industrial world, though such work would

contribute substantially to a more cross-cultural and gender-inclusive disaster social science (Enarson 1998; Enarson and Morrow 1998). In the next section, I review social trends and population patterns suggesting that everyday life in the United States puts rising numbers of American women at risk during environmental or technological disasters.

Root Causes of Women's Housing Vulnerability

An aging population is a feminizing one. In the United States, over half of all women over 75 (and 20 percent of men) now live alone (Ollenburger and Tobin 1998:101). The number of *senior women living* alone is expected to increase by 39 percent among women aged 55 to 64 and by 11 percent among women 75 or older (Schmittroth 1995:221). Though aging is not a uniform process, the physical disabilities of age increase the likely disaster vulnerabilities of the elderly (Eldar 1992) and disaster planning with their needs in mind is essential. At all income levels, private residences, extended care facilities, and retirement facilities house large numbers of widows and other senior women likely to require assistance. While self-protection is a major theme in US disaster preparation campaigns, senior women on their own may well lack family or material vital for home preparation, evacuation, or reconstruction.

The traditional nuclear household residing in an owner-occupied home is the unit of analysis in most disaster planning and preparation. Yet approximately one-quarter of all US households are now either *sole-female or female-headed households* (Ahlburg and DeVita 1992). In the decade ahead (2000-2010), the fastest rate of increase for women heading households is expected among those under 25, a group of young women already

subject to higher poverty rates and therefore likely to be insecurely housed (Schmittroth 1995:224). At the other end of the life cycle, half of all elderly women live on less than $9,500 (Ollenburger and Tobin 1998: 100). Many live alone and draw on very meager resources to prepare or repair their homes.

Low-income female-headed households are increasing. Just over half of all poor households are headed by women (54 percent), an increase of 46 percent between 1970 and 1991 (Nunez 1996: 12). In 1993, over a third of all female-headed households lived below the poverty line, five times the poverty rate of married couples (Schmittroth 1995: 511). The racial dynamics of poverty in the United States put racial-ethnic minority families at greater risk of substandard housing before disasters; poverty rates for single mothers in 1997 ranged from 37 percent for Anglo women, to 46 percent and 54 percent for African-American and Hispanic women respectively (U.S. Census Bureau 1997). *Women in public housing* are especially at risk. While projects vary in the degree to which they are safely located, retrofitted, or maintained, on balance the rising maintenance costs in aging structures have resulted in a deterioration of the nation's public housing stock (DeParle 1996). Like renters, many project residents depend on absentee landlords to prepare or repair their dwellings. When affordable housing is not available to them, women displaced from public housing units become long-term residents in "temporary" postdisaster accommodations (Morrow 1997).

The nation's supply of *affordable housing is declining* despite the need (Nunez 1994; DeParle 1996). Low-income women and their children are likely to reside in substandard structures built where land is cheap and often hazard-prone; their shelter in

trailers and on floodplains provides them little protection. Low-income women in minority populations are disproportionately subjected to routine toxic exposure and the risk of catastrophic toxic events in contaminated neighborhoods (Brown and Ferguson 1995; Taylor 1997).

Homeless families headed by women are the fastest growing sector of the homeless population, and now constitute approximately 40 percent of this highly vulnerable population (Nunez 1996:5; Glasser 1994). Increasing numbers of American women cope with the relentless "daily disaster" of homelessness, among them women leaving violent relationships and runaway teenaged girls on the street (Kozol 1988). Their daily rounds in and out of shelters, hotels, or borrowed space render them socially invisible, difficult to locate and assist, and well outside the normative household disaster planners target for information and resources.

Women in domestic violence shelters are also socially invisible yet highly vulnerable. Shelters offer safe space of last resort to women forced from their homes by violence; to maintain this lifeline, residents, volunteers, and staff may need physical assistance preparing and repairing their facility and locating alternate evacuation space unknown to abusers (Enarson 1999). Women living with physical or mental disabilities, or serious illness in *group homes* or other public settings, may need help tailored to their abilities and needs as they prepare and repair their living spaces.

These patterns and trends make disaster housing a gendered issue in the United States, with particular significance for women raising families alone, those on low-incomes or in poverty, marginally housed women in public housing or domestic violence

shelters, older women living alone, and homeless women. What can we add from the concrete experiences of U.S. women living through specific disasters?

Housing Experiences of Women in Two U.S. Disasters

Taking up the challenge of feminist standpoint theory to understand and critique ruling relations and power structures from women's everyday domestic experiences (Smith 1987), some researchers have recently investigated women's disaster experiences in the developed world, during Miami's Hurricane Andrew (Morrow and Enarson 1996; Enarson and Morrow 1997; Morrow 1997; Enarson and Morrow 1998a; Alway, Belgrave, and Smith 1998); in flooded areas of North Dakota (Fothergill 1998), Wales and Scotland (Fordham 1998; Fordham and Ketteridge 1998), Australia (Finlay 1998) and Canada (Enarson and Scanlon 1999); and in the aftermath of fire (Cox 1998; Hoffman 1998) and earthquake (Phillips 1990). Though not directly investigating gender and post-disaster housing, these studies suggest that women are highly impacted by issues arising during emergency preparation, evacuation, emergency shelter, temporary accommodation, repair and reconstruction.

This paper reports on original data from an earlier study conducted with Betty Hearn Morrow following Hurricane Andrew in Miami and from my on-going investigation of women's disaster experiences during the 1997 Red River Valley flood in the Upper Midwest (North Dakota and Minnesota). In these studies, too, housing loss and recovery were critical issues facing women.

Research strategy and study samples

The field studies were conducted to document and analyze the experiences of

women in a recent U.S. hurricane and flood, among them women's housing needs and interests. The studies employed qualitative methods appropriate to this goal, primarily open-ended interviewing and focus group sessions. Guiding research questions elicited information about women's vulnerabilities and losses and about their resources and responses in each phase of the disaster cycle. Interviews and focus groups were conducted with the use of informed consent forms and background data sheets; all discussions were tape-recorded, translated from Spanish to English if necessary, and later transcribed for computer-assisted qualitative analysis.

Because their ideas, feelings, and observations are often marginalized, narrative accounts were solicited from women particularly vulnerable to disasters. In addition to professional women in service-providing agencies, emergency response organizations, and local government, interviews or focus groups sessions were conducted with migrant farm workers, refugees, seniors, women in public housing and in domestic violence shelters, home-based workers, single women, rural women, low-income single mothers, racial-ethnic minority women, and small businesswomen. In most cases, potential focus group participants were identified and contacted by knowledgeable key informants (e.g. shelter manager, agency director, community leader). This strategy resulted in a non-probability, purposive sample of women representing the broad range of community difference across the divides of race, ethnicity, age, citizenship status, and social class.

Research conducted in Miami with Betty Hearn Morrow in 1992-94 included interviews with 25 service providers (e.g. the YWCA, South Dade Immigration Services, Legal Services of Miami); five focus groups involving 25 women; observations in tent

cities, service centers, and provider organizations; and extended participant-observation of an emergent community group. In "Grand Forks" (used here to include Grand Forks, ND and East Grand Forks, MN), I conducted interviews with 95 impacted women, service providers, and disaster responders during three field visits at six, 12, and 18 months after the April 1997 flood.

Other data sources complimenting this primary data included agency documents, local research reports, and media accounts; numerous informal conversations with residents during field visits; personal letters and other documents in the University of North Dakota's Special Collections Library; and oral histories conducted under the auspices of the University of North Dakota Museum of Art.[1]

Findings

The following section reports sequentially on key patterns or issues which emerged from women's accounts through the disaster cycle of household preparation, evacuation, emergency shelter, temporary accommodation, rebuilding, and resettlement in permanent housing. I emphasize that the findings are not conclusive but suggestive, raising a host of questions for further investigation, among them how gender interacts with race, class, and age to bring these dynamics into play, and what gender-specific issues might emerge in a similar study of male residents.

1. Conflict with men was reported over priorities during household preparation and evacuation. When couples in the Red River Valley differed over how much and how soon to prepare their homes for flood, and whether and when to evacuate, women took action earlier and wanted more help from male partners and kin.[2] As the Red River

waters rose dangerously high, most child-free and able-bodied residents, male and female, volunteered at "Sandbag Central" to help dike endangered homes, schools, businesses, and other public structures. But women and men were often divided over the need for mitigation at home. Interpreting women's desire for action not as mitigation but as "panic," husbands in some cases actively resisted women's efforts to gather sandbagging materials for the home, pack belongings for evacuation, or move furniture and other possessions to safer ground. Their partners later spoke bitterly about male resistance to mitigation, resenting both the resulting material losses and the emotional cost, as one woman explained:

> When the women showed this concern (to buy flood insurance, to move things upstairs), their significant others... in many cases discounted their turbulence, little was done, and much was lost... [My husband] disconnected himself from my efforts. In the early stages, he used little words that discounted what I felt. In the later stages, I knew I had to move regardless of how he felt and I moved like a woman possessed. I didn't force him to help me, but I missed his companionship when I felt our home was at stake. This created a chasm between us which we recently have begun to bridge. (Crawford 1997)

2. *Highly vulnerable women sometimes lacked needed assistance preparing their homes*, among them women in public housing units in Miami. As Hurricane Andrew approached, they reported that male managers ignored their requests for plywood and nails to cover apartment windows: "Everything was right there. All they had to do was open it up and give us some nails—we could have did it ourselves. They didn't want to

do it. They didn't tell us anything." As a result, living units were damaged or destroyed, resulting in increased losses of personal belongings. Eighteen months later, women and children reported numerous respiratory problems caused by mildew and mold in apartments still under repair. In some rural homesteads along the Red River Valley, a strong regional ethic of self-reliance may have inhibited widows living alone on deteriorating family farms from asking for help, leaving them in substandard housing "with their basements collapsing" after the flood.

3. Women were less likely than men to resist or delay evacuation. In the Grand Forks area, many families experienced emergency evacuation in darkness as dikes broke overnight, and virtually all residents were evacuated when city services ceased. Women tended to evacuate earlier than men,[3] due both to safety concerns about youngsters and because the men in their families resisted evacuation, increasing women's caregiving responsibilities. In one professional family, the wife was seriously ill herself at the time of the flood crest but more concerned about her husband's recent heart problems:

> After about 1 ½ hours of sleep Friday night, I turned the radio back on and they were saying that the whole town should evacuate—our area was specifically named. I woke [my husband and grown son] about 5 am. Both said they would not go . . . It took me until the afternoon on Saturday to convince [him] that we should leave. All medical services were down, and I didn't want to have to worry about getting him to medical help if he should need it in an area where none was available. [My son] refused to go.

4. Lack of housing and safe space put some women at higher risk of violence.

Increasing incidents of domestic violence were reported after Miami's hurricane and the Red River Valley flood (Enarson 1999). Designated evacuation space or relief centers may not be safe spaces for women in violent relationships, as this shelter worker explained:

> [T]hey're in that shelter because they're in danger. And the Red Cross shelters, those types of shelters, are not safe for them. Their other courses of action tend to be neighbors, friends, family members who are logical places for the perpetrator of that violence upon them to look for them . . . And so I think this really shows that we need to have a plan of action ahead of time . . . Because they're there for a reason.

When floodwaters destroyed the community shelter for homeless and abused women, Grand Forks residents were made more aware of the needs of battered women for emergency shelter and affordable transitional housing. The flooded shelter in Grand Forks had not been replaced one year later and crisis workers had physically relocated the crisis intervention center to five different locations.

Housing shortages brought former boyfriends and recently divorced spouses back into many women's lives during evacuation, shelter, and temporary housing; some spoke of increased conflicts with children, threatened violence, substance abuse, and emotional strain. In Miami, lack of accommodation for out-of-town construction workers and their families was the proximate cause of abuse of a young woman who lived in a tent for six months while her partner repaired homes.

5. Women's domestic and kin work intensified when living conditions were

disrupted. Women in both studies spoke frequently of what "putting the house to rights" entailed in the aftermath of a hurricane or flood. Lack of facilities, equipment, supplies, space, and time clearly expanded women's postdisaster domestic labor, magnifying the demands of the "second shift" most employed women face. This was especially true of low-income women unable to purchase such replacement services as child or elder care, restaurant meals, domestic help, or dry cleaning.

The inability to perform basic household tasks was emotionally stressful for women who saw themselves as family providers:

> When I couldn't fix a meal because I didn't have water, when I had basement water in my kitchen—that's what I felt like I was responsible for, washing their clothes and—it *majorly* disrupted *my* life, where my husband could go off and go to his job and bring a pay check home, and 'Everything's just fine.' And I'm like, 'Everything's not!' I couldn't shop at the stores I wanted to shop at, I couldn't do anything.

Insecure housing during the evacuation and resettling period also greatly expanded women's traditional socioemotional and kin work. They reported having primary responsibility for assessing the extended family's housing needs and resources and arranging for appropriate temporary living space. Overcrowded living conditions in damaged houses, relatives' homes, or Fema trailers intensified women's emotion work as caregivers in much the same way that non-functional kitchens intensified their physical labor. Respondents and service providers in both Grand Forks and Miami attributed increased family stress, leading in some cases to conflict and violence, to overcrowding

in tents, trailers, hotels, the homes of relatives or their own damaged houses or cars.

Households often expanded in size as women able to do so offered space and personal services (cooking, laundry, child care, emotional support) to kin, co-workers, friends, and evacuated families not known to them personally. Many women recalled the struggle to keep up with their paid jobs, clean up their damaged property and workplaces, and create a 'home' away from home for their own families or those they hosted:

> I know of a lady who had 17 families living with her—families! And the last one left two days ago [six months after the flood].We're talking long-term. Families still have families with them, because they don't want to move—the denial—they don't want to move into a trailer. They want a home situation as much as they possibly can.

6. Fema trailer camps were not designed for the needs of women and children. During their long stays in temporary trailers, women's day-to-day efforts to cook, clean, and care for their families, often in combination with paid jobs and unpaid community work, were complicated by the physical limitations of temporary accommodations, e.g. lack of privacy, few play spaces for children or activities for teens, insufficient laundry facilities, social isolation.[4] In Miami's Fema trailer camps, women were often isolated, fearful for their personal safety, lacked needed mental and reproductive health services and reliable transportation, and were unable to access needed community services. There was no child care, elder care, or family respite care consistently provided in public spaces either in Miami or in Grand Forks to support women with dependents in their efforts to repair homes, search for new housing, or access relief services. A community center

offered Grand Forks trailer residents needed recreational services, computer facilities, after-school care, and other services, but mothers spoke often about overcrowding and the lack of safe, outdoor play space for children. Outreach workers identified limited public bus transportation as an issue for women in Fema trailers who lacked cars but were still responsible for searching for permanent housing, getting to jobs, and transporting children to child care and home schools.

7. Women were slow to locate affordable housing and leave temporary accommodations. Women's economic status and family roles were formidable barriers in the race for affordable housing, making women more dependent than men on private or public temporary accommodations. In Miami, women were the majority of those long-time residents of "temporary" Fema housing, especially non-English-speaking women heading multi-generational families. One year after the flood, a housing specialist in Grand Forks estimated that 30 to 40 percent of Fema trailer residents were women, often single mothers with large families, on public assistance, or marginally employed. Disaster relief workers, Unmet Needs Committee members, and others engaged in Grand Forks' recovery process concurred that low-income women rearing families on their own were especially disadvantaged in the post-flood housing market, echoing the stories told by single mothers of their many moves in and out of Fema trailers and around the community. One housing specialist explained:

> We have a lot of lower-income families, like single mothers with three children, you know, that can barely make it the way it is, let alone with paying rent, because they only pay utilities on these places . . . I have a list of all rentals in

> Grand Forks and it's just—they're still real high. Even for sleeping rooms, they're like $200 a month . . . We have one lady out here that has nine kids and she's going to need a four-bedroom. And the last apartment I saw was over a thousand a month for rent.

Lack of affordable permanent housing was as major setback for low-income single mothers, pushing some back into dependency and depression. They often spoke of behavioral problems with children in crowded living quarters, health problems, loss of home-based income, unwelcome engagement with former spouses in need of housing. Treated earlier for depression, this mother of four repeatedly stressed the need for secure space for her active youngsters and two teenagers:

> I had things set. I had a house leased until my eldest daughter graduated from high school. We had four bedrooms, a big enough house for my family, big yard. I was going to start college in June . . . I was single, I was starting college, I was feeling good. I had my head together. When we get another house that we have space in, we'll feel better, but I'm starting to get the feeling that that's not going to happen and I'm starting to get real upset again, thinking I'm stuck—into an apartment and then we'll have to move again, and move again, and move again.

Among the predominantly Scandinavian residents of the Red River Valley, Latina women were highly visible in the search for relief goods and housing. After losing her home and its contents, one single mother of three drove non-stop to Texas for emotional and material support from her extended family. She focused on racial bias in describing her subsequent search for permanent housing and the conflicts which developed between

her teenaged children and her landlord:

> I had a hard time getting that apartment but I actually begged him—actually, I kneeled down and I said 'Please, me and my kids need a place . . . I have to go into storage to get clothing for me and my kids. I need a home.' And he's over here, 'Well, let me think about it for two weeks, because Mexicans used to live in my place and destroyed my apartments before the flood.' That's what I was told by him. So that's where I thought racial had something to do with it.

8. Gender was a factor in decisions about home repair and rebuilding. Couples in both studies struggled to resolve conflicting priorities when making decisions about whether, when, and where to relocate, and about repair and rebuilding priorities. In Miami, an advocate for low-income refugee women recalled mediating many conflicts between couples when women more than men wanted to use relief funds to make immediate home repairs and replace needed household supplies. As the account below suggests, home repairs were delayed for other Miami women when male partners more readily took on waged clean-up jobs than helped out with necessary but unwaged home repairs:

> [We] three women spent 39 days without electricity—washing clothes in the bathtub, heating water on the campfire for the children's baths, washing dishes in a bucket. We cooked Mexican food over a makeshift kitchen in the yard, preparing corn tortillas on a cast iron griddle . . . Disaster or no disaster, the men demanded hearty meals of traditional foods and refused to eat at the military kitchens . . . The men began to hire themselves out, repairing others' homes as the

job market for workers boomed, but our home lay in disarray. (Colina 1998)

Tenants in South Dade County were expected to continue rent payments but landlords in low-income areas often failed to make needed repairs. As women are more likely to rent than to own homes, this impacted women directly, especially those most vulnerable to exploitation. This advocate for Haitian immigrants in Miami explained:

> Well, even if you got a [FEMA temporary housing] check, where are you going to go? Now a lot of them, what they did—they make deals with the landlord. OK, we stay, we pay you rent, you fix. So the landlords are getting the money but they're not fixing. [This young single mother had] no electricity, no lights, and she had her 14-day-old baby, and she was paying $260 rent every month.

In Grand Forks, service providers noted that poor health and special needs kept many elderly widows from returning promptly after their evacuation. Because they were not in town to arrange for prompt clean-up and repairs before construction work slowed for the winter, repairs were delayed on their homes and they returned to depressing living conditions in damaged homes and deserted neighborhoods. Early return after evacuation and prompt repairs also created problems. A public health educator observed that the husbands and fathers she worked with were sometimes overeager to begin repairing the homes they had build themselves; this led some men to bring women and children back to wood-frame homes not yet thoroughly dry and safe for occupancy.

9. Housing loss had direct economic consequences for some women. Women generally did not benefit from casual work on construction and clean-up crews in either Miami or Grand Forks. There were many reports of women's secondary unemployment