

CIRRA



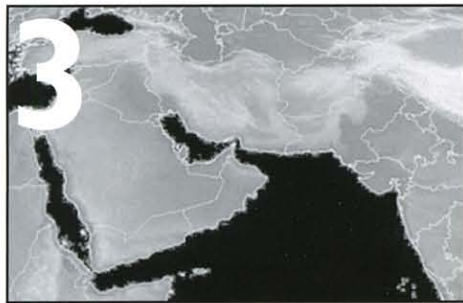
GATHERING CLOUDS:
CIRA'S Role in the Battlefield and
on the Home Front

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**Colorado
State**
University

Knowledge to Go Places

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911 Dispatch Cards for Natural Disasters Still Popular

By John Weaver with Mary McInnis-Efaw

Under the auspices of the VISIT program (Virtual Institute for Satellite Integration Training) spearheaded by NOAA, a number of researchers at CIRA have been engaged in training efforts that transfer advances in research to the hands-on world of National Weather Service forecasters. John Weaver, a member of NOAA's RAMM Team based at CIRA, has been involved with many such training efforts during his 23 years at the institute.

One such training effort came in the aftermath of the devastating flash flood that affected Fort Collins, Colorado the night of 28 July 1997. At the time of the event, Weaver was also volunteering with the Fort Collins Office of Emergency Management (OEM). In the weeks and months that followed, Weaver worked with local responding agencies to explore and identify the "failure points" during that unprecedented event. One of the weaknesses identified was that the 9-1-1 dispatch center was entirely overwhelmed by the amount of incoming emergency calls, and related radio traffic. As the events of that July night were reviewed, Weaver and his OEM colleagues began to develop the idea for a training program that dispatchers might use to better prepare for emergencies during a natural disaster. Clearly such an effort would be a great fit as a part of Weaver's association with both CIRA and NOAA.



Emergency worker tries to reach a submerged hydrant while other workers rescue trapped residents during the July 1997 flood event.

The calls during the busiest two hours of the event arrived at a rate of one call every 8.5 seconds, in an environment where the five dispatchers were already bogged down with flood and non-flood emergencies. CIRA/RAMM researchers sought to investigate whether these deficiencies were peculiar to the Fort Collins OEM, or if this was common to emergency management offices throughout

comprehensive list (to the 90th percentile) of most frequently asked questions during a number of different natural disasters. With the problem identified, a joint effort between the City of Fort Collins Office of Emergency Management, the National Weather Service, NOAA, FEMA and CIRA was launched.

In its first incarnation, the solution came in the form of a Powerpoint presentation which operated like a flow chart. These Natural Disaster Information Cards (NDIC) were used in teletraining courses funded by VISIT for emergency offices around the country. Dispatchers could choose a type of natural disaster (blizzards, floods, lightning, hail, or tornadoes) then follow the sequence of cards/screens to learn how best to handle the call and what sound advice to dispense. The system later evolved to an HTML format to simplify the use of the system. The cards are now being used in many offices across the country in a number of different ways. The most frequent usage for the cards is for in-house training, followed closely by 9-1-1

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For further information on the NDIC, please see <http://www.cira.colostate.edu/flab/fronrange.htm> to access information, photos, etc from the flood of 1997, and ftp://ftp.cira.colostate.edu/weaver/NDIC_Html/Istart_ndic.htm to view the cards themselves.

Although the response on the part of emergency dispatchers was impressive that night, their lack of experience with natural disasters specifically left them ill-equipped to deal with the types of calls they received.

the country. A survey of dispatch centers and/or emergency managers in 20 states followed, and it was found that many were similarly unprepared for natural disasters. From the survey, researchers compiled a

911 Dispatch Cards *(continued from page 12)*

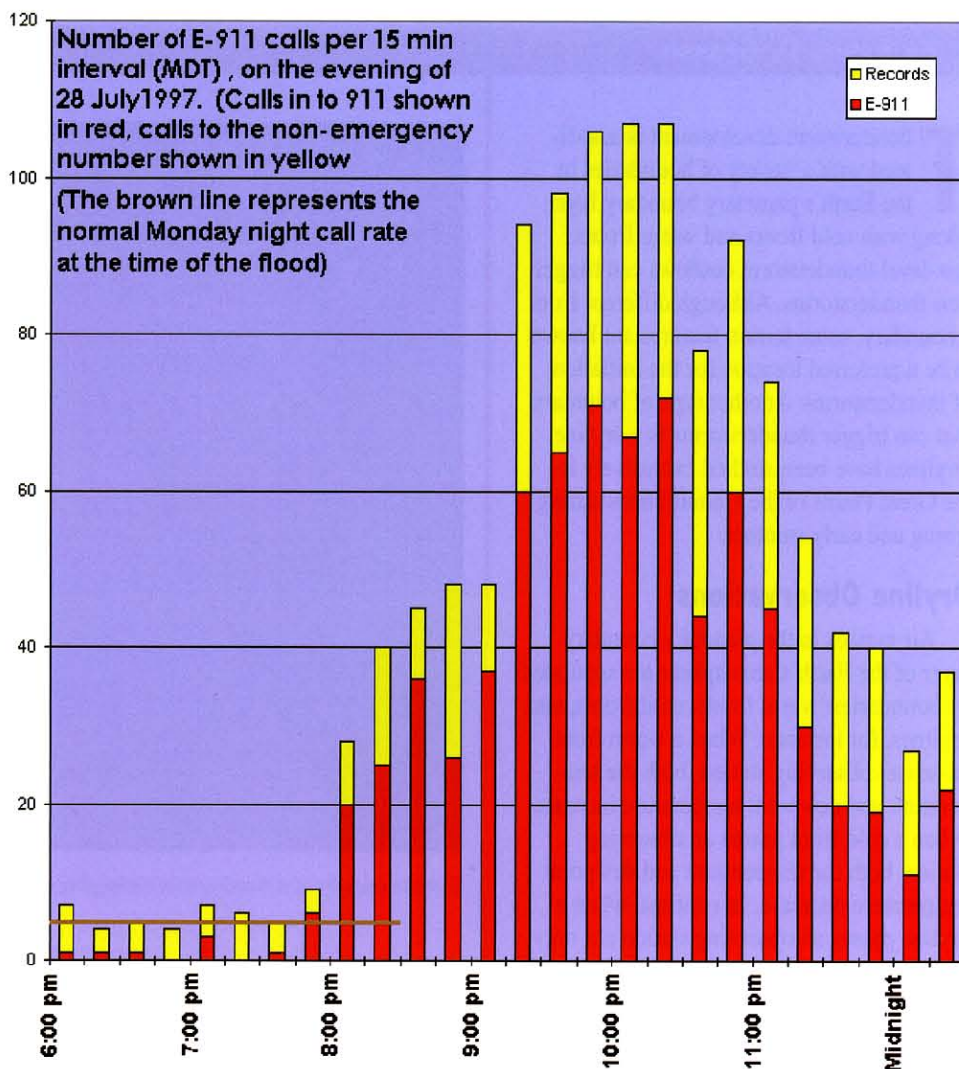
a review for dispatchers on the morning of the day of an anticipated event. As one might imagine, events occur too quickly in real-time for the system to be useful without this prior review, though the advice is available quickly in the event that a call taker forgets specifics. The system has been popular enough that the cards have been featured in several dispatch magazines to further publicize its usefulness.

Though the card system was completed in 1999, many refinements have been added in subsequent years. Also, interest in the program surged after the terrorist attacks of September 11th, and much thought was given to expanding the cards for use in other types of emergencies. Weaver has been contacted by any number of private companies asking permission to either expand the system for other emergencies, or to incorporate the system, as it stands, into whatever programs they are developing. Because the system has been in the public domain since its inception, these requests have been easily accommodated.



USAGE:

- In-Service Training.** General weather knowledge from a dispatcher perspective.
- Pre-Event Review.** To review specific problems and procedures for a day on which a dangerous event is expected.
- Emergency Directions.** A guide that can be used in real-time to answer specific questions.



Emergency call volume during the July 1997 Fort Collins flood event.

"9-1-1...What is your emergency?"
Tornadoes

There are only two (2) contingencies that necessitate E-911 response:

- Caller has spotted a tornado: refer to card "A"
- Caller has been hit by a tornado: refer to card "B"

Non-Emergency Advice (if time permits):

- You can get general information at our local emergency broadcast radio station (if available). The station is at: _____ AM.
- You can call our local non-emergency phone line (if one is set up for the incident). The number is: _____
- You can also listen to NOAA weather radio (if you have one), or get in touch with the nearest National Weather Service office.

NOTE: Types of injury associated with tornadoes: lacerations, blunt-force trauma, trapped by debris, automobile accidents, cardiovascular.

NOTE: The dispatcher is not required to ask every question in the natural disaster series. Ask only those questions that pertain to the specific call.

Samples of the 911 Dispatch Cards used in training by dispatchers to respond to callers' most frequently asked questions during emergencies and natural disasters.

"9-1-1...What is your emergency?"
Flash Floods

If the caller...

- is reporting someone (else) trapped in a vehicle: refer to card "A"
- is reporting someone drowning in a creek or ditch: refer to card "B"

If not, then ask...

Are you calling from a house (building), mobile home, or automobile?

- Calling from a flooding house, or a building: refer to card "C"
- Calling from a flooding mobile home (trailer): refer to card "D"
- Calling from an automobile (truck, van, SUV): refer to card "E"

Non-Emergency Advice (if time permits):

- You can get general information by listening to our local emergency broadcast radio station (if available). The station is at: _____ AM.
- You can call our local non-emergency phone line (if one is set up for the incident). The number is: _____
- You can also listen to NOAA weather radio (if you have one), or get in touch with the nearest National Weather Service office.

NOTE: Types of injury associated with flooding: automobile accidents, drownings, electrical shock, cardiac, blunt trauma, lacerations, and falls.

NOTE: The dispatcher is not required to ask every question in the natural disaster series. Ask only those questions that pertain to the specific call.

NOTE: If flooding has not been previously reported, you should pass the information to both the local Emergency Operations Center, and the nearest office of the National Weather Service.