Quick Response Report #110 EMERGENT COORDINATIVE GROUPS AND WOMEN'S RESPONSE ROLES IN THE CENTRAL FLORIDA TORNADO DISASTER, FEBRUARY 23, 1998

Jennifer Wilson and Arthur Oyola-Yemaiel
Department of Sociology and Anthropology
Florida International University
Miami, Florida 33199
E-mail: jwilso02@fiu.edu; aoyola01@fiu.edu

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EMERGENT COORDINATIVE GROUPS AND WOMEN'S RESPONSE ROLES IN THE CENTRAL FLORIDA TORNADO DISASTER, FEBRUARY 23, 1998

Storms that swept across Central Florida in the early morning hours of February 23, 1998, spawned the deadliest round of tornadoes on record in Florida. Ninety percent of Florida's tornadoes have winds under 72 miles per hour (see Appendix A). However, according to the National Weather Service, due to the effects of El Niño atmospheric disturbances, the several tornadoes that struck Florida on February 23, contained wind speeds ranging from 210 mph to 260 mph. According to Jim Lushine, a Miami-based National Weather Service warning meteorologist, only two other times has Florida been hit by tornadoes with wind speeds of more than 206 miles per hour in 1958 and 1966. Both were El Niño years, and both times the storms hit Central Florida (*Sun-Sentinel* Feb. 24, 1998). Florida is far from "Tornado Alley" where the nation's most severe tornadoes usually occur. Tornadoes in Florida most often occur as by-products of hurricanes. Thus, Florida does not have tornado sirens such as those found in Texas, Oklahoma and Kansas which sound to warn sleeping citizens of approaching tornadoes. Despite tornado watches and warnings all day, many Central Floridians went to sleep on Sunday night with apparently little concern for such extreme weather (see Appendix B).

Tornadoes touched down in Brevard, Dixie, Manatee, Nassau, Orange, Osceola, Seminole, Sumter and Volusia Counties. Forty-two people

were killed and more than 250 were injured throughout the Central Florida area (*St. Petersburg Times* Feb. 24, 1998). This was the aftermath of the state's worst documented tornado outbreak.
Osceola County experienced the worst impact of these series of tornadoes. Twenty-five people were killed and 148 were injured in this county. Osceola County Office of Emergency Management estimated that the county sustained more than $37 million in damage to 150 homes, 200 mobile homes, 15 RVs, a strip mall and about 30 businesses. Some damage was inflicted upon an additional 225 homes, 60 apartments and 25 mobile homes (*The Osceola Sentinel*, March 6, 1998). Located adjacently to the south of Orange County in which resides the city of Orlando, Osceola County has a population of approximately 130,000 (Pierce 1995). Geographically the county contains two large lakes, West Lake Tohopekaliga and East Lake Tohopekaliga, that surround the county's two largest cities, Kissimmee and St. Cloud. The two large lakes and many smaller lakes to the south comprise the Upper Kissimmee Waterway Basin. Because of the many lakes, conservation areas and farmland in the southern part of the county, the population is small outside of the cities of Kissimmee and St. Cloud. Osceola County is also the Florida county that contains most of Walt Disney World theme park located directly west of the city of Kissimmee.
The path of the storm (see Appendix C) took it from southwest to northeast crossing the mid-section of the county. It first passed over a restricted elders-only subdivision near the Poinciana Office and Industrial Park causing minor damage to some homes. It then proceeded to damage a few homes in the Campbell area southwest of Kissimmee proper. The tornado continued northeast heavily damaging The Shops at Kissimmee strip shopping mall with one entire wing completely collapsing. At that point the tornado passed over the northern tip of West Lake Tohopekaliga causing the heaviest damage to a neighborhood of lakeside homes as it reached the opposite shore.
After crossing Highway 441, then a field and leaving the Osceola County Stadium and Sports Complex unscathed, the tornado touched down around 2:00 a.m. at the Ponderosa Pines mobile home park near Boggy Creek Road causing the highest number of fatalities. Amidst

virtually complete devastation, rescue workers recovered 10 bodies in the park. Nearly all of the community's 200 mobile homes and recreational vehicles were destroyed. The tornado then rolled northeast crossing the Florida turnpike and landed in the Lakeside Estates subdivision of single-family homes in the Buena Ventura Lakes area damaging about 400 homes and Cypress Creek Elementary School. Rescuers and residents awoke to find flattened cars, wrecked homes, and aluminum siding embedded in trees (see Appendix D).

We visited Osceola County, Florida, on four different occasions for two days each in order to study this community's coordinated response to the tornado disaster. The research for this project was qualitative in design including document analysis, ethnographic interviewing and participant observation. Data was primarily collected through semi-structured, open-ended interviews. We interviewed emergency management organization personnel, government and non-profit disaster relief organization personnel and citizen/victims. In total, we conducted ten interviews.

Snowball sampling techniques were employed. During each interview, we asked the respondent if he/she thought there was someone else in the community that would be important for us to talk with regarding coordination of the community's tornado response. In order to avoid biasing our informants, we did not reveal that we were primarily interested in women's roles in coordination of Osceola County's disaster response. Rather, we only asked our respondents who they thought were the key individuals in coordinating the community's response. In principle, our respondents suggested more women participants in human services and more men participants in response activities, confirming the traditional division of labor pattern within disaster that has been documented elsewhere (Wilson 1998, Enarson 1997, Enarson and Morrow 1998a, Phillips 1990).

To supplement ethnographic data (Erlandson, et al. 1993; Lincoln and Guba 1985), we gathered documents such as organizational reports, media accounts, weather reports and other potentially useful materials (Webb, et al. 1981; Plummer 1983).

Conceptual Framework

Disasters do not affect everyone the same—such phenomena are discriminatory (Blaikie et al. 1994, Neal and Phillips 1990, White and Hass 1975). Vulnerability to such events is unequal among different social groups with disaster victims more likely to be groups of individuals who have the least amount of power and resources in the social system to recover or escape from natural or technological hazards. For example, the elderly are more apt to lack the physical and economic resources necessary for effective response, are more likely suffer health-related consequences, and will be slower to recover (Morrow 1998, Tobin and Ollenburger 1992). Poorer households more often live in sub-standard or ill built and inadequately maintained housing, increasing their vulnerability to hazards (Phillips 1993, Peacock et al. 1997, Bolin 1982, Bates 1982). And, while the economic losses of the poor will be less in absolute terms, even minor losses can be devastating, relative to the household's stock of resources and assets. Ethnic differences have been found to affect ways in which people process warnings and respond to disasters (Perry and Mushkatel 1986). Language barriers often limit the access of minority groups to disaster warnings and disaster information such as that related to the government aid process (Bolin and Bolton 1986, Aguirre 1988). Women are the population most at risk around the world to disaster events (Enarson and Morrow 1998a, Blaikie et al. 1994). Women typically have fewer resources and less autonomy as well as greater caregiving responsibilities which serve to accentuate their hazard vulnerability and victimize them disproportionately at all stages of disaster (Morrow 1998, Enarson and Morrow1998a, Blaikie et al. 1994).

Thus, an individual's place within the social structure determines the likelihood of their becoming a disaster victim. Additionally, among disaster victims those individuals belonging to one or more of these less-powerful groups will have more difficulty in the recovery process. Researchers have also found that traditionally less powerful groups are

less likely to be part of existing disaster planning, response, and recovery efforts (Enarson and Morrow 1998a, Peacock et al. 1997, Neal and Phillips 1995, Phillips 1990, Bolin and Bolton 1986).

However, there is significant evidence that groups of affected people (women included) who do not have their needs met through pre-existing social (organizational) means will organize among themselves in some fashion to satisfy these requirements. Emergent or ad hoc organizations then arise (see Dynes' typology of organizational behavior in disaster [1970]) which form outside the structure of the official disaster relief network and are aimed to link with the "insiders" in order to acquire a fair share of the means for recovery. While called emergent organizations, these groups often draw upon existing networks for labor and resources.

Women do often become actively involved in their communities and neighborhoods during disaster situations. Neal and Phillips (1990) illustrate that women were key participants or leaders in emergent citizen groups in disaster-affected communities. The emergent citizen groups fit into this traditional and local pattern of women's activism in which women view their cause as an extension of their traditional gender role. In addition, Enarson and Morrow (1998b) found that women's formal and informal networks were central to both household and community recovery after Hurricane Andrew in 1992. Women's experience as community workers, informal neighborhood leaders, and social activists propelled women to take the initiative in organizing a disaster response coalition (Enarson and Morrow 1998b). Other women are highly involved as community workers and organizers in disaster-prone areas (Eade and Williams 1995), including neighborhood-based household preparedness programs (e.g., Faupel and Styles 1993).

On the other hand, Gillespie (1992) discusses how network structures in already *existing* organizations shift their functions and modify their goals during disaster in adaptation to the new environment. This arrangement is better-suited and more cost-effective than the formation of entirely new organizations. Bates and Harvey (1978) and Peacock (1991) have labeled these groups that form between existing organizations and play coordinative roles to pool resources from many

different sources *interstitial* groups. These groups serve to link the various social units that participate in a goal-oriented exchange relationship. An exchange interstitial group may or may not continue to exist contingent upon attainment of goals, expectations and needs of the participants involved (Peacock 1991) as well as the scope of work, jurisdiction and/or financial limitations of the parent organizations. Following this concept, then, pre-existing women's groups or networks may be a source for leadership in such emergent coordinative groups. Today, women are becoming incorporated into the official disaster relief network. Due in part to professionalization, women are more often found in official emergency management positions at the federal, state and local level (Wilson 1998, Enarson 1997, Enarson and Morrow 1998a, Drabek 1986). Women also continue to enter other emergency response organizations such as the police and fire departments in greater numbers (Chetkovich 1997, Martin 1980). These conditions together with the fact that women have traditionally participated in human service agencies such as the American Red Cross and others, make their presence more prevalent in the emergency operations center (EOC) as representatives of important functional areas. Women's greater participation from across fields in the interstitial group of the EOC, may provide less reason for outside interstitial groups to form. Thus, women's needs may primarily be met through existing organizations.

In order to explore further the complex issues of women and emergent organization in disaster, our intent was to examine a disaster-affected community's emergent, ad hoc groups which formed to broker or coordinate between service, non-governmental and governmental organizations and, in so doing, meet certain recovery needs of the population that otherwise would not be met. Specifically, we looked for women's roles in these "emergent coordinative organizations." Hence, the research question was: *What are the conditions under which women play vital roles in coordinating interorganizational disaster response activities in the community?* Several sub-questions included: When did these groups emerge?; How many women were involved?; What were the structural characteristics of the organization as well as individual characteristics of the women in these coordinative roles?

Findings and Discussion

We found no evidence of formation of emergent, coordinative interstitial groups in Osceola County, Florida following the February tornado disaster. The response was handled using pre-established organizational channels. Conditions for the formation of coordinative interstitial groups were not present. Thus, the opportunity for women to participate in these groups was nonexistent.

Why were their no emergent groups?

The Osceola County emergency operations center (EOC) Operations Manager stated: "Initially it was overwhelming. The sheer volume of…needs was tremendous…This county has never experienced anything like this…Were we prepared? No, we weren't." However, all indications from other respondents were that the official response was immediate and thorough. Victim respondents whom we talked with were highly satisfied. Furthermore, the Salvation Army and the American Red Cross respondents believed that the response went extremely well despite the lack of preparation.

Although this county has rarely experienced a disaster of the same proportion as the tornadoes, there were some very innovative techniques utilized during the response. For example, the Osceola County Office of Emergency Management (OEM) established a storeroom for citizens whose homes were destroyed to store their possessions until they could find replacement housing. In addition, the OEM established two warehouses: one for incoming donations and one for outgoing donations. Osceola OEM was aware that the county would receive large amounts of unusable donations that could then be forwarded to other agencies that would be glad to have them. The OEM Operations Manager who was in charge of the activated EOC said that "at one point we had nearly twenty semi's coming in and twenty semi's going out each day" with donations received and then subsequently forwarded.

Another unique or unusual response by Osceola County OEM was the coordination of volunteers. The OEM arranged to have photo identification badges made for each volunteer. This was accomplished through the development of a database which kept track of volunteers' names, what skills and/or equipment they were able to provide, and their assignments. The database also tracked the volunteer needs within the community. The OEM also covered volunteers with accident insurance and workman's compensation insurance during their volunteer work. According to the Operations Manager of Osceola County OEM, there were close to 3000 volunteers who did 19,000 hours of work in the county in response to the tornado disaster.

In all, respondents had very few complaints concerning the response to the tornadoes. Rather, the respondents to whom we spoke praised the coordinated efforts among the community's organizations. Indeed, according to our respondents there was a high amount of coordination among existing agencies or organizations. For example, "town meetings" by city-county coordination were instituted immediately after the event (the next day) in order to facilitate communication among all the players. Respondents reported that there were only minor communication problems that were resolved quickly. This may be due to the fact that the EOC was expressly utilized for coordination purposes among the players.

Because most of the Osceola County departments and offices were involved in the response in some way coordination was further facilitated. These departments include the human resources department, the parks and recreation department, the road and bridge department, the collections office, the solid waste department, the billing office, and others. These offices provided labor, equipment, and communication to the response effort.

Another reason for the quick and thorough response, is the fact that several of the key response agencies had members of their regional or state offices come into the county in order to facilitate the response. Florida state Department of Emergency Management had a representative come in "almost immediately" after the tornadoes to work with Osceola County OEM in instituting the state-designed response

plan. This same procedure occurred at the American Red Cross and the Salvation Army which both had members of their regional disaster response teams arrive within twelve to thirty-six hours of the tornado disaster. These teams' expertise in disaster response and their assistance in Osceola County was evident in the coordinated and swift response of these organizations for sheltering and donations (American Red Cross) and feeding (Salvation Army).

There was substantial evidence that the responders were concerned with making recovery from the disaster as easy as possible for individual victims in the community. One way in which this was accomplished was that the Disaster Relief Center (DRC) contained representatives from the Red Cross, the Salvation Army, Federal Emergency Management Agency (FEMA), Small Business Administration (SBA), some state agencies such as the Insurance Department, and United Methodist Disaster Relief (UMCorp) all in the same building. This is significant because in many communities this does not always take place due to lack of space and willingness to work so closely together. In addition, the local bus system, LYNX, established separate routes to transport tornado victims to the DRC.

Furthermore, most of the local social service agencies decided to set up a disaster relief fund for the donations they received. Every agency was then able to draw from this fund to practice their individual disaster relief work, i.e., mental health, food bank, etc. This procedure was taken in order to balance out the amount of disaster relief donations received by individual agencies since some received large amounts of funds and some received little or no donations. This is a significant component of the coordinative effort as non-profit agencies often have difficulty obtaining adequate operating funds.

Where were the women?

A few women were key participants within their existing organizational positions. For example, the director of the county personnel office was key in organizing the county's volunteer program. A horticultural agent of the Department of Agriculture designed a computer database program

to keep track of the volunteers. Kissimmee's assistant city manager was essential in facilitating the working relationship between city workers and the Osceola County Office of Emergency Management's response plans. In addition, the director of the local American Red Cross played an integral part in shelter provision. One of the co-directors of the local Salvation Army was crucial in providing feeding to both victims and rescuers. And, finally, the sheriff's department EOC representative served to link her department's response efforts with the OEM.

In total, six women were prominent in the community tornado response in Osceola County, Florida. Although the total number of important female responders is small, only half of those women (three) occupied traditional female working roles in their official positions. Three were in social services but the remaining three occupied "less-traditional" female working roles: a police officer, a horticulture agent, and an assistant city manager (public official). Even though these women regularly occupied "less-traditional" working roles, two of them fulfilled more traditional female roles during the disaster response. One woman was responsible for coordinating volunteer workers and the second handled phone communication at the EOC. The third woman took on a much more substantial "non-traditional" working role during the disaster response as the mediator between city workers and the county OEM response process. Thus, we can argue that women were vital in the response process within the pre-existing organizational structure.

Conclusions

In this relatively small community, the coordinative effort of local agencies was supported and assisted by the convergence of outside experts. The tornado, although severe and devastating for some, was localized and did not have a catastrophic effect of large magnitude in which the entire social structure/institutional fabric ceased to operate (Bates 1982). In contrast, a disaster of the scope of Hurricane Andrew in 1992, caused devastation so widespread that the social-organizational

structure of everyday life was virtually dismantled (Peacock et al. 1997). In Osceola County, the tornado left clusters of localized heavy damage, but the majority of the community was left intact and able to concentrate relief efforts on the damaged areas. This resilient community was able to respond effectively, solving the problems at hand that otherwise could have created unmet needs for sectors of the population. In doing so, unmet needs never arose.

Among the reasons that no emergent coordinative groups formed in Osceola County is that already existing organizations adapted to meet the basic needs of the affected community. In short, the exchange relationship was conducted both within existing organizations and between these organizations so that the outside or ad hoc groups were not needed. This may have been accomplished in part because women, racial minorities, and cultural ethnic/religious ethnic minorities, are often integral parts of the disaster relief network. More diverse emergency response organizations represented in the EOC are more likely to be sensitive to the needs and concerns of all members of the affected community.

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APPENDIX A: Osceola County, Florida Tornadoes 1950-1995* and the Fujita Tornado Scale**

All times are Central Standard Time; add one hour for Eastern Standard Time

Date	Event #	Time	Dead	Injured	F Scale	County Number(s)
JUN 08, 1960	017	1730	0	1	F1	097
APR 12, 1961	008	1515	0	1	F1	097
APR 04, 1966	001	0900	0	0	F3	097
APR 04, 1966	002	0715	0	0	F2	097
JUN 28, 1971	031	1430	0	0	F0	097
AUG 24, 1971	045	1630	0	0	F1	097
JAN 28, 1973	006	1115	0	7	F2	097
APR 15, 1975	036	0515	0	0	F0	097
APR 15, 1975	037	0850	0	0	F0	097
MAY 14, 1975	042	1850	0	0	F1	097
MAY 13, 1976	022	1800	0	0	F0	097
JAN 10, 1977	002	0550	0	0	F1	097
FEB 24, 1977	004	0804	0	0	F0	097
MAY 04, 1978	039	1350	0	1	F0	097

MAR 19, 1981	008	0100	0	11	F2	097
MAR 24, 1983	030	0510	0	0	F2	097
MAR 24, 1983	031	0550	0	0	F1	097
SEP 01, 1987	040	1440	0	3	F1	097
AUG 02, 1995	041	0304	0	0	F1	097

Fujita Tornado Scale

F-0: 40-72 mph, chimney damage, tree branches broken.
F-1: 73-112 mph, mobile homes pushed off foundation or overturned.
F-2: 113-157 mph, considerable damage, mobile homes demolished, trees uprooted.
F-3: 158-205 mph, roofs and walls torn down, trains overturned, cars thrown.
F-4: 207-260 mph, well-constructed walls leveled
F-5: 261-318 mph, homes lifted off foundation and carried considerable distances, autos thrown as far as 100 meters.

*Tornado Project Web Link
http://www.tornadoproject.com/fujitascale/fscale.htm#top
**FEMA Tornado Page Web Link
http://www.fema.gov/library/tornadof.htm

APPENDIX B: Official National Weather Service Watches and Warnings for Central Florida (Osceola County), February 22-23, 1998*

BULLETIN - IMMEDIATE BROADCAST REQUESTED
TORNADO WATCH NUMBER 58
STORM PREDICTION CENTER NORMAN OK
813 PM EST SUN FEB 22 1998

THE STORM PREDICTION CENTER HAS ISSUED A
TORNADO WATCH FOR PORTIONS OF

NORTHERN AND CENTRAL FLORIDA
AND ADJACENT COASTAL WATERS

EFFECTIVE THIS SUNDAY NIGHT AND MONDAY MORNING FROM 900 PM UNTIL
300 AM EST.

TORNADOES...HAIL TO 2 INCHES IN DIAMETER...THUNDERSTORM WIND GUSTS
TO 80 MPH...AND DANGEROUS LIGHTNING ARE POSSIBLE IN THESE AREAS.

THE TORNADO WATCH AREA IS ALONG AND 80 STATUTE MILES EITHER SIDE OF
A LINE FROM 60 MILES WEST NORTHWEST OF DAYTONA BEACH FLORIDA TO 35
MILES SOUTH OF AVON PARK FLORIDA.

REMEMBER...A TORNADO WATCH MEANS CONDITIONS ARE FAVORABLE FOR
TORNADOES AND SEVERE THUNDERSTORMS IN AND CLOSE TO THE WATCH AREA.
PERSONS IN THESE AREAS SHOULD BE ON THE LOOKOUT FOR THREATENING
WEATHER CONDITIONS AND LISTEN FOR LATER STATEMENTS AND POSSIBLE
WARNINGS.

OTHER WATCH INFORMATION...THIS TORNADO WATCH REPLACES TORNADO WATCH
NUMBER 57. WATCH NUMBER 57 WILL NOT BE IN EFFECT AFTER 900 PM EST.

DISCUSSION...THUNDERSTORMS CONTINUE TO MOVE EASTWARD FROM THE
EASTERN GULF OF MEXICO TOWARD THE WEST CENTRAL FLORIDA COAST. 00Z
TBW SOUNDING INDICATES AMPLE LOW LEVEL MOISTURE AND DRY AIR ALOFT
CREATING MODERATELY UNSTABLE CONDITIONS /MOST UNSTABLE CAPE TO 2500
J/KG/. IN ADDITION...VERTICAL WIND PROFILES SHOW STRONG WINDS AOA
45-50 KT ABOVE THE SURFACE LAYER THAT VEER AND INCREASE WITH HEIGHT

RESULTING IN FAVORABLE SHEAR/HELICITY FOR POSSIBLE
SUPERCELL
DEVELOPMENT.

AVIATION...TORNADOES AND A FEW SEVERE THUNDERSTORMS WITH
HAIL
SURFACE AND ALOFT TO 2 INCHES. EXTREME TURBULENCE AND
SURFACE WIND
GUSTS TO 70 KNOTS. A FEW CUMULONIMBI WITH MAXIMUM TOPS TO
450.
MEAN STORM MOTION VECTOR 21045.

...WEISS

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BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE MELBOURNE FL
1222 AM EST MON FEB 23 1998

THE NATIONAL WEATHER SERVICE IN MELBOURNE FL HAS ISSUED A
TORNADO WARNING EFFECTIVE UNTIL 120 AM EST
FOR PEOPLE IN THE FOLLOWING LOCATION...

IN EAST CENTRAL FLORIDA

   ...NORTHERN OSCEOLA COUNTY

AT 1218 AM EST...WEATHER RADAR INDICATED A POSSIBLE TORNADO
ABOUT 8
MILES NORTHEAST OF LAKELAND MOVING RAPIDLY NORTHEAST AT 45
MPH. THIS
SEVERE THUNDERSTORM AND POSSIBLE TORNADO WILL MOVE INTO
NORTHWEST
OSCEOLA COUNTY NEAR INTERCESSION CITY...KISSIMMEE...AND THE
ATTRACTIONS AREA. THE STORM WILL LIKELY CONTINUE INTO
SOUTHWEST
ORANGE COUNTY.

A TORNADO WARNING REMAINS IN EFFECT FOR WESTERN ORANGE
COUNTY UNTIL

1240 AM. THIS WARNING MAY BE EXTENDED.

CARS AND MOBILE HOMES CAN BE TOSSED ABOUT BY TORNADO WINDS. DO NOT
TRY TO OUTRUN A TORNADO IN YOUR VEHICLE. ABANDON VEHICLES AND MOBILE
HOMES WHEN THREATENED BY A TORNADO AND GO TO A STRONG BUILDING. IF NO
STRUCTURE IS NEARBY...SEEK SHELTER IN A DITCH OR LOW SPOT.

SHARP

****
****

WFUS01 KMLB 230620
TORMLB
FLC095-097-230720-

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE MELBOURNE FL
119 AM EST MON FEB 23 1998

THE NATIONAL WEATHER SERVICE IN MELBOURNE FL HAS ISSUED A TORNADO WARNING EFFECTIVE UNTIL 220 AM EST
FOR PEOPLE IN THE FOLLOWING LOCATION...

IN EAST CENTRAL FLORIDA

   ...ORANGE COUNTY
   ...OSCEOLA COUNTY

AT 115 AM...RADAR SHOWED SEVERE A TORNADIC LINE OF SEVERE THUNDERSTORMS FROM BITHLO TO NARCOOSEE AND WEST LAKE TOHO. THESE STORMS WILL ACROSS EASTERN ORANGE AND OSCEOLA COUNTIES F
AND LIKELY PRODUCE TORNADO TOUCHDOWNS FROM CHRISTMAS TO NARCOOSEE...AND KISSIMMEE/ST CLOUD.

TORNADOES HAVE ALREADY CLAIMED A LIFE IN VOLUSIA COUNTY! TAKE SHELTER NOW!!!

IF YOU ARE IN THE PATH OF A TORNADO...ABANDON CARS AND MOBILE

HOMES FOR A REINFORCED BUILDING OR GET INTO A DITCH OR CULVERT.
THE SAFEST PLACE IS AN INTERIOR ROOM SUCH AS A CLOSET ON THE LOWEST
FLOOR OF A STRONG BUILDING. AVOID WINDOWS.
*National Weather Service Melbourne Office Web Link
http://sunmlb.nws.fit.edu/wbstorms/

APPENDIX C: Map of Kissimmee, Osceola County, Area Affected by the Central Florida Tornado Disaster, February 23, 1998, 12:40AM (989K)

APPENDIX D: Images of Osceola County Tornado Damage, February 23, 1998 *Photos by Arthur Oyola-Yemaiel and Jennifer Wilson (425K)*

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November 4, 1998
hazctr@colorado.edu