

# **Integrated Warning Team Workshop Summary and Actions**

Approximately 90 emergency managers, members of the broadcast media, and National Weather Service (NWS) meteorologists gathered at the National Weather Service Training Center January 21-23 for an Integrated Warning Team workshop. The first two days included a variety of presentations which elicited lively and productive discussions with the end goal being to find better ways for the team to work better in order to gain a more proactive response from the public when severe weather warnings are issued.

The three days were broken up as follows:

## **Day 1: The Integrated Warning Team**

Most of the day was spent not only familiarizing attendees with the concept of the Integrated Warning Team. This team, made up of the broadcast media, emergency managers, and the NWS share the common goal and responsibility to keep the public safe during severe weather. By putting personal motivations aside and truly acting as a team with a shared mission and vision the team can achieve great things.

During the day the group heard presentations from an emergency manager, a television meteorologist and a NWS meteorologist where each discussed their perspective on their group's role in the IWT, the duties, pressures, constraints, challenges, and opportunities of their group, and what they hoped to get out of the workshop. It was eye-opening for many in the group to hear firsthand how each of the three facets of the IWT operates.

Capping these three presentations was a small group breakout session where groups of attendees discussed their thoughts on what mutually beneficial workshop outcomes and goals through group should strive for.

Towards the end of the day there was a presentation on how a well forecast, normally minor winter weather event turned out to have a major impact on a major metropolitan area. This talk set the stage for much of the societal impact information which would follow the next day.

## **Day 2: Integrating Meteorology and Social Science**

The second day was spent looking into how people choose to get their weather information, and why they choose or not choose to seek shelter. In the first presentation entitled, "What Weather Forecast Information do People Get, Want, Need, Use, ... ?" by Julie Demuth and Daniel Neitfeld we learned:

- Almost 90% of people surveyed get a forecast once per day and nearly 60% twice or more per day.

- The vast majority of people surveyed get their forecasts from info TV, Radio and non-government web pages
- Most people receive weather information in the morning and evening

In the next presentation entitled, “Societal Impacts of Weather: Understanding Public Response to Severe Weather Events” by Havidan Rodriguez we heard about the results of surveys following four Midwest severe weather events. Specifically we learned:

- 96.1% of those surveyed said they heard of the warning either via siren or the mass media
- Only 11.6% received info from the Internet during the last 30 minutes before the storm arrived
- 84.4% received information from TV during the last 30 minutes before the storm arrived
- After receiving the warning only 50.6% took immediate protective action
- Only 64 % ever took protective action during the hazard event
- Of those who took shelter most said either sirens or information on TV led them to take action
- 31% of those interviewed said they owned NWR
- Those polled have a difficult time understanding the difference between a watch and a warning-they understand they represent some sort of danger, but don't know the difference between the two

This presentation coupled with the previous presentation really helped underscore the need for emergency managers and the National Weather Service to look at every means necessary to feed TV meteorologists as much information in real time as possible since that is where most people get their information from. Additionally, with the high dependence on sirens, it was noted the disparate siren policy in this region should also be addressed.

The final presentation of the morning was entitled, “Communication, Communication, Communication! Message Intent, Consistency, and Effectiveness” by Gina Eosco. The presentation focused on hurricane track graphics, and drew comparisons between them, and our own watch/warning display information. Specifically we learned:

- The message the scientist is trying to communicate through a graphical display is often not the message the public receives
- You have to figure out what you are trying to communicate through your graphics, understanding or behavior. Is your goal to get the public to understand what the graphics mean, or do you want them to exhibit the proper behavior for the situation. Are we more concerned with the public understanding the difference between a watch and warning, or knowing the proper behavior during a watch or warning
- Behavioral messages should be more closely linked with verbal messages
- Message intent does not always lead to accurate understanding, nor does it always lead to positive action

During the afternoon on Day 2 the first presentation was entitled, “Societal Aspects of the 2008 Super Tuesday Tornado Outbreak” by Kevin Barjenbruch and Julie Demuth. The presentation summarized the Societal Aspects discovered during a National Weather Service service assessment following this massive tornado outbreak. Key points from this presentation included:

- Majority of people got their info from TV and NOAA Weather Radio was used, but not common
- Tornado sirens, while useful, there existed several misconceptions held by the public
- Public perception-many chose to minimize or disregard the threat because it occurred outside of the “traditional” tornado season
- People often sought out confirmation of the threat...a single source of info did not necessarily spur them to take protective action
- Many people recognized the risk, but thought their person risk was less, or nonexistent (it won’t happen to me)
- Most people who received the warning eventually did seek shelter
- Suggested local opportunities-gather impacts and socio-demographic data for local events, utilizing local academic communities for these research initiatives (build partnerships)

The second presentation of the afternoon was entitled, “Confronting Prevailing Myths about Flash Flood Warnings and False Alarms” by Eve Grunfest. This presentation summarized findings from surveys conducted in two different growing cities. (Denver, CO and Austin, TX) Key points from the presentation included:

- Main source of information during events came from broadcast media, and environmental cues
- The public felt sirens, TV, Radio, and phone were the best ways to be notified about a flash flood
- Interestingly, people preferred more warnings, even if it meant more false alarms.
- Study suggested that for flash floods, less lead time may be better (elicit a better public response)
- Outreach campaigns in Las Vegas (License plate billboards) and Phoenix (Don’t trade an hour for a lifetime) have been quite effective
- Weather information requirements of each user community are highly specialized

The final presentation of the afternoon was entitled, “Impact on Policy from Three Severe Weather Events in the Omaha area in June, 2008” by Daniel Neitfeld. This presentation provided an overview of a high wind event which was nearly identical to the May 1-2 event here in Kansas City and an overview of the tornado which struck the boy scout camp in western Iowa. Key points included:

- An unwarned tornado embedded in a bow echo occurred in the Omaha metropolitan area-led to significant public outcry and an adjustment to local siren policy
- New siren policy included:
  - When the NWS issues a tornado warning
  - When public safety official or spotter sites funnel cloud or tornado
  - When 911 receives credible reports of damage or the imminent threat of hurricane-force winds (wind greater than or equal to 74 mph)
- This new policy was less NWS product driven and more impact driven

This concluded the formal presentations. Attendees broke out into discussion groups for the entire third day. The following are a summary of action items to be undertaken following the workshop.

### **Session One on Day Three – Small-group Discussions: Improving “Internal” Communications Among IWT Members and Researchers**

#### **Immediate action goals:**

The need to ensure widespread NWS Chat usage among all IWT team members was deemed extremely important by all groups. As a result the following was agreed upon as post workshop goals:

- Achieve 90% NWS Chat usage as an IWT collaboration tool within 12 months
- Develop an NWS Chat user group to help the NWS manage and promote the chat
- Develop and conduct an NWS Chat webinar to help facilitate faster adoption of the chat

To keep keep the communications going and growing it was decided the members of the IWT should participate in the

- State Broadcaster Meetings
- Quarterly regional KEMA and SEMA EM Meetings

Other Internal IWT communication enhancement goals include:

- Maintaining current contact lists (regular and emergency)
- Finding ways to accelerate confirmed reports (may be achieved via chat)
- Video feed – NWS may experiment with Skype video feed to TV stations to aid in severe storm coverage
- Ensure communications and collaboration between neighboring forecast offices continues
- Mid American Regional Council to host followup meetings/workshops

## **Session Two on Day Three – Small-group Discussions: Improving “External” Communications Among IWT Members and Researches**

### **Immediate action goals:**

- Exploration of a uniform siren policy and do we need better public education
- Work with TV news directors in KC and elsewhere to get consistent severe weather “bug” graphics
- Getting more weather specific and warning information on KC Scout message boards – getting a meeting set up with KC Scout involving a few IWT members
- Work with local Universities to get their social scientists to conduct studies which would further educate us on how our local public responds to warnings
- PDF of Tornado Myths available for everyone’s use – Doug Barlet ([Inf905@ckt.net](mailto:Inf905@ckt.net)) has volunteered to take on this task and will be the POC

Other External IWT communication enhancement goals include:

- Production of uniform educational news releases for local, especially rural news papers
- Look into an alternative severe thunderstorm warning format or verbage for storms possessing extraordinarily strong winds (hurricane force) or large hail (baseball and greater). This could be as simple as a headline for the really high end severe thunderstorms
- Near real time notification of NWS and media when sirens are blown, and why they were blown
- More clear, and direct wording for warnings
- Investigate and promote personal notification systems like weather call, reverse 911 systems, etc
- Develop a uniform severe weather education program similar to the highly successful stop-drop-roll program for fire

## **Session Three on Day Three – Large Group Discussions: Keeping the IWT Energy and Collaboration Going**

### **Action Goals:**

- When you arrive home evangelize this information to coworkers and peers who were unable to attend the workshop. Build a local coalition and report back to Andy Bailey
- Develop measurable goals and metrics to ensure and measure progress
- Find ways to continue working with “outside” partners such as Midland Radio and others
- Followup meeting should occur by the end of March. Local connections/discussion should happen prior to this so at this March meeting we have a clearer picture of how to include everyone

- Expand MEMC siren surveys to all locations within the NWS Pleasant Hill CWA
- Ensure an accurate contact list for team members to quickly contact other team members
- Develop a list serve or bulletin board to share information and collaborate
- Use March severe weather drill as a deadline for checking in on NWS Chat and testing sirens
- Team members should consider applying for the summer WAS\*IS workshop. See [www.sip.ucar.edu/wasis/summer08/agenda.jsp](http://www.sip.ucar.edu/wasis/summer08/agenda.jsp) for more information