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THE WEATHER CHANNEL FORUM
POLICY ISSUES IN HURRICANE PREPAREDNESS
AND RESPONSE

A workshop developed by the
ATMOSPHERIC POLICY PROGRAM
AMERICAN METEOROLOGICAL SOCIETY



MEDIA ISSUES

POSITION PAPERS



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MEDIA ISSUES PANEL

Primary Focus Questions

- 1. How can hurricane forecasts and associated warnings be presented to the public in a responsible manner, thereby avoiding the “hype” problem?**
- 2. How can the media avoid conveying conflicting information about hurricane predictions and response strategies?**
- 3. What policies are needed to ensure that official public forecasts are used by the media during weather emergencies without unduly restricting the full flow of information from private sources, that is, to resolve public-private prediction issues?**

Media Issues in a Weather Emergency

Ronnie J. Goodstein, APR

Director, Pinellas County (Florida) Department of Public Affairs

When a weather emergency threatens, it is the media, both print and electronic—television, radio, and now the Internet—to which citizens look for information to help them to make critical, life-saving decisions such as whether to evacuate their homes, and when to evacuate. Emergency management officials look to these same media outlets to help them to convey their public safety messages to citizens.

I believe that central to the issue of media coverage during a tropical weather event is how to convey critical, life-saving information to citizens in a responsible, factual manner that is strong enough and convincing enough to move them to appropriate action without creating undue panic.

Most reporters are hard at work trying to do the best job they can. They care about getting their facts straight and reporting accurately. Sometimes, somewhere between good intent and the spoken or written report, however, something goes awry. How and why does this happen? Sometimes the answers are easy. Often, the answers are more complex.

While Hurricane Andrew (1992) was bearing down on south Florida, Pinellas County residents watched as miles and miles of bumper-to-bumper traffic evacuated the Florida Keys. For those who missed the beginning of the report, and those who were channel surfing, the question of who was evacuating from where remained a mystery. Concerned that what they were watching was happening in their own community, people began calling the Pinellas County 9-1-1 emergency communications center for information and guidance. This put an added burden on emergency call-takers and dispatchers and could have caused unnecessary delays in responding to actual local emergencies.

Media should avoid those instances where showing video of a localized occurrence may be perceived as part of a general trend. Examples include long lines at the home center stores, shelves devoid of bottled water in grocery stores, and so on. This is especially troublesome when people are watching nationally televised network news. One suggestion to help to eliminate this confusion would be to superimpose a graphic (and to keep the graphic up longer than the customary three seconds) as to the location being viewed, or to run a scroll. This would also be of great benefit to members of the deaf community who are watching coverage that is not being closed captioned in real time.

When Pinellas County experienced a series of killer tornadoes (1993), I received a call from one national media outlet wanting to verify the fact that we had 14 dead. I responded that I could only confirm four fatalities. The reporter repeated her statement, “But, we heard there are 14 dead, we just want you to confirm that number.” I restated that I could only confirm four fatalities. To this she responded, “Well, where did the number 14 come from?” “It’s your number,” I replied; “where did you get it?”

This reporter’s call to the Public Information Office enabled me to correct erroneous information. Unfortunately, in an effort to be first and possibly even exclusive with some information, reporters do not always take the time to check their facts thoroughly with official sources. There was a time

when the standard was to verify unofficial information with at least three sources. Understandably, this takes time. But one well-placed call to a county's emergency operations center would set the record straight.

It is also my opinion that media need to choose wisely to air only the most credible and trustworthy comments as they develop the story of a weather emergency, not just the "drive-ups" or, as some reporters call them, the "drive-bys." For those not familiar with these terms, it refers to when a reporter pulls up alongside someone, puts a microphone in his face, and says something such as, "Excuse me, sir, but I can see you must be very concerned about the impending storm by the way you're stocking up on supplies." The individuals, who want to see themselves on television, hear themselves on the radio, or see their name in the newspaper, gladly respond to the reporter's lead. The news story that follows then goes something like this: "The shelves at the home center store are almost bare as worried residents stock up on bottled water, batteries, and other emergency supplies."

Are the shelves really empty? Does one individual speak for a community? Clearly, seeing empty shelves and long lines at checkout counters and talking to store managers who say, "We're almost out of bottled water and batteries...A crowd had already gathered in front of the store by the time we opened at 6:00 a.m. and it's been long lines at the checkout counter all day" more accurately tells the story.

Tropical Storm Josephine (1996) briefly caused some concern in the Tampa Bay area before making landfall in the Florida panhandle. As Pinellas County began to feel some mild effects of this storm system, a national network reporter was doing his standup report from one of Pinellas's beaches. As he stood there with his hair blowing in the wind he breathlessly reported that winds were picking up on the beach. He was even heard to say the area around him could experience severe storm surge. Panicked callers, especially those located on the barrier islands, flooded the 9-1-1 center with questions. They were concerned and confused because they felt the reporter was indicating residents needed to prepare for possible evacuation; however, emergency management officials were not recommending they take any action.

In an effort to get the station to clarify the report, I called the news director. I was told it would not be necessary because the reporter had already left the beach because nothing was really happening in Pinellas County. They told me he was on the road, racing the storm to the Florida panhandle. He may have been gone, but the damage was done when he exaggerated and sensationalized the story, and we were now faced with the task of righting this wrong perception.

In a situation where evacuations are being ordered, it gives viewers a conflicting message to have reporters broadcasting from the very areas we are evacuating. Many members of the emergency management community remember during Hurricane Andrew an incident in which a field reporter and his photographer, in fear for their lives, sought shelter under a roadway overpass. I vividly recall when, during Tropical Storm Keith (1988), I received a frantic call from one news director desperately seeking help to get their video crew off one of our beaches where they had been told not to go and which had already been locked down.

A satellite image of a massive hurricane can appear extremely foreboding. Hurricane Floyd (1999) was such a storm, geographically several times larger than Hurricane Andrew. As Floyd approached the Florida mainland, and TV reporters compared Floyd to Andrew, residents of the

east coast of Florida flew into a panic because of exaggerated reports in the media. Thousands upon thousands fled their homes, jamming the interstate highways from Miami to Jacksonville and beyond, creating massive gridlock and unnecessarily endangering lives.

As I watched the news broadcasts after Hurricane Floyd made landfall, it was not uncommon to see a reporter wading through water while delivering his report. A common sense safety message is for people not to walk through flooded areas, because there is a strong possibility there could be downed live power lines or other dangers lurking unseen in the waters below.

Another example I experienced was while providing mutual aid for public information during the 1998 Florida wildfires. The fires raged for weeks, destroying thousands of wooded acres in several counties. Understandably the media wanted to show the flames rising some 30 feet into the air. One reporter chose to do his report while standing a little too close. With Florida's quickly shifting winds, he almost became the story.

Sometimes the focus, or angle, of a story and even its headline are determined before the story is written or are written in anticipation of the event. Tropical Storm Harvey (1999) formed in the Gulf of Mexico, threatening the west coast of Florida. Harvey strengthened to a 60-mph tropical storm about 250 miles west-southwest of Tampa, Florida. Luckily for us, Harvey took an abrupt turn toward the southeast. Residents picking up one morning paper, however, would never have known that from the headline that caught their eye above the fold—"Harvey Hits...strong winds, heavy rains and a 5 to 7 foot storm surge usher in the tropical storm." Yes, Harvey Hit, but not in the Tampa Bay area.

One reporter presented another problem for Pinellas emergency officials and residents during Tropical Storm Harvey when she combined two related pieces of information into a third and reported their conclusion as fast-breaking news. For example, Pinellas County is connected to its barrier islands and adjacent land by 16 bridges—hence bridge closures are a critical piece of information for our residents. Reporters frequently ask the question, "When will the bridges close?" Unless closures are imminent, the answer is typically when weather conditions present a hazard to motorists. Typically, those conditions include the arrival of sustained tropical storm-force winds. Reporters will then ask when the area is expected to begin feeling the effects of tropical storm-force winds associated with the storm system (for example, during Harvey, approximately 10:00 p.m.). They then extrapolate and issue the statement that the bridges will close at 10:00 p.m. It may seem to be a logical conclusion, but it is speculation until an official order to close a bridge is given. Until then, it is irresponsible to report a timetable to the public.

It is true. Weather emergencies and other disasters do not always occur at convenient times. In the case of "Harvey Hits," the paper went to print with the information available at that time. Yes, the information was accurate at the time it was written, but the headline that appeared, even in the final edition, was not supported by the story or by the event.

It is my policy never to speculate, and I advise others to do the same. How do you respond when asked a "what if" question? One response might be, "It would be irresponsible for me to speculate on that at this time." It is important that reporters know that as soon as the information is available and verified you will share it with them.

So, what can be done to fill the void of no storm information yet? Reporters are always looking for new information, new angles, and new faces to provide a supporting sound bite or quote. This is especially evident, and understandable, when electronic media begin wall-to-wall coverage. I believe it is incumbent on the public information officer to identify and to suggest supplemental story ideas, or sidebars, that would be both of interest to viewers and readers and meet the media's needs.

If you want your story to be told accurately, you need to be accessible. Thanks to the technology available to us—pagers, cell phones, 800-MHz county radio system, Internet, fax servers, and so on—connectivity 24 hours per day, 7 days per week, is easily accomplished. In Pinellas County, we make every effort to accommodate all media in their quest for information, providing access to experts who can tell the story best.

Our media room located in the Emergency Operations Center (EOC) provides the tools that reporters need to communicate directly with their editors via phone, fax, modem, and microwave links. We also consider their lighting needs, visuals, and background information, and during an activation they are considered to be part of our staff; they share meals and are housed with us. Briefings are held whenever new information is received from the National Weather Service, The National Hurricane Center and other sources. News releases are written and distributed the moment events occur that could effect our citizens' safety and well being. All official information is immediately posted on our county Web site so citizens, reporters, and concerned relatives and property owners can access the latest details concerning our county's response to a storm from anywhere in the world via the Internet. In addition, utilizing GIS technology, our citizens can easily look up their evacuation level and immediately find out if an evacuation for their neighborhood has been called.

Not everyone is connected by today's technology. That is why we immediately activate our Citizen Information Center (CIC) to answer callers' questions personally and to alleviate unnecessary calls to the 9-1-1 center. During Tropical Storm Harvey, within a 24-h period, our CIC responded to 10,000 telephone calls, and the Internet site received 12,000 queries.

In addition, prior to the start of the hurricane season each year, we host a media day. This is an opportunity for local government and the media to share information and concerns. They are also invited to test their equipment and run a live feed from inside the EOC. We work hard at building our credibility as a reliable and available information source.

It is my position that, if media and government are to act in the best interest of our citizens, we adopt the following recommendations.

For the media:

1. Use graphics and scrolls to identify affected areas. Channel surfing is a widespread practice, and viewers may not easily discern whether a story is local. It also benefits the deaf and hard-of-hearing viewer.
2. Do not speculate or sensationalize. It is not necessary to hype the story to convey the message.

3. Check your facts and use official sources. It is the right of the media, in fact it is their responsibility, to cover different points of view. However, when not talking to official sources, they should only focus on how the emergency has affected that one individual they are interviewing.

4. Talk with emergency managers about their response plans and decision making process before hurricane season. Take advantage of their media days; prepare for your coverage before a tropical weather event.

For government:

1. Meet with media representatives early on and exchange information and educate each other about your respective roles and responsibilities.

2. Official sources for information must be accessible.

3. Holding regularly scheduled news briefings may not be enough. Supply sidebar stories.

4. Be considerate of reporters' deadlines.

A weather emergency is serious business and it deserves serious reporting. Our citizens look to their media for truth. In a weather emergency, the safety of their lives and property lies in the balance. Reporting the conditions of a weather emergency with incomplete information, exaggerated predictions, nonofficial points of view, or unbalanced reporting of any kind can lead to real panic among affected citizens. Misleading information can lead to bad decisions concerning where to go and what to do during a weather emergency. Bad decisions can cost money, disrupt the flow of services, hamper the efforts of emergency services and recovery personnel, and even imperil the lives of those involved. Therefore, it is of the utmost importance that official emergency managers and disaster response agencies develop cooperative working relationships with the media, and we strongly urge the media to be careful what they say and to verify that what they say is absolutely true when telling the story of a weather emergency.

The Role of the Media in Hurricane Preparedness And Warning Response

John R. Hope

Hurricane Specialist, The Weather Channel

Most weather information in our country, including hurricane watches and warnings, reaches the public through the mass media—television, radio and newspapers. Recently, the Internet can be added to the list. Television is in the lead among these outlets. Studies have shown that at least 80% of the public depends on television as its primary source of information during hurricane emergencies. This includes information coming from the National Weather Service and from emergency management. It therefore is imperative that a close working relationship must be established and maintained among these groups, because only then can we be assured that information vital to the safety of life and property will reach the public in a timely and unambiguous fashion. A lack of coordination between agencies and organizations whose responsibility it is to warn and advise people who are threatened by hurricanes could well lead to disaster.

In the United States, television weather coverage is more extensive than in most of the rest of the world. Visitors from abroad are often astonished at the scope of weather coverage on U.S. television. It has been noted that television also has been giving increased time and emphasis to coverage of weather, especially the most dramatic events. From 1989 to 1995, the Center for Media and Public Affairs found that weather coverage was not among the top ten topics on nightly network news, but in 1996 it was eighth and in 1998 it was fourth. Many of the networks often feature stormy weather in their programming.

I have had the opportunity to see what happens in other parts of the world when there is not well-organized cooperation between warning agencies, those responsible for evacuations and other protective measures, and the media. In 1978 I led a mission to Asia sponsored by the World Meteorological Organization's Typhoon Committee. The purpose of the mission was to assess the need in each of seven typhoon-prone countries for measures and programs to reduce fatalities and damages caused by typhoons and their related floods. In each country, the National Meteorological service was well organized and equipped. Emergency management, closely tied to civil defense, appeared to be well organized and active at the national level, as was the Red Cross or Red Crescent. However, there were no media representatives at any of our meetings. It was never quite clear how emergency messages were going to reach all of those threatened. Then in 1990, I traveled to India to participate in a bilateral workshop with Indian and U.S. delegates to discuss getting timely, action-oriented warnings to those threatened by tropical cyclones. It was the first time in India that media representatives had participated in a joint meeting with those responsible to issue warnings or to take protective measures to save lives and property from approaching tropical cyclones. Although the National Weather Service of India also was highly professional and competent and could demonstrate the accuracy of its forecasts, there had been major disasters because of the failure of warnings to reach remote areas and to be acted on in a timely fashion. One got the impression that each organization involved in the warning chain had often acted more or less independently of the others. It was to seek ways to remedy this situation that our discussions were directed.

We cite these experiences to illustrate the importance of the National Weather Service, emergency management, and the media being closely aligned and coordinated—all are vital parts of the

hurricane warning service. The National Weather Service and emergency management at all levels must be prepared to work with the media, to be always frank and open, and never to appear to be taking actions that cannot be shared with them or the public. In this day of the electronic media, spokespersons must be chosen carefully. They must be knowledgeable, authoritative, articulate, and available at reasonable intervals. If such persons are not at hand, the media assuredly will find someone else with which to talk and to quote.

What, then, should we ask of the media? In the case of reporters, we would hope that management would select their best for these assignments. These people should be well versed in the nature of hurricanes and their consequences. They need to be aware of limitations in the National Hurricane Center's ability to predict precisely the landfall strength of a hurricane, and when and where the eye will reach land 24–48 h in advance. Knowing that, they can understand why hurricane watches and warnings must cover a wider area than is likely to be impacted severely. The media needs also to understand why some areas need to be evacuated and others do not, and who has the authority to order or to recommend these actions. The public depends on the media to help them with evacuation routes, openings and locations of Red Cross shelters, and a myriad of other actions that might be required in a hurricane emergency. The public does not need to hear from the media any second-guessing as to whether the evacuation orders are justified by the threat—at least not until the hurricane is past.

Of course, much of the work can and should be carried out before the hurricane season ever begins. Radio, television, and newspapers are of enormous help in preparing the public for the upcoming season. Specifics concerning evacuation routes, shelters, vulnerable areas, and so on reach most of the public through the special editions newspapers publish each year and through the brochures and tracking charts that many radio and television stations distribute. Most television stations and the national networks air programs near the beginning of each hurricane season to educate the public about the threat and measures that need to be taken to mitigate the damage and risk to life that accompany these storms. All the standard rules for action in the threat of a hurricane landfall need to be reiterated often, and it is largely up to the media to do this. We believe also that the media should be taking a hard look at building codes within their areas. We know that structures can be built with comparatively little extra cost that will withstand even major hurricane-force winds. Much can be done to retrofit existing structures to withstand hurricane winds. The public needs to be advised through the media that all windows must be secured because, when they fail, there is a much greater likelihood that other structural failures will ensue. The media needs also to explore the wisdom of building in the coastal or inland flood plain, especially in areas where there has been multiple rebuilding of structures destroyed in floods. These costs are borne at least in part by taxpayers, because flood insurance is heavily subsidized by the Federal government.

When a hurricane is about to strike, we would appeal to the media to be as factual as it can be, to avoid hyping, and to know to whom to turn for information. It must clearly be understood that the National Hurricane Center is the sole source for hurricane watches and warnings, and it is extremely important that all media relay these to the public in a timely manner. To do otherwise would be to sow confusion and lead to inaction and chaos. Those covering hurricanes from the media need be aware of who is issuing the evacuation directives, that is, either state or local emergency management, and they should be sure that their viewers, listeners, or readers also know this.

In this connection, it is our understanding that there may be some changes during this hurricane season in evacuation policies. There seems to be a consensus that too many people are evacuating and attempting to travel too far. Some are fleeing the wind as well as the water. If not in danger from flooding, we concur that most would be better off in their own homes as long as those homes

are not mobile homes, are well-constructed, and are properly protected. If such a policy is adopted, it will fall mostly to the media to explain it publicly.

So far in our discussion, we have been concentrating on the role of media reporters. There is another aspect to the story, and that is the fact that many media outlets, both local and national, have their own meteorologists. Many of these are highly trained and competent. Furthermore, with each passing year they have been able to acquire more and more of the data on which the National Hurricane Center bases its forecasts. At this time, meteorologists in the private sector are able to evaluate all the global models and special hurricane forecast models in real time. The Internet has played a big role here by making huge amounts of data available to all at little or no cost to the users. No one can say that the track and intensity forecast issued by the National Hurricane Center in a given instance is going to be better than one issued by a private organization. However, that is not the issue, nor should it be. Anyone who has forecast hurricanes for many years can remember forecasts that turned out very well and others that they would just like to forget. The National Hurricane Center is not infallible, and neither are the forecasters from any private group. We know that television is a fiercely competitive business, but we do not believe that it is proper or ethical to attempt to enhance one's competitive position by publicly citing instances in which one organization outperformed another. The problem becomes more acute when we realize that some television meteorologists, especially in local markets, who "go their own way" have extremely high credibility with their viewers and are going to be relied on more than the National Hurricane Center or anyone else.

It is all very well to assert, as some private organizations have, that if they broadcast the National Hurricane Center's watches and warnings, it is their right and their obligation to display a forecast track that differs from the "official" forecast track if that is what their analysis indicates. However, because the hurricane watches and warnings and evacuation directives are based primarily on the official forecast track, the alternate track would suggest that some within the warning area would not need to be warned, while others in danger would be under no warning. Certainly such a scenario would add another layer of confusion to an already chaotic situation. We do not wish to dispute the right of the private sector to issue weather forecasts. Indeed it is estimated that 85% of weather forecasts that reach the public are supplied by the private sector. We are troubled only by this issue of hurricane forecast tracks because it is so closely tied to hurricane watches and warnings. This issue perhaps is one of the most thorny this forum is being called on to address.

Can there be a solution to this dilemma? There is no legal prohibition against any private meteorologist or organization issuing its own hurricane track and intensity forecast. Some hold that it is a right guaranteed by the basic law of the land, the very constitution itself. If any solution is to be found, we believe that it must start with more and better contacts between the public- and private-sector meteorologists, carried out in a spirit of good will and mutual respect for one another. As the hurricane warning service now functions, there is much coordination going on between the National Hurricane Center and National Weather Service offices within the threatened area and also between these groups and appropriate emergency management centers. This is accomplished through the hot line, which connects all these groups. Meanwhile, private meteorologists who are part of the media are not privy to these discussions and do not know what is being decided until the hurricane advisories are issued. It needs to be said here that forecasters at the National Hurricane Center are most willing to discuss their thinking with private-sector meteorologists as time permits and phone connections can be made. As advisory time approaches, however, it is next to impossible to get a phone connection to the National Hurricane Center. We suggest that NOAA and the National Weather Service consider allowing private meteorologists within the watch and

warning area and those from national networks to listen to the coordination discussions. These are issues that we would like to see this forum address.

Bearing in mind that the hurricane warning service is almost totally dependent on the media to get its messages to the public, we have discussed the media issues that we consider the most pressing as we enter a new millenium. My viewpoints have been formulated during twenty years at the National Hurricane Center and the past eighteen years at The Weather Channel. We hope this forum can reach a consensus that will benefit all of us.

Media Issues: Position Paper

Robert T. Ryan

Chief Meteorologist, WRC/NBC, Washington, DC

The panel has been asked to consider how “the media” can provide “accurate responsible information that will assist the public to prepare for and respond appropriately to the ‘official’ hurricane response decisions.” The media issue primary focus questions also ask about reducing “hype,” avoiding “conveying conflicting information,” and assuring that the official public forecasts are used. The overall tone of the panel guidelines implies that the media should be more “responsible,” that forecasts and decisions by emergency management have not been responsibly presented by the media, and that the media’s role is to disseminate “official” forecasts and directives for public response.

Hurricane preparedness and response to minimize loss of life requires cooperation, coordination, and communication between the three groups represented by the workshop panels. These underlying themes (cooperation, coordination, communication) really involve the three groups (forecasting, media, emergency management) working *together* to accomplish the goals of the workshop. This workshop should only be the first step toward a cooperative working relation. I believe too often the media is viewed as being outside hurricane preparedness/response issues. Decisions are made at the government level (Federal, state, local) and the “media” are brought in and essentially asked, “How can we help you to disseminate and to explain what we have decided?” The media, at least the broadcast meteorology media, should be involved in the decision-making process early on. Let me give an example.

Regular hurricane statements from the hurricane center (the “official” statements and forecasts) give the distances of storms from Atlantic and Caribbean islands (“Hurricane X, 500 miles east of Barbados”) when storms are well offshore. Why not also include distances from the U.S. mainland to give the U.S. public a better sense of how far the storm is from them? Statements that also give a historical perspective of the likelihood of storms at particular locations ever reaching the United States would also be useful to the public. Statements such as “Storm X is at ... but over the last 50 years only 5% of hurricanes in this area in August have ever made landfall on the U.S. mainland” would be helpful to allay public fear.

I believe the forecasting community can and should work *cooperatively* with the broadcast meteorology to make all the information presented to the public more responsible. Official statements that help to allay fears can be as important and helpful as official statements that require public action and possible evacuation. If the overall theme is responsible statements *by all* I think the public will be better served and the question of media “hype” would not be viewed so much as a “problem” by the forecasting and emergency management community. The media did not order the largest peacetime evacuation in U.S. history last year. What lessons have been learned from that? Do we know how many injuries or deaths there were from traffic accidents as a result of the evacuations? Is asking people who chose to stay in vulnerable areas the names of their next of kin responsible or hype? Has the forecast and emergency management community done postevent surveys with “focus” groups to see how many would voluntarily evacuate this year should a storm similar to Floyd parallel the coast? What is the tradeoff between perceived overreaction and resultant potential underreaction for even more dangerous events in the future? Again, I believe the media and especially the broadcast meteorology community could have useful ideas and input, such as the above, to the forecast and emergency community.

?? Each local forecast office in any area that might be affected by hurricanes or hurricane-related life-threatening weather (inland flooding, tornadoes, high winds, etc.) should be required to hold regular workshops that would include local TV and radio news directors and/or local broadcast meteorologists/weathercasters and emergency managers to work on the same issues addressed at this workshop. This *should not* be a “meeting” along the lines of how can the media help us to get the official word out. Again, the theme should be coordination, cooperation, and communication—two-way communication. The three groups involved in this issue can all learn something from each other to serve the public better and cooperatively.

Question number two for this panel suggests the media give conflicting information. The news and weather information business is an extremely competitive business, but I know of no news organization that will intentionally give out conflicting information at a time of danger when public response is needed. All media, news, and broadcast meteorologists should pass on official weather warnings and evacuation decisions. This does not mean that experienced broadcast meteorologists should not provide additional interpretative information or accept the “official” forecast and track as being the *only* information that should be disseminated. Similarly it is the function of the news media to get further information, even during weather warnings, and, for example, to question whether the evacuation of more than 2 million people is necessary each time there is a threat similar to Floyd.

To alleviate any fears that official hurricane prediction and response information is not reaching the public, the EAS could be activated and it could be required that the official hurricane prediction be given on any broadcast when there is an imminent danger to life and property. Local forecast offices or the Director of the National Hurricane Center could write a “letter of concern” to all radio and TV stations in hurricane-prone areas outlining concerns that the official forecasts be given along with local information to best assure public response. Local meteorologists are certainly free to write critical letters to the media or broadcast meteorologists/weathercasters who they feel have endangered public safety by giving conflicting information or by not providing the official forecast and track information. The American Meteorological Society can and probably should develop guidelines for AMS Seal holders that would deal with the responsibility to present the official forecast as well as information the experienced professional broadcast meteorologist feels is most useful in helping the public and in helping in the response and decision-making process. Future Policy Statements by the Society should also address the public–private issues in hurricane intensity and track forecast information.

If there is significant uncertainty about a specific hurricane prediction, the media should not avoid giving this information. Information that the hurricane forecast is very uncertain and there may be conflicting information is useful information. The public should be told to stay informed to learn what the latest and higher-confidence forecast is. The more useful, responsible information the public has during weather emergencies, the more likely they are to make informed decisions. Information items such as strike probabilities, track trends, storm strength trends, and storm wind fields are examples of important information that should be conveyed to the public so they can become informed participants in the decision-making process. There may be some “conflicting” information in this but I believe it will still be helpful to the public. We do not serve by the public well by knocking on the door and saying, “You’ve got to leave now or tell me your next of kin.” How many meteorologists were among the 2.6 million people evacuated along the Florida, Georgia,

and Carolina coasts last year? With more information we all can make and participate in informed decisions.

?? Again, regular *local* workshops in which all participants listen, communicate, and have a sense of cooperation rather than conflict will best serve the public. Without regular communication among the three groups represented at this workshop, conflicts will continue to exist.

I don't believe any policies are needed to ensure official forecasts are used by the media. As outlined above, there is much we can do cooperatively, professionally, and as concerned individuals to ensure that we reach the common goals of providing the most timely and accurate forecasts and information to keep the public informed and to allow them to respond to emergency events. The use of the Internet as a medium for public information continues to expand rapidly and to present great opportunities for dissemination of official forecasts. The National Weather Service should ensure that the forecasts and products from the hurricane center are always easily available. During Dennis and Floyd it was very difficult to get to the NHC site. Very localized maps and diagrams showing storms' forecasted impact (rainfall, winds, and storm surge) would greatly help with *informed* public response. Local forecast offices should have deadlines just as the media does for issuing updated forecasts and warning information. Regular scheduled updates on NOAA weather radio and through the Internet at times the public would know about and could expect (as local news programs) would be an effective way of officially communicating with the public. Local models such as CAPES could be adapted to have outputs viewable on local NWS Internet sites so the public could "see" the forecast impact and be more likely to take action if necessary. Such outputs in an easily viewable/useable format would be more likely to be used by local media. Again, communication between the forecast community and the media could determine what works best, at what times such visuals would be used, and so on.

The entire meteorological community, public and private, wants to reach the goal of this workshop. Working cooperatively in a coordinated effort with real communication I believe we can better inform, prepare, and have the public respond to future hurricane and tropical storm threats.

Position Paper for Media Panel

Jack Williams

Weather Editor, USATODAY.com

In recent years, the word “media” has come to be a synonym for television, although it is shorthand for “news media” and could include newspapers, magazines, radio, and the Internet, especially the World Wide Web. It’s easy to see why most of the time those who talk about the media are really talking about television. Radio and then television long ago replaced newspapers as the source of last-minute news. The media have replaced “the press.” I am sure our focus in the media discussions here will be on television. That focus is not misplaced.

Even as we focus on television, I can envision television as we know it eventually seeming as quaint as newsboys running down the street shouting “extra, extra,” to sell newspapers that came out in several editions a day when big news was breaking. Sooner or later, maybe sooner, the Web is going to become the dominant medium.

I’ve been spending most of my working time the last five years with the USA TODAY Web site. I am the first to tell you that the Web today is probably at the stage of development that television had reached in maybe 1950. Eventually, however, the Web will solve its bandwidth and other problems, and traditional television will begin fading.

Let us look at someone who wanted the latest information about Hurricane Floyd when he or she woke up around last September 15. (This is based on my experience.) You would turn on the Weather Channel and see a Michelin tire commercial. Turn to Channel 4 here in Washington and you would see a Today Show interview with an actor whose IQ number would make a comfortable room temperature. Log on to your computer and brew a pot of coffee while waiting for the Web to download.

When the new, truly fast Web arrives and it becomes a real mass medium—snatching the term “media” from today’s television—people such as John Hope and Bob Ryan will not have to worry about being sent off to the redundant, old newsboys’ home.

Instead, viewers will click a button on a screen and call up the latest on the storm presented by John or Bob or another weathercaster that they have grown to trust. The picture will be as good, or better, than today’s TV picture. The weathercasters will use their professional meteorological and communications skills to help viewers to decide what, if anything, to do about the storm. The human face and voice, especially when the human knows what he or she is talking about, can communicate much more than words on a screen can.

Viewers would click another button to find information such as the latest, detailed wind, surge, and freshwater flooding forecast from the National Weather Service—maybe enhanced by the Web site or its weather provider to make it easier to understand. It should be an accurate reflection of what the National Hurricane Center is saying. Another button would take viewers to the regularly updated Web site of the local emergency management office. Here they would find information such as detailed maps of areas the storm is threatening, showing what areas should be evacuated and which are safe for those above the likely surge or freshwater flood zone and who are also in a hurricane-resistant building.

The emergency management Web site would show the latest information on evacuation routes and how long they are likely to stay open, maybe even which service stations are still open with power to pump gas. After a storm hits and moves on, viewers should be able to go to the Web to find accurate and detailed information on what damage was done to various areas, including information on when it will be safe to return to evacuated areas and what has happened to hotels, motels, and other tourist facilities in the areas the storm hit.

As we talk about the media today with mostly television in mind, we should be thinking about how what we say would apply to the Web that is on the way. Our suggestions should apply to the Web that we have today and to other news media, including the press.

Here are some comments on the media issues listed with the “Primary Focus Questions” those of us taking part in the media panel were asked to address.

1. How can hurricane forecasts and associated warnings be presented to the public in a responsible manner, thereby avoiding the “hype” problem?

One problem faced by all news media is that even accurate reporting often turns out to seem like hype after a storm hits and the damage is assessed. With Floyd, for instance, the storm was accurately reported as having 150 mph winds when it was east of the Bahamas. By the time it hit North Carolina it had weakened to a Category-2 storm. Until soon before hitting land, however, Floyd was a Category-3 storm and was accurately described as such. Floyd’s actual effects did not jibe with the way the storm had been described during a good part of its life. At the time they were made, however, the descriptions were accurate, yet the result was a feeling by many people along the coast that the storm had been hyped.

The solution to this problem may be to remind viewers and readers as we are reporting on a Category-4 hurricane at sea that storms often weaken before hitting land. There is an obvious tightrope to be walked here. You want people to be alert and ready to take appropriate actions, yet you do not want them to feel like they have been victims of hype after the storm hits without causing Andrew-like damage or bringing a Camille-like surge to wide areas.

The news media could also strive to make it clear that even if a hurricane hits land as a Category-3 or -4 storm, only a relatively small part of the area affected will experience the winds that make a storm a Category 3 or 4. Viewers and readers could be told that while not everyone is going to experience the storm’s worst, it is not possible to say ahead of time exactly where the eye wall with its strongest winds will hit.

We can wonder, however, how effective attempts to communicate such relatively subtle points will be when we know that our audiences include many people who do not know the difference between a tornado and a hurricane. Does the need to communicate the fact to these people that hurricanes are huge storms conflict with saying these huge storms are not uniformly producing winds at the speed we use to rate the storm?

In e-mails sent to many of us taking part in these discussions, Bob Sheets stressed that too many people are being evacuated from storms. Floyd certainly made that point. I will not try to get into the forecasting and emergency management aspects of Bob’s comments, because I am sure that they will be addressed by other panels. Bob does raise an important point for the news media to consider: how can we help make the point that even in the city or county in which a strong hurricane is going to hit, everyone does not need to evacuate? Those who evacuate without needing to could feel like they were victims of media hype.

On the other hand, how does the mass media convey rather subtle ideas (for those who do not understand hurricanes) such as the storm surge will be much weaker to the left of the eye than to the right? This is one area where the Web could be a powerful communication tool. Commercial Web sites, working with the National Hurricane Center and emergency management offices, could come up with ways to post somewhat detailed maps showing the actual surge threat to the different parts of an area being threatened.

In the early 1980s, the National Hurricane Center began using probabilities to characterize more accurately the danger that a particular storm represents to specific parts of the coast. For people who understand probabilities and how to use them to make decisions, this is a real advance. Wise use of probabilities should be a good way to lower the hype factor in our reporting of storms, and I know many weathercasters and reporters try to use them that way. Still we can wonder how effective probabilities are as a communications tool. How well does a big part of our audiences understand probabilities? I recall reading about a recent survey that found a good many people see lottery tickets as the only way to guarantee retirement income.

In the final analysis, the best hope for reducing hype in stories about hurricanes and other kinds of news will be a realization by the news media that a reputation as a reliable source of news has a bigger payoff than a reputation for hype. I think those of us in the weather media, as well as meteorologists, emergency managers, and others who are concerned about this issue, should be quick to criticize hype in hurricane coverage when we see it. Television critics do this from time to time, but their criticism can often be ignored because it is often uninformed.

2. How can the media avoid conveying conflicting information about hurricane predictions and response strategies?

I am curious about just how much of a problem this is and I hope to hear of some cases that illustrate it. Because I have had no personal experience with the problem—even as a media consumer—what I have to say is theoretical.

The first line of defense against the media conveying conflicting information is to ensure the media receive official forecasts and emergency management information in a form that is easy to understand. In my experience, the National Hurricane Center is the leader among governmental meteorological services around the world in making information available to the public. The Center's tradition of engaging the public goes back to Grady Norton in the 1940s, and, from what I have seen, each director since then has kept the tradition alive.

Other agencies could follow the Hurricane Center's example. Our discussion is mostly about Atlantic Basin hurricanes. Working on the Web has made me aware of the needs of people in other parts of the world for reliable, understandable information about tropical cyclones. We have received e-mail from U.S. military families around the western Pacific who were desperate for some information about a typhoon they had heard about, and we have received e-mail from people in Australia and South Africa who wanted information about cyclones they had heard about. I do not think anything we say here is likely to affect the Australian and South African meteorological services, but maybe we could get word to the U.S. Joint Typhoon Warning Center that it needs to improve its presentation of typhoon information on the Web, following the lead of the National Hurricane Center.

I have little direct experience dealing with emergency management agencies because all of my work on hurricanes has been with USA TODAY, which as a national newspaper does not try to cover any location in detail. Obviously, each emergency management office should strive to ensure the news media in its area has the information needed for prestorm education. Emergency managers should also work with local media to ensure the public receives authoritative information during storms.

Although USA TODAY is a national news medium, we have been linking to local emergency management offices and local NWS offices during hurricanes to add to the information available to our readers. We have found that some state and local emergency management Web sites are treasure troves of useful, up-to-the-minute information. Other agency Web sites are merely online brochures that show us how handsome the director is and what great things the agency is planning to do. Imagine how disappointed residents are when they go to their state's or county's Web sites during a storm such as Floyd and find it was last updated a month before. We find local NWS offices are generally good sources of information, but because each NWS office is following its own Web design star, finding the information you want as you go from site to site is often a challenge. The NWS should standardize the design of local Web sites, making sure all offices post certain kinds of information.

The first step any news medium should take to ensure reliable hurricane information is to have competent reporters who have prepared themselves to cover a storm that threatens their community. Reporters should know where to go for authoritative information and should have made arrangements for obtaining information during the chaos of a storm.

Even though many might wish otherwise, the First Amendment probably does not allow governments at any level to make rules that would hold the news media to a certain level of competence. In other words, freedom of speech includes the freedom to make a fool of yourself and to mislead readers and viewers.

However, in a few meetings, I have heard Bryan Norcross, who I believe is now with Channel 4 in Miami, propose that in order to stay on the air during an emergency, a broadcast station would have to show that it was competent to cover the emergency. I am relying on my memory of what I have heard Bryan say; I do not know the details. He does raise an interesting point. How far should a broadcast station, which is licensed to use certain frequencies, be required to go to serve the public? I am very interested in what those who know much more than I do about broadcasting have to say about this.

3. What policies are needed to ensure that official public forecasts are used by the media during weather emergencies without unduly restricting the full flow of information from private sources, that is, to resolve public-private prediction issues?

Again, I have heard of conflicts between official hurricane forecasts and those from private sources, but I do not know enough about any of the particular cases to talk about them. This question, like the one above, raises First Amendment issues. However, even if we did not have the First Amendment, we could ask whether we would want to restrict who could release forecasts about hurricanes.

Why would we want to let anyone make hurricane forecasts? Many of you have probably read *Isaac's Storm* by Erik Larson. The book is the story of Isaac Cline, who was in charge of the Weather Bureau office in Galveston when the 1900 hurricane killed more than 8,000 people. Part of the story is that Cline and others in the Weather Bureau did not know as much about hurricanes

and storm surge as they thought they did. The part that is relevant to our discussion here is how the Weather Bureau in 1900 ensured that forecasts and other information about the storm by Cuban meteorologists would not be sent out on the telegraph lines. The Weather Bureau “knew” that the storm would recurve after hitting the Florida Keys and presented no danger to the Texas Coast. The Cubans, using methods pioneered by Father Vines, had a clearer idea of where the storm would be likely to go. Even if the Cuban forecasts had been allowed to go out, it probably would have made no difference in 1900. Still, we could wonder: what if a newspaper in Galveston had picked up the story that Cuban meteorologists were saying a hurricane could be headed toward Texas? Would this have made people in Galveston more aware of what might be going on when the large waves started crashing ashore? Would more of them have crowded on the trains to the mainland before the storm cut the rail line? We will never know. We do know, however, that the government is not the font of all knowledge. From time to time the freedom for anyone to tell a government agency it is all wet pays off. I have no fears about the current National Hurricane Center slipping into a state like that of the Weather Bureau in 1900. However, who knows what will happen in the future?

If we want to keep freedom of speech for those who disagree with the National Hurricane Center, what do we do when a forecast goes wrong and either causes an unneeded evacuation or, even worse, encourages people to stay put in a place that ends up under 15 feet of storm surge?

Those who think the forecaster did something wrong should yell and scream and call the media in to describe what happened, naming names and giving times, dates, and details. Names are necessary. Talking about the problem in abstract terms as we are here would put any news director or editor to sleep. Has a director of the National Hurricane Center or the head of the NWS ever called a press conference to say that a particular private forecaster or forecasting firm confused the public by issuing a forecast that caused an unneeded evacuation? Has an article about such a forecast, which names names, been published in an AMS journal? I do not recall any such cases, but maybe it has happened. Does a fear of being sued keep people from speaking out? American libel laws are extremely liberal in comparison with those in nations such as the United Kingdom. In general, the truth is a defense against libel in this country. Anyone who takes care to get the facts and writes only the facts should be on solid ground. Some, maybe many, lawyers would advise you not to publish something that could lead to a lawsuit. Good libel lawyers, such as those at my company, take the attitude that their business is to help editors work out the best way to publish important stories that the lawyers will be able to defend against libel suits. If conflicting forecasts are a big problem, I think the only way to address it is with vigorous criticism of those responsible, including hard facts about the consequences of the conflicting forecast and the names of those responsible.

In summary, the meteorological and emergency management communities can help to ensure better, lower-hype, reporting about hurricanes by supplying easy-to-use, accurate, and up-to-the-minute information. Using the Web will help not only commercial news Web sites. Today, traditional media such as television and newspapers rely on the Web as a research tool. As the Web becomes a more and more important source of information, forecasters and emergency managers should be looking for better ways to use it. Forecasters and emergency managers should also not fear speaking out when any news medium makes their jobs harder with hype or conflicting information.