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Riding Out the Storm

The Vital Role of Local Radio
in Times of Crisis

An Arbitron Special Report Investigating the Impact
of the Hurricanes of 2004

February 2005

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Overview: The Storms and the Study

Between early August and late September of 2004, both coasts of Florida and the gulf coast were hit by a rapid succession of hurricanes. Charley, Frances, Ivan and Jeanne were most devastating to residents and caused a great deal of disruption locally. It was the most destructive hurricane season in the history of the United States.

Radio stations stayed on the air when physically possible and provided vital information and comfort to residents in their time of need. In many cases, while millions of people were without electricity, radio proved to be their only source of information. Radio managers and program directors worked around the clock to provide the best information to their listeners regardless of their regular format—all the while ensuring employees got the chance to prepare their homes for the impending storms.

In the aftermath of the storms, after the cleanup had begun, many in the radio industry wondered what sort of impact these hurricanes had on radio listening and the radio survey process in general. Another question also hangs in the air: In a world of high-tech weather maps and instant radar information, is radio still vital in emergencies? This study addresses those questions and many more about how listeners in markets most affected by the storms use radio and feel about media during a hurricane.

In the wake of unspeakable natural disasters around the world, now more than ever, radio stations need to be prepared to deal with possible natural disasters in their own regions. Arbitron believes that this study will better prepare radio for such a situation.

About the Study

***Riding Out the Storm* is designed to:**

- Examine radio listening and changes in markets affected by the hurricanes of 2004
- Explore listener perceptions and usage of media during hurricanes
- Get feedback from radio stations about how they handled the storms
- Summarize Arbitron's survey practices and how they adapt to events as far-reaching and disruptive as a hurricane

Data analyzed:

- Day-by-day and hour-by-hour ratings from Summer 2004
- Diaries from the Summer 2004 survey, and comment and day pages from the Summer 2004 survey and Phase 1 of the Fall 2004 survey
- Online survey of 48 program directors in markets affected by the 2004 hurricanes
- Perceptual study of 570 diary consenters from the Fall 2004 survey in markets most affected by the hurricanes of 2004. Telephone interviews with these diary consenters were completed in early December 2004. Topics included which media they used and which they preferred during the hurricanes.

Arbitron would like to acknowledge that the hurricanes of 2004 impacted many areas in the country with varying degrees of damage. The markets analyzed in this study were chosen because they received the most direct impact from the storms. Other Florida markets also received a direct hit from these storms but were not in survey for the Summer 2004 ratings period.

Headlines from the Study

One of the main questions regarding radio and hurricane coverage has to do with radio in the context of other media. With Web sites designed to give ultra-specific radar coverage and tracking maps, and television providing Doppler radar images and reporters on the scene, is radio still vital in a natural-disaster situation?

The answer is an overwhelming “yes,” and the place radio occupies in a natural-disaster crisis is held by no other medium. Radio’s portability, local information and battery power are unmatched once the storms hit and electricity goes by the wayside. Although television is the medium of choice when a storm approaches, once the storm arrives, radio still rules.

Here is a brief summary of headlines from this study:

- **When the lights go out, the radios go on.** Radio audience estimates increased in most cases once the storms made landfall and listeners experienced power loss. The perceptual study, diary comments and audience estimates all support this. Since 86% of people lost power during the storms, radio became invaluable.
- **While residents waited for the impacts of the storms, television was their medium of choice.** They felt television had the most up-to-date information.
- **Radio audiences are biggest during or after the storm hits, not before.** In many cases, radio listening was flat or dropped in the days before impact, and then increased significantly as the storm began to make landfall. Many listeners were preparing their homes for the hurricanes and watching television to get information as the storm approached.
- **Radio was the #1 choice for a source of information during the storms.** Although listeners preferred television in the preparation stages, 51% of them said radio was their medium of choice during the storm. Radio was the top choice because it is battery powered, portable, and has a dependable signal.
- **The more local the information, the better.** Listeners felt that much information pertained to large metro areas and excluded smaller communities within the coverage area. This is a perfect opportunity to take advantage of traditional radio’s unique local strength.
- **Portable, battery-powered radios were preferable to battery-powered televisions.** They were more portable, conserved batteries better and had more dependable signals.

- **Many radio stations simulcast with News-formatted radio stations or television stations, but only for one to three days on average.** Through diary comments and the perceptual study, it was clear that listeners understood the need for simulcasting and viewed it as media outlets working together to provide the best information for residents.
- **Listeners were loyal to their usual stations.** Of those using radio as their primary information source, 58% listened to their usual station.
- **Radio did an outstanding job providing information during and after the storms.** Diaries and the perceptual study both revealed that listeners were grateful for the service radio provided during the weather crisis.
- **Diarykeepers return diaries, even in natural-disaster situations.** Arbitron survey respondents who consented to keeping diaries did so even during the storms. Consequently, response rates did not show a decline in many markets during the emergency. Listening locations included “shelter,” and notes on day pages included apologies that diaries were late due to evacuations.

The Hurricanes

The Storms

	Charley	Frances	Ivan	Jeanne
Landfall Day	Friday, 8/13/04	Sunday, 9/05/04	Thursday, 9/16/04	Sunday, 9/26/04
Approximate Time of Landfall	4:00PM	12:00AM (Saturday night)	3:00AM	12:00AM (Saturday night)
Impacted Markets Used for This Analysis	Orlando	Miami Tampa West Palm	Mobile	Data now available with the Fall survey release

Source: National Oceanic and Atmospheric Association (NOAA)

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The following is a summary of each hurricane followed by observations about radio listening. Although each of these storms impacted many markets, only markets measured in the Summer were in survey at the time the first three storms struck.

“Landfall” is a term used to describe the time period when the eye of the storm comes ashore. The following charts refer to “landfall day” as the

day that the eye of the storm came onto land. Keep in mind that the storms can cause severe damage in the hours before landfall.

Hurricane Charley

Charley, a Category 4 hurricane, made landfall near Ft. Myers, FL, around 4:00PM on Friday, August 13, 2004. Charley was the strongest hurricane to hit the area in more than 40 years. Charley left at least 10 United States casualties in its wake. It was the second most costly hurricane in American history. Orlando was in the Summer survey for Arbitron at the time of the storm.

Hurricane Frances

Hurricane Frances, a large, slow-moving Category 4 storm, battered the coast near Ft. Pierce and West Palm Beach on Saturday, September 4. The eye of the storm hit shore around midnight, Saturday, September 4—Labor Day Weekend. For the purposes of this analysis we will consider landfall day to be Sunday, September 5. Frances was only three weeks behind Charley. There were more than 20 casualties in Florida. West Palm Beach, Miami and Tampa were in the Summer survey for Arbitron at the time of the storm.

Hurricane Ivan

Hurricane Ivan was a Category 4 storm when it made landfall after 2AM on Thursday, September 16, near Gulf Shores, AL, and it arrived only two weeks after Frances. There were more than 50 American casualties associated with Ivan. Baldwin County, AL, and Pensacola and Ft. Walton, FL, were hardest hit. Mobile, AL, was in the Summer survey for Arbitron at the time of the storm.

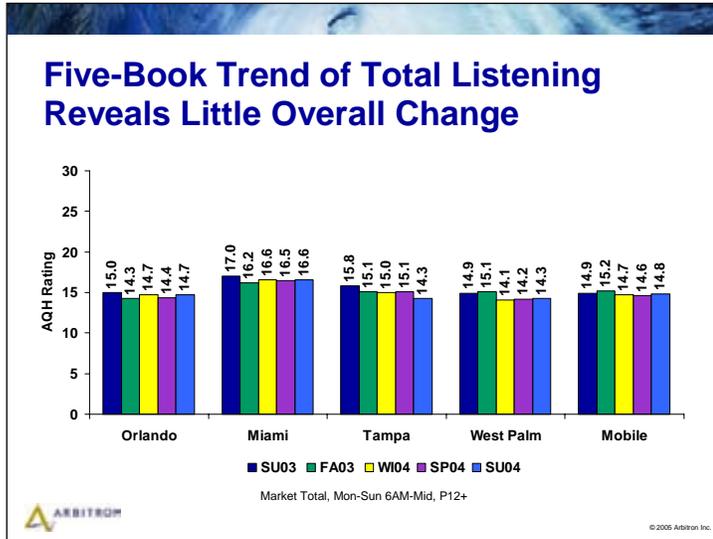
Hurricane Jeanne

Hurricane Jeanne was a Category 3 storm when it slammed, September 26, into the east coast of Florida only 20 days after Frances had hit in almost the same spot. This storm affected many markets that were in Phase 1 of the Fall 2004 survey. Complete data for those markets were not available when this report was written.

Insured losses as a result of the four storms will most likely exceed \$22 billion. Total losses are expected to top \$40 billion.

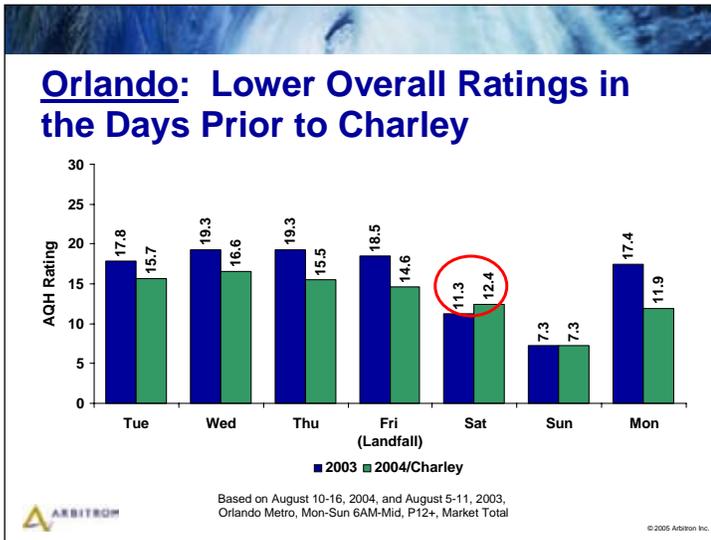
Radio Listening During the Storms

Due to the innumerable programming changes and simulcasts during the time of the storms, it is impossible for Arbitron to draw conclusions about which specific changes resulted in ratings shifts. Overall changes are noted, and the information provided is as detailed as possible. Please refer to the “What to Do When the ‘Event’ Book Comes Out” section of the study for ways to analyze your station’s performance.



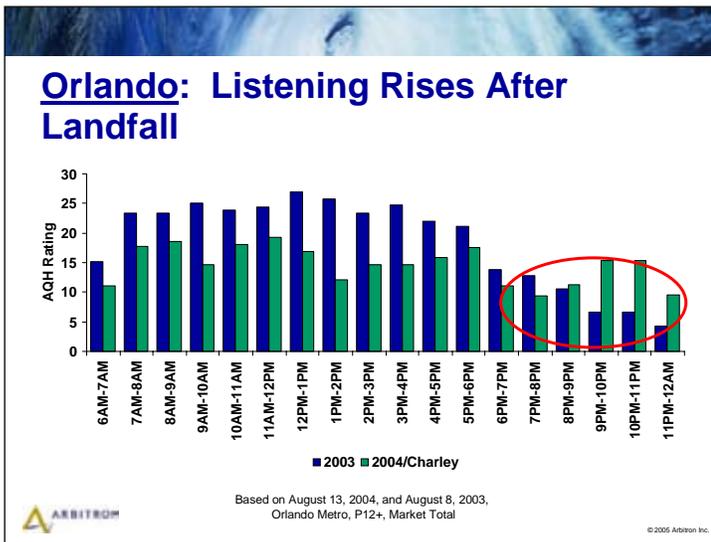
Summary of Listening

A glance at a five-book trend does not reveal a significant increase in overall ratings for the Summer book. This means that the audience estimates are sensitive enough to show the changes around the storms but stable enough to avoid large fluctuations.



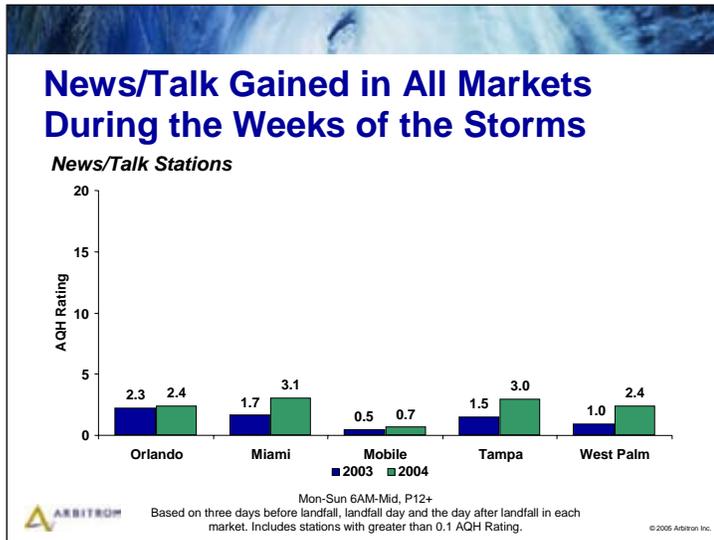
An analysis of the days surrounding the storms in each market shows changes in AQH Ratings year to year. Generally, the audience is flat or lower in the days before a storm, and when the storm hits and power is lost, radio listening seems to climb. The chart on the left illustrates this pattern in Orlando. See the “Appendix” for the patterns in the remaining markets.

This is a very significant finding, since many stations might think they have increased audiences while people are preparing for the storms. That does not appear to be the case. Evidence shows that listening rises as the storm is hitting, not before.



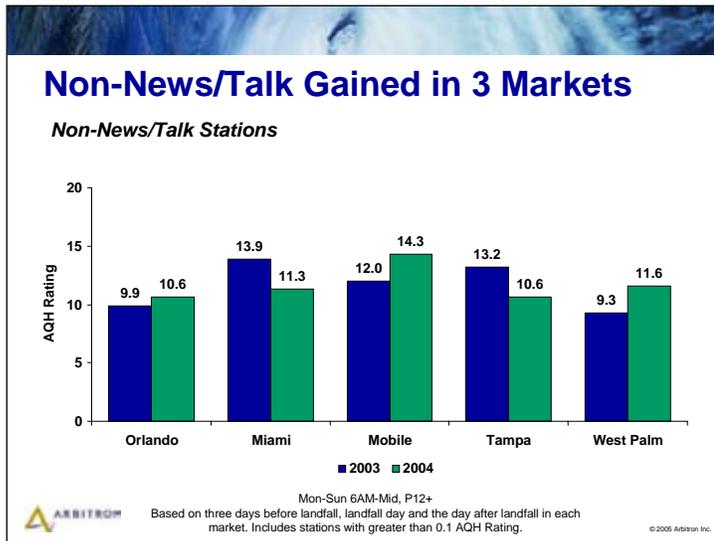
An hour-by-hour analysis of the day of landfall in each storm supports the prior finding: Listening levels climb as the storms make

landfall, or in the wake of the storm. Again, the charts for Orlando illustrate this pattern while the rest of the markets are found in the “Appendix.”



One might assume that News/Talk stations would have had a better book because of the hurricanes, or that these stations would have had an advantage. The reality is that listening to News/Talk stations varied based on the market.

The first chart at the left shows the AQH Ratings for News/Talk stations year over year in the seven days surrounding the storms.



The second chart shows the non-News/Talk stations. The News/Talk format experienced higher AQH Ratings in the seven days surrounding the storms. Non-News/Talk formats also gained audience versus the prior year in all but two markets.

A Higher Proportion of People Listened at Home in Most Markets

	Summer 2003	Summer 2004
Orlando	37%	40%
Miami	44%	46%
Tampa	40%	39%
West Palm	40%	40%
Mobile	39%	44%

At-Home Listening, AQH Comp%, Mon-Sun 6AM-Mid, P12+

Listening location analysis showed three out of the five markets had increased in-home listening.

How Radio Responded

Results of Radio Station Survey

Many stations deviated from their regularly scheduled programming for at least some of the time during the storms. Many stations simulcast, some with other radio stations and some with television stations, during the storms.

Radio stations that were affected by the 2004 hurricanes were contacted by Arbitron and surveyed about how their stations adapted to the storms. Most of the 48 responses came from program directors, who have extensive knowledge about the minute-by-minute changes that happened at their stations.

Actions Radio Stations Took to Respond to the Storms

	Sometime in 3 Days Before Storm	During Storm	Sometime in 3 Days After Storm
Broadcast EAS messages	52%	52%	23%
Ran PSAs to help listeners prepare	83%	63%	58%
Ran special programming to help listeners prepare	81%	63%	46%
Air personalities talked about storm and encouraged listeners to call or e-mail stories and questions	81%	69%	65%
Changed station Web site to provide listeners with hurricane information	67%	52%	46%

Source: Program Director Survey, December 2004



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The responses included in the survey are from stations that were affected by Charley, Frances, Ivan or Jeanne. Two or three of the storms affected some stations. The percentages refer to each instance of change, so, for example, if one station broadcast Emergency Alert System (EAS) messages before Charley and again before Frances, those are counted as two separate instances of programming change.

Actions Radio Stations Took to Respond to the Storms (continued)

	Sometime in 3 Days Before Storm	During Storm	Sometime in 3 Days After Storm
Stopped playing or played fewer commercials	13%	60%	21%
Scaled back the amount of music played	52%	67%	46%
Station received more than usual call-ins	67%	54%	67%
Station received more than usual e-mail	46%	35%	52%

Source: Program Director Survey, December 2004

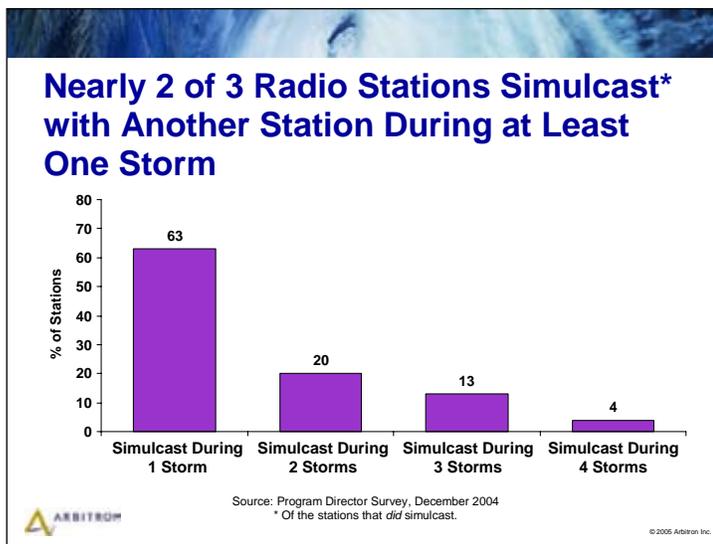


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Other programming changes that stations instituted during the storms:

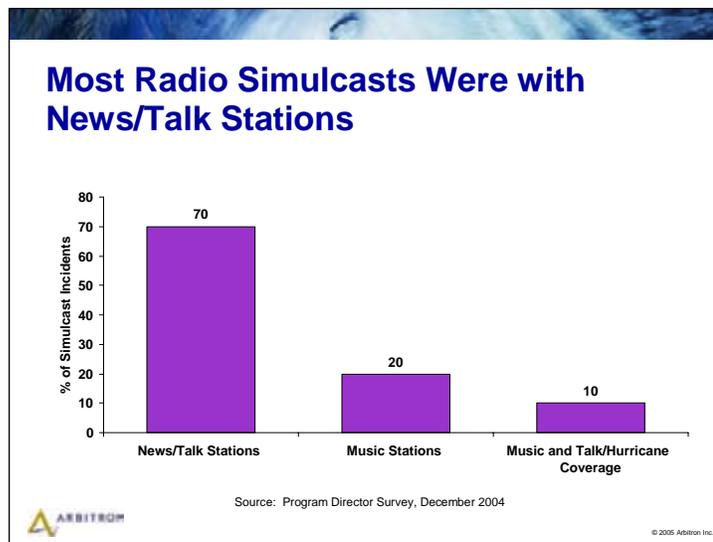
- On-air personalities were used from other stations in the cluster during a simulcast.
- Personalities were let off work to go home in shifts and prepare their homes.
- Stations broadcast a heavy PSA schedule from the Red Cross after the storms.
- One station held a blood drive after the storm and donated items for storm relief.

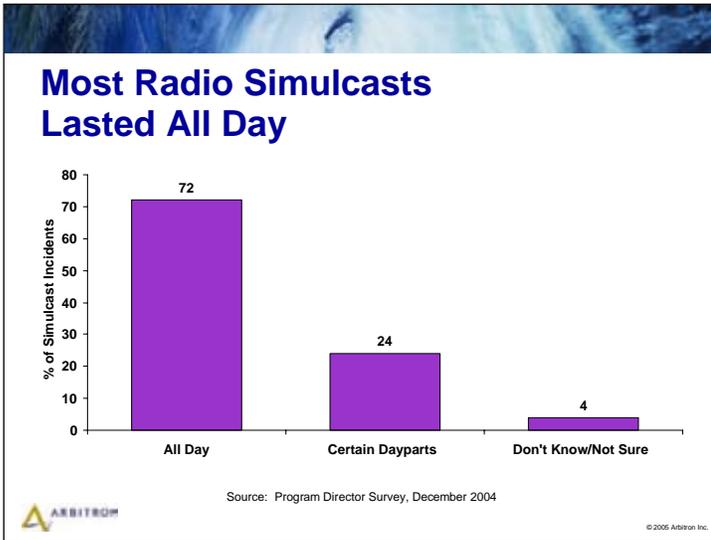
Note that the highest numbers for receiving increased call-ins and e-mails are in the three days after the storms.



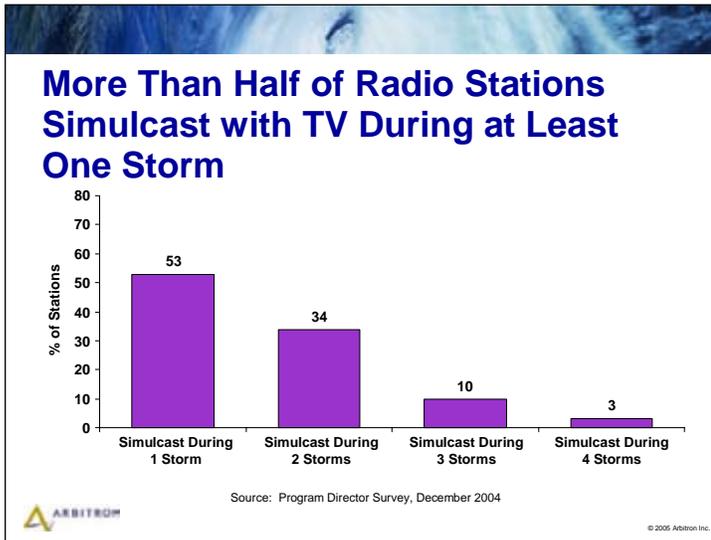
Simulcasts

Many stations said they simulcast during the storms, some with other radio stations in their own cluster and some with television stations. Most simulcasts were with News/Talk radio stations.





Most radio station simulcasts lasted all day.



More than half of the radio stations simulcast with TV stations' programming.

Other Findings Regarding Simulcasts:

- Forty-three percent (43%) of radio station simulcasts lasted two to three days, and 25% lasted one to two days.
- Sixty percent (60%) of simulcasts of TV programming occurred during selected dayparts rather than the entire day; 40% of television simulcasts lasted only one to two days.
- Only 24% of radio simulcasts occurred during certain dayparts.
- Some listeners commented that it was difficult to listen to the television simulcasts because the on-air personalities were not as descriptive as radio announcers. They had a difficult time following or were left wondering exactly what was being viewed on the television.

How Listeners Used Radio and Other Media During the Storms

Arbitron Radio Diaries give great insight into the media habits of listeners, and the following are just a few examples that help explain the “why” behind the listening. Listeners provided comments about why their diaries were late, what they were doing instead of listening to the radio and how they used radio overall.

The following day pages and comments also show that even in 2004 the paper diary captures listening in shelters and during evacuations.

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 03/12
 Survey: SU04 Phase:3 County:(9411) BROWARD HDHA
 01-05-2005 09:10:24 Diary ID:007068775902 User ID:EDPPRODW

VIERNES/FRIDAY									
	Radio		Other media used today (Please list the frequency of program and station)	Morning		Afternoon			
	Station	Time		AM	PM	12-1	1-2	2-3	3-4
Tempo en la mañana Early Morning (6:00 AM / 7:00 AM)	:	:							
A mediodía Midday	:	:							
En la tarde Late Afternoon	:	:							
De noche Night (from 5 AM until 5 AM Saturday)	:	:							

Si usted no oyó la radio hoy, por favor, márkelo [X] aquí.
 If you didn't hear a radio today, please mark [X] here.

*** No Listening Information for This Page ***

This diary shows that listeners were busy making preparations for the storm. This may account for some of the drop in listening on the day before landfall.

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 08/09
 Survey: SU04 Phase:3 County:(1797) MOBILE BALANCE
 01-05-2005 09:08:27 Diary ID:007053215501 User ID:EDPPRODW

WEDNESDAY									
	Time		Station <small>Call letters, did setting or station name? Did hear? Use program name</small>	Mark/Zone		Mark/Zone			
	Start	Stop		AM	FM	At Home	In Car	At Work	Other Place
Early Morning <small>(Over 5 AM)</small>	:	:							
	10:40 AM	:	WOL 98.5		✓				Shelter
Midday	:	:	MGM						
	:	:							
	:	:							
Late Afternoon	:	:	Harris can						
	:	:							
	:	:							
Night <small>(to 5 AM Thursday)</small>	:	:							
	5:00 AM	:	WOL 98.5		✓				Shelter

If you didn't hear a radio today, please mark here.

Day	Start	Stop	Station	QHrs	Loc	ID Method
Wed	10:00 AM	05:00 AM	WDLT	76	4	0

Note the listening location for this diarykeeper. It is amazing that an Arbitron diary ended up among “essentials” taken to a shelter!

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 08/09
 Survey: SU04 Phase:3 County:(1697) MOBILE HDBA
 01-05-2005 09:07:03 Diary ID:007053119902 User ID:EDPPRODW

WEDNESDAY									
	Time		Station <small>Call letters, did setting or station name? Did hear? Use program name</small>	Mark/Zone		Mark/Zone			
	Start	Stop		AM	FM	At Home	In Car	At Work	Other Place
Early Morning <small>(Over 5 AM)</small>	:	:							
Midday	:	:							
Late Afternoon	:	:							
Night <small>(to 5 AM Thursday)</small>	:	:							

If you didn't hear a radio today, please mark here.

Watching TV. For Hurricane Ivan!!

*** No Listening Information for This Page ***

A day page with no recorded listening during the day and the “No Listening” box checked at the bottom includes a revealing note. Like many listeners, this diarykeeper kept “watch” with his television as the storm approached.

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 09/09
 Survey: SU04 Phase:2 County:(9795) ORANGE BALANCE
 01-05-2005 09:12:33 Diary ID:007039520501 User ID:EDPPRODW

Quick questions...
 For you
 The following questions apply to you yourself. Each household member should complete these questions in his or her own diary. Your answers will be kept in the strictest confidence.

1 What is your age?
 49 years

2 Are you male or female?
 Male Female

3 Where do you live?
 City Orlando
 County Orange
 State FL
 ZIP 32814

4 Are you employed either full time or part time?
 Yes No
 If yes, how many hours per week are you usually employed? Mark with Less than 20 20 or more
 What is the ZIP code at your usual place of work?
 32750

5 What was the last grade of school you completed? Mark with Less than 12th grade High school graduate or GED More than 12th grade college Bachelor's degree or higher

6 Thinking back 6 months ago, what radio station did you listen to the most at that time? Write down call letters, call letters or station name. Mark AM or PM.
 AM PM
 WFTS

7 How many children under age 12 live in this household?
 Enter number None of children

8 Which of the following categories best describes your total household income from all sources (before taxes) for the past year? Mark with Less than \$25,000 \$25,000 - \$49,999 \$50,000 - \$74,999 \$75,000 or more

Your opinion counts
 Use this space to make any comments you like about specific stations, announcers or programs.
 Americana, Charley delayed my optika trip to home. Totally dependent on radio report work. 5 days later!

Some diarykeepers wrote comments of apology that their diaries weren't mailed on time. Although this diarykeeper felt as though she mailed in her diary too late, this diary was included in the sample. The vast majority of diaries are returned the week immediately following the survey week; diaries received up to several weeks after the survey week are also included in the sample.

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 09/09
 Survey: SU04 Phase:3 County:(9711) BROWARD BALANCE
 01-05-2005 09:13:15 Diary ID:007051226801 User ID:EDPPRODW

Quick questions...
 For you
 The following questions apply to you yourself. Each household member should complete these questions in his or her own diary. Your answers will be kept in the strictest confidence.

1 What is your age?
 62 years

2 Are you male or female?
 Male Female

3 Where do you live?
 City Ft. Lauderdale
 County Broward
 State FL
 ZIP 33305

4 Are you employed either full time or part time?
 Yes No
 If yes, how many hours per week are you usually employed? Mark with Less than 20 20 or more
 What is the ZIP code at your usual place of work?
 33313

5 What was the last grade of school you completed? Mark with Less than 12th grade High school graduate or GED More than 12th grade college Bachelor's degree or higher

6 Thinking back 6 months ago, what radio station did you listen to the most at that time? Write down call letters, call letters or station name. Mark AM or PM.
 AM PM
 WFTS

7 How many children under age 12 live in this household?
 Enter number None of children

8 Which of the following categories best describes your total household income from all sources (before taxes) for the past year? Mark with Less than \$25,000 \$25,000 - \$49,999 \$50,000 - \$74,999 \$75,000 or more

Your opinion counts
 Use this space to make any comments you like about specific stations, announcers or programs.
 I wasn't able to follow readily due to hurricane Francis & had to evacuate, then came back home and was only able to listen on radio with batteries, while the electricity was out. Sorry

This person was evacuated, had to use a battery-powered radio and still managed to return a diary.

Please see the "Appendix" for more diary comments.

The Listener Perceptual Study

Unless one has personally experienced extended power outages, damage to personal property or even the loss of a loved one in a storm, it can be difficult to grasp the impact that natural disasters have on people's lives. This perceptual study of listeners is intended to help readers better understand the consumer's media experience during the storms.

The Listener Perceptual Study is a telephone recontact study of people who consented to participate in the Fall 2004 Arbitron radio survey; it was conducted in the beginning of December 2004. Interviews were conducted in English and Spanish. This study details what the residents of the markets directly impacted by the hurricanes of 2004 had to say about their media experiences regarding the storms. Telephone interviews were conducted in the following markets: Daytona Beach, Ft. Myers, Ft. Pierce, Ft. Walton Beach, Lakeland, Melbourne, Miami, Mobile, Orlando, Panama City, Pensacola, Sebring, Tampa and West Palm Beach.

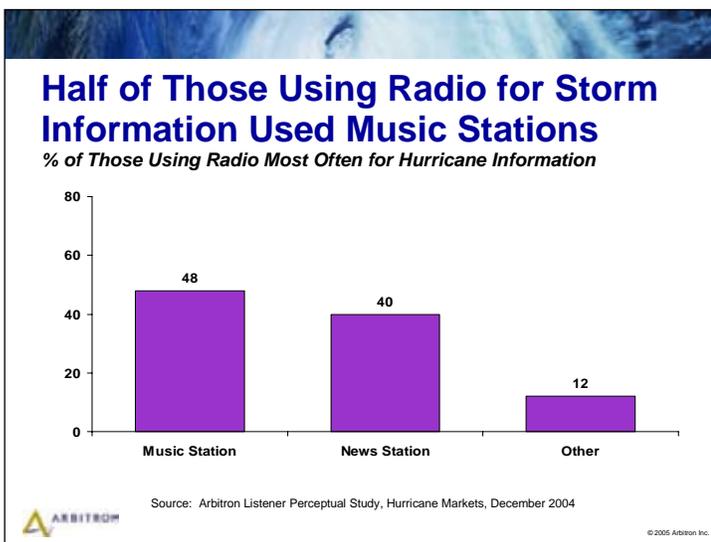
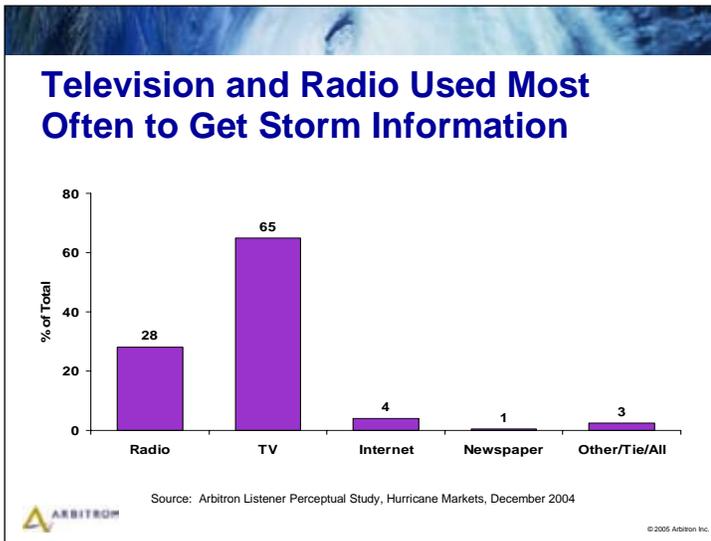
All respondents in the survey are age 18+ and were involved in the hurricane planning, preparations or information gathering for their households.

A unique aspect of the survey was the unusual cooperation and eagerness of the respondents. Interviewers noticed that people seemed ready to share information about their ordeals with the storms and how media helped them.

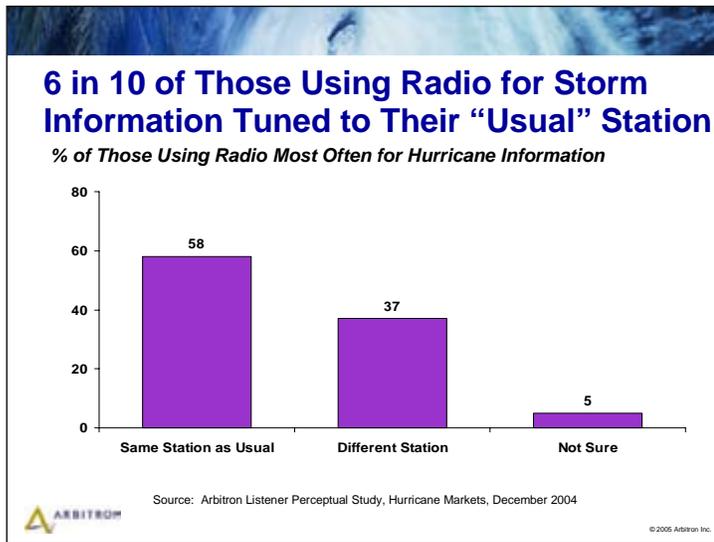
One respondent, when asked for any additional comments, said they were glad that this survey was being conducted: "It shows interest in what happened and can help in the future."

Key Findings

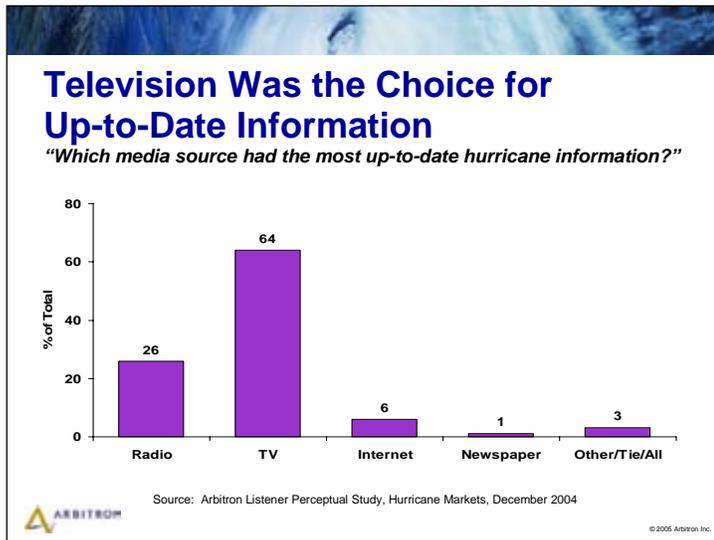
Television and radio are used most often to get storm information, with television being the most popular choice. Most cited “visuals” and “maps or radar” as reasons they tune to television.



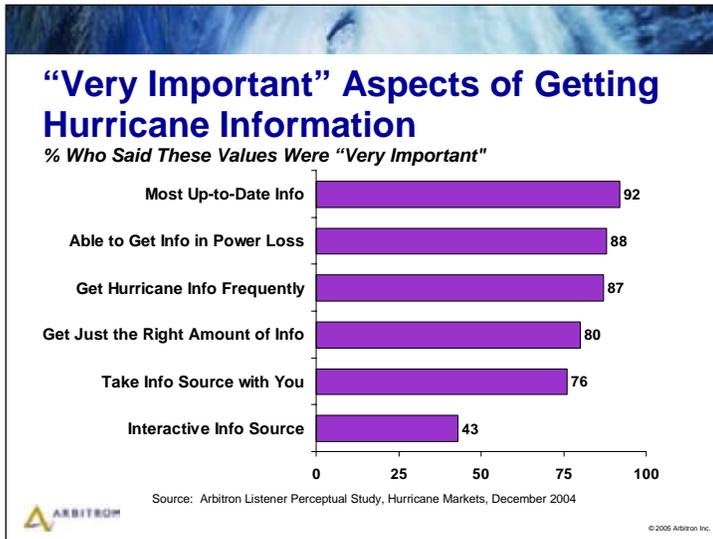
Of those using radio most often for hurricane information, almost half of the respondents used music stations to get hurricane information.



Almost 60% said they used their "usual" station to get hurricane information, again showing that not all radio dials go to News/Talk stations.

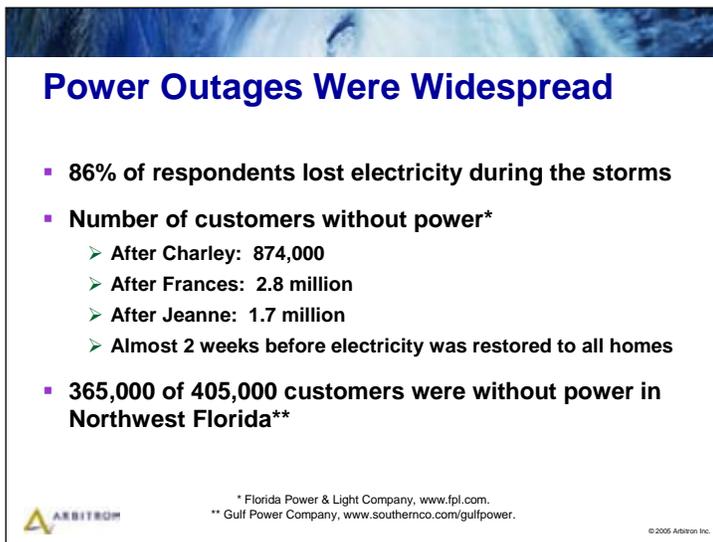


Television was the medium of choice for up-to-date information largely due to visuals. Residents used television in the preparation stages to track the storm as they anticipated landfall.

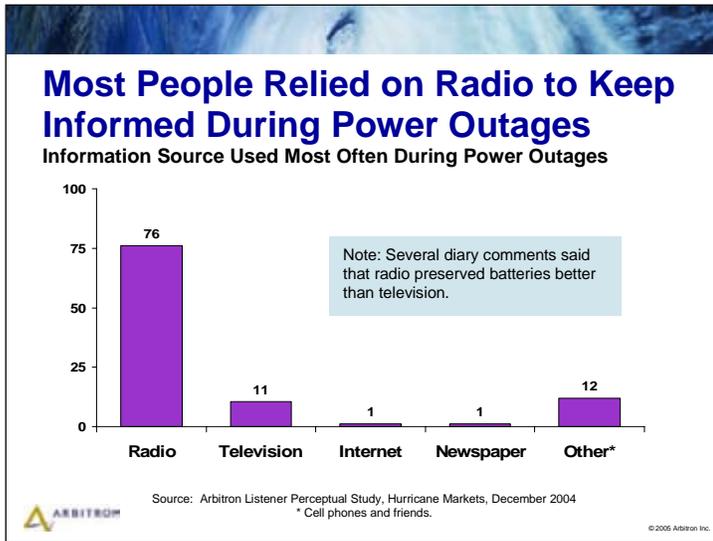


The most important things to listeners are:

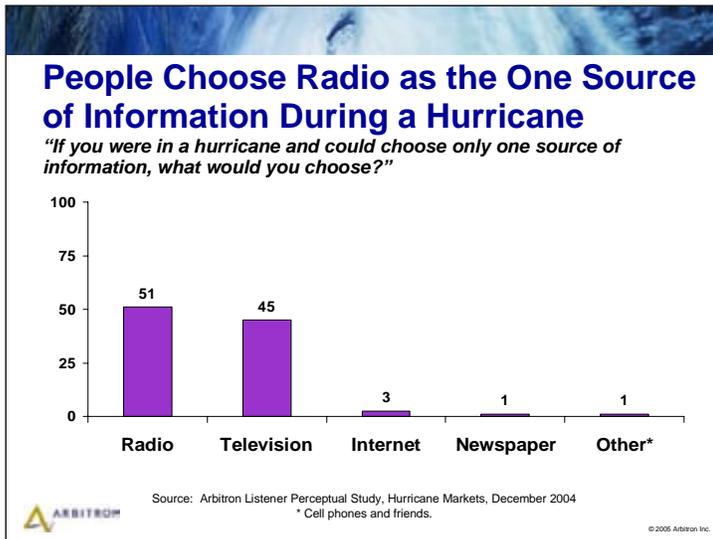
- Up-to-date information
- Ability to get information in a power loss
- Ability to get information frequently



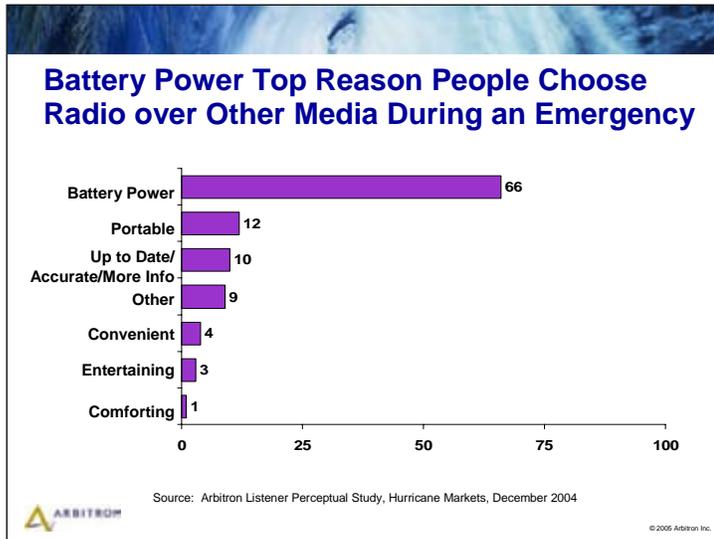
Electrical outages were widespread during the hurricanes, with millions losing power.



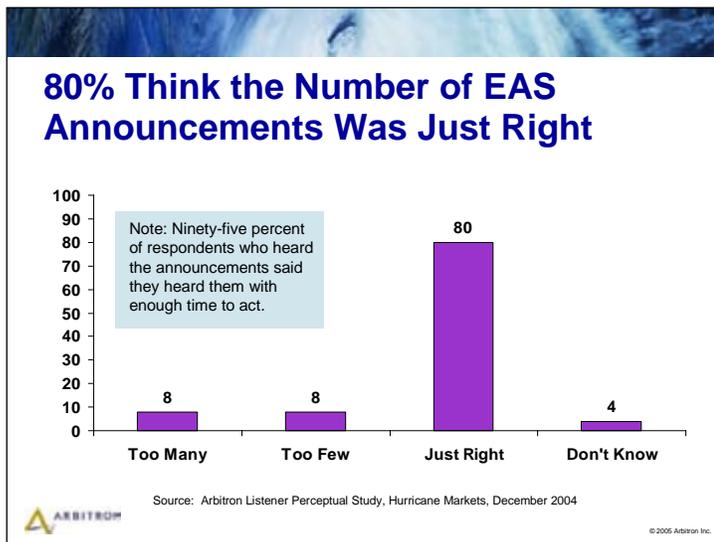
Most people relied on radio to keep them informed during the common power outages during the storms. Listeners repeatedly commented that radio was dependable, used fewer batteries and had better signals than television, and it was portable.



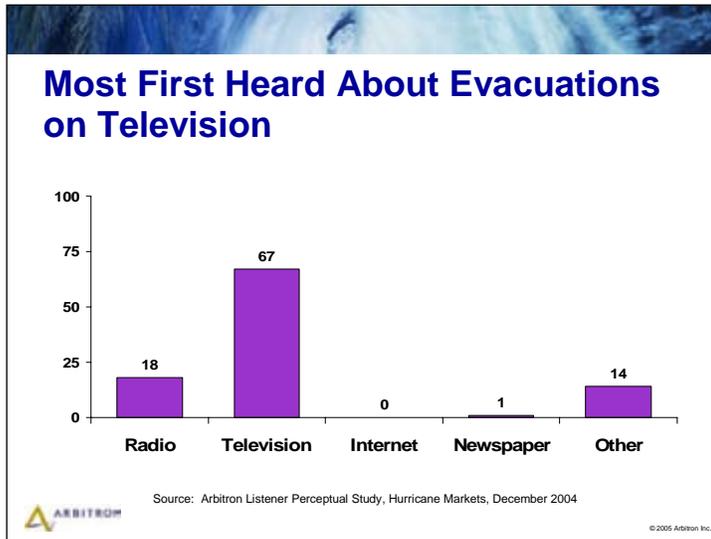
When given the choice of only one medium to use for information during a hurricane, radio was the top choice.



Battery power is the top reason consumers cite when choosing radio as the one medium they would use for information if they could select only one during a hurricane.



Since a hurricane is considered a state emergency rather than a national one, radio stations are not bound by federal regulation to run Emergency Alert System (EAS) announcements. Nonetheless, it is clear that many of them did. Seventy-five percent (75%) of respondents said they heard or saw EAS announcements. Of those who heard the EAS announcements, eight in 10 thought the number of announcements was "just right."



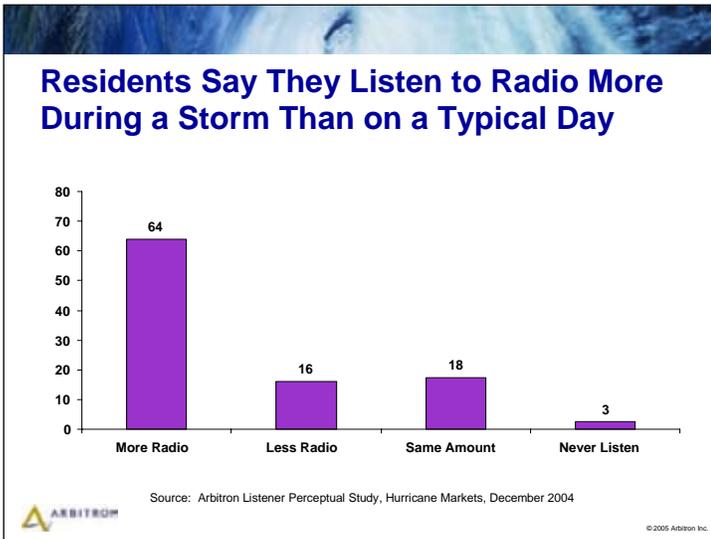
Most first heard about evacuations from television:

- Thirty-five percent (35%) were advised to evacuate their homes.
- Only 61% of those advised to evacuate actually did so.

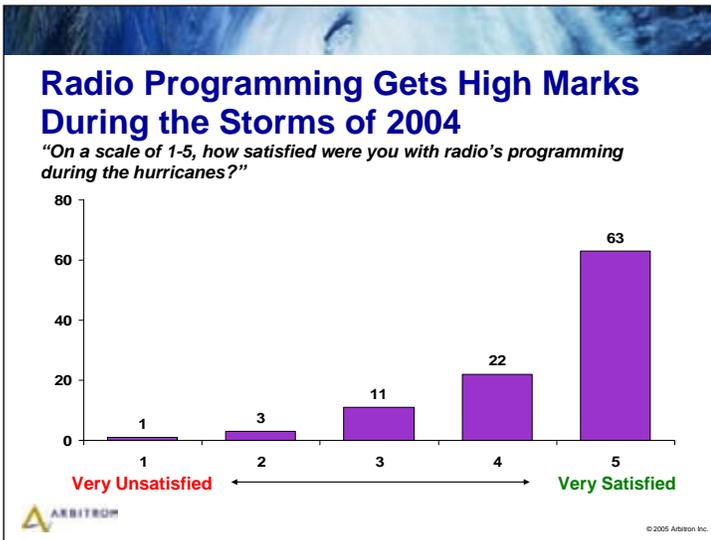
Although residents relied heavily on television and radio for information as they decided to evacuate, more than 20% said they did not rely on the media for specific evacuation route information.

Other sources for the most updated information on evacuation routes:

- Past experience
- Word of mouth
- Knew where they were going
- Didn't rely on the media



Most people say they listened to *more* radio during a storm versus on a typical day.



Radio got high marks for its programming during the storms. On a scale of 1-5, with 5 being most satisfied, 63% of respondents gave radio a "5" for its programming during the storms; another 22% gave it a "4."

Conclusions from Respondent Comments During the Perceptual Study

(with Comment Examples)

1. **Radio becomes the medium of choice when the lights go out.** A key finding from this study is that television is used as the storm is approaching (to watch the weather maps and get up-to-date information) and radio is then used as the storm hits and residents lose electricity.

“Very satisfied with radio coverage; listened to it the whole time; even went out to car to get better radio reception.”

“I was glad we had a radio that could be run with batteries.”

“If we didn't have power, we listened to the radio.”

2. **Radio is important, and listeners said it did an outstanding job during the hurricanes of 2004.** Many of the listener comments were in praise of radio in general and the service it provided during the storms.

“Radio was far superior compared to any other media source.”

“We couldn't have done without our radio. It was the only source of info we had.”

“Radio personalities talked people through the crisis, helped to keep hopes alive and pulled the community together.”

“If it had not been for radio, it would have been much more difficult to deal with the 2004 hurricanes. The connection with callers calling in and announcements made me feel people were out there who knew what was going on. This experience gave me a much greater appreciation for radio.”

“[Some] stations were able to keep audiences aware of important public-service information such as shelter locations, emergency phone numbers and other necessary info for our area. They all did a very good job.”

“Thought coverage was great and gets better every year.”

“You couldn't find a radio anywhere; they were all sold out.”

3. **Television is the medium of choice before the storms hit.** Listeners wanted to see pictures and track the storm. They also wanted to see the damage that the storm was doing. Visuals are very important as listeners anticipate the impact of the hurricanes. They also felt like television provided the most up-to-date information, and they used it most often.

“You could see what was going on rather than just hearing about it.”

“I can see the potential devastation and the route of the hurricane.”

“TV was more useful in the preparedness stage.”

- 4. Radio can be more descriptive during these visual events.** One of the reasons TV is so powerful in a natural-disaster situation is that it can give pictures of the approaching storm, show the path of the storm, and then let viewers see the damage. Listeners want radio to be as detailed as possible when giving information, particularly after the storm hits.

One complaint from listeners was that during the television simulcast, it was very difficult to understand sometimes, because the person speaking was addressing a television, not a radio, audience.

“Radio needs to be more descriptive in giving ‘visuals’ to listeners during hurricane coverage.”

“In addition to what radio is doing now, they need to be more detailed when explaining what’s going on because when power is out people can’t see. So, in a sense, radio has to be the ‘eyes’ for the people.”

- 5. Listeners do not appreciate “sensational” coverage.** Listeners used words like “sensationalize,” “hype,” “overdramatic,” “melodramatic” and “panic” to describe certain media coverage that they did not care for.

“It is so important for the news media to stay calm—we all have to pitch in and help each other and stay calm. Reassure people and help them not to get upset. We noticed that some media try to make it more than it is—sensationalize it. Other stations are really good about telling it like it is.”

“Didn’t appreciate reporters instilling fear into residents instead of just reporting what was happening.”

- 6. The more local the information, the better.** Listeners felt that much information pertained to large metro areas and excluded smaller communities within the coverage area. They want to hear information as local as possible. This is a perfect opportunity to take advantage of terrestrial radio’s unique local strength.

“Would have liked more local coverage.”

“[Need] more emphasis on impact for smaller areas, not just big metropolitan areas.”

“[For] Seminole County, specific information was lacking on TV and radio. Definitely could have used less information on Orlando and Daytona Beach and more on Seminole County.”

- 7. Information about resources should be specific.** Listeners want as much information as possible about where to get sandbags, water, food, etc. Listeners wanted to know exactly what to take with them to a shelter. They wanted to know exactly how to get the resources that were available to them. These are the details that will make people's lives easier as they weather the storm.

"I would like more information on getting sandbags at the fire department."

"Initially, media failed to tell people that when evacuating to a shelter, you were supposed to bring supplies in order to be self-sufficient for three days in the shelter. This was finally corrected by hurricane #4."

- 8. Putting reporters in dangerous situations is generally seen as unnecessary.** People want to see and hear as much as possible but not at the risk, or perceived risk, of a reporter's safety.

"I don't think the TV reporters should be out in the hurricanes on the beach. Be in the studio showing the Doppler reports, when things were going to hit."

"Dissatisfied with reporters being out in the hurricane elements. Seemed unnecessary."

"Reporters were putting themselves in dangerous situations and shouldn't have been out in those situations."

"It's important for reporters to explain where potential damage will be instead of standing in the storm saying things like 'It's really windy.'"

The Survey Process at Arbitron

During times of natural disaster, radio stations are primarily concerned with keeping their stations on the air and serving their communities to the best of their abilities. They have to do this while changing programming, managing advertisers and keeping their employees safe.

Some markets are also in Arbitron ratings survey periods during such disasters. Stations may be concerned that response rates, and the overall survey, could be compromised. Arbitron is well aware of these concerns and goes to great lengths to ensure survey quality.

Each scenario is different, and each situation requires special attention by Arbitron regarding sampling, interviewing and mailing. The following are some of the ways that Arbitron handles the survey process during times of natural disaster or unusual circumstance. All of the following information refers to practices that were implemented for the hurricanes of 2004 and may not be applicable to all natural-disaster situations.

Monitor the Storms

The Sampling department monitored the storms and tried to determine when the storms would hit, which markets would be affected and to what extent. With the availability of advance-warning systems and up-to-the-minute weather information via the Internet, radio and TV, Arbitron's Survey Operations group followed the storms. The purpose of this exercise is to assess the impact that the storm will have on calling and mailing and what impact that will have on the sample. This allows the Sampling department and the Mailing Resources department to plan ahead and have a higher likelihood of achieving sample targets.

Isolate the Markets, Brief the Interviewers

Once "hurricane" markets are identified, they are labeled as such and interviewers are alerted. The interviewers are briefed as to how to handle calls to people in such situations, taking into account the sensitive nature of calling a household in a hurricane market. Top interviewers are assigned to these markets.

Monitor the Calls and Monitor the Mail

Calls to hurricane markets are monitored daily. Certain information is considered while calling statistics come in: Contact Rate, Placement Success Rate, No Answer Rate, Disconnect Rate, Follow-Up Success Rate and Diary Nonreceipt Rate. All these are factored into daily calling plans. Arbitron is looking at daily calling to ensure that performance numbers are not atypical. Changes in mail delivery are also tracked, and adjustments are made to the mailing schedule as needed.

Develop a Specific Plan of Action and Stay Updated

Much like with 9/11, a specific plan of action is put into place. The storms are continually monitored. Interviewing Center management may decide to increase the number of calls prior to the expected impact of the storm so that in the event that calling is suspended for a day or so, diary placement targets are still met. Mailing Operations uses resources from the U.S. Postal Service to keep tabs on the mail situation in hurricane markets.

Make Hourly Decisions on Calling

Communications meetings are held daily to confirm that hurricane markets are being called in the most efficient and effective way. Arbitron knows that this is a good opportunity to collect listening behavior and takes this responsibility quite seriously.

If an area is being evacuated, calling may be suspended. The call attempts may also be restructured to make sure that as many call attempts are made as necessary, with as little waste as possible. Since a close watch is kept on each storm, changes in the calling plan are made as needed. The goal here is to be as flexible as possible with the calling.

Also, considerations are made for phone line problems as a result of the storm. Phone numbers are not automatically taken out of the sample because they appear to be “bad numbers,” but extra follow-up calling attempts are made as power is restored to each area.

Listen to the Interviews

The top interviewers are assigned to these markets, and sensitivity is crucial. The call length in these markets is sometimes a bit longer than usual. The resident of the hurricane market suddenly finds himself or herself on the phone with a friendly voice, someone who will listen to their situation.

Arbitron has experience with disruptive events such as floods, blizzards, power outages and hurricanes, not to mention the tragedies of the Oklahoma City Bombing and 9/11. The operations groups are well prepared and have a history of maintaining high-quality surveys.

After the storm has moved through and the survey operations groups have done all that they can to ensure a quality survey, the diaries come in and special care is given in Diary Analysis and Crediting.

Average Response Rate for Quarterly Survey When the Hurricane Hit

Hurricane	Response Rate for Survey 1 Year Prior to When Hurricane Hit	Response Rate for Survey When Hurricane Hit
Charley (Orlando)	28.0 (Summer 2003)	23.7 (Summer 2004)
Frances (Miami, Tampa and West Palm)	25.6 (Summer 2003)	26.7 (Summer 2004)

Note: Charley, Frances and Ivan hit during Summer 2004. Jeanne hit during Fall 2004.




Analyze Response Rates

The tables on the left shows that some of the markets had an increase in response rate year over year while some showed a decrease.

Average Response Rate for Quarterly Survey When the Hurricane Hit (continued)

Hurricane	Response Rate for Survey 1 Year Prior to When Hurricane Hit	Response Rate for Survey When Hurricane Hit
Ivan (Mobile)	29.7 (Summer 2003)	27.6 (Summer 2004)
Jeanne (Daytona, Ft. Pierce, Lakeland, Melbourne, Miami, Sebring, Tampa, West Palm)	27.8 (1st month Fall 2003)	28.3 (1st month Fall 2004)

Note: Charley, Frances and Ivan hit during Summer 2004. Jeanne hit during Fall 2004.




Ensure Proper Diary Credit

How Diarykeepers Record Their Listening During Crisis Situations

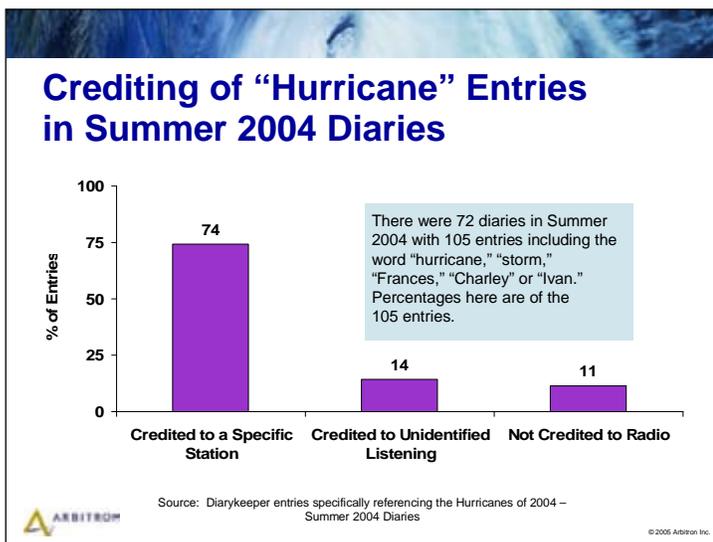
Arbitron knows, based on a Fall 2002 census of diary entries, that listeners typically record their listening the following ways:

- **Sixty-eight percent (68%) of all the quarter-hours credited to radio comes from frequency entries** (e.g., “1500 WTOP,” “Mix 107.3” or “1090”).
- **Thirty-five percent (35%) comes from call letter entries** (e.g., “WGMS Classical Station” or “Rush Limbaugh WAAA”).
- **Nineteen percent (19%) comes from Station Name entries** (e.g., “Rocket 107.9 or “The Ticket”).
- **Two percent (2%) comes from program/personality entries** (e.g., “Dr. Laura 1090” or “Super Bowl WTEM”).

In keeping with this norm, only 72 (0.23%) diaries, out of more than 25,000 in-tab Summer 2004 diaries from the impacted Metros, contained an entry including the word “hurricane,” “storm,” “Charley,” “Frances” or “Ivan.”

Of the listening entries containing a reference to the hurricane in the 72 diaries, the vast majority of these entries clearly identified the station to which the diarykeeper was listening, for example, “96 Rock Weather Traffic Hurricane Ivan,” “Lite Mix 99 Hurricane Coverage” or “610 WIOD News Radio Hurricane.”

Specifically, in the 72 Summer 2004 diaries, there were a total of 105 entries including the word “hurricane,” “storm,” “Charley,” “Frances” or “Ivan.” Of the 105 entries:



- 78 (74.3%) of the entries were credited to a specific station.
- 15 (14.3%) were credited as Unidentified Listening (e.g., “AM Hurricane News” or “Local Coverage of Hurricane Ivan”).
- 12 (11.4%) were not credited as radio (e.g., “NOAA Hurricane” or “87.7 Hurricane Frances”).

Few diarykeepers referred to a hurricane either by name or by generalized reference in their Summer 2004 diaries. *In the markets directly impacted by the hurricanes, the proportion of diaries containing a hurricane-type entry was well under 1% of the total in-tab diaries in each market.*

As found in other crisis situations, like the September 11, 2001, tragedy and, a year later, the Washington, DC, Beltway sniper attacks, diarykeepers in the impacted markets continue to record their listening by frequency, call letters and/or Station Name. Only a small percentage recorded their listening by program name.

Arbitron recognizes that programming credit during a crisis period may be a concern for station program directors. To find out more on programming policies and procedures, along with top-level market information, call Diary Analysis and Communications at (410) 312-8756. Once quarterly estimates are published, Arbitron subscribers have access to detailed credit information. For an overview of Arbitron's "Programming Diary Credit Policy and Procedures," see "Diary Crediting During Crisis Situations" at http://www.arbitron.com/radio_stations/wartime_crisis_credit.htm.

Station Information Profiles During Crisis Situations

Here are some key points to remember about Station Information Profiles on file at Arbitron during a crisis:

- Continue to submit the SIP every survey.
- Continue to submit updates *during* the survey.
- Regular and special programming will not need to be submitted to Arbitron; the new Program Credit Procedures will handle these credits.
- Technical Difficulties when unable to broadcast due to transmitter and/or antenna damage can be submitted. Arbitron will then note the *Technical Difficulty* in the respective survey's Radio Market Report should the station meet Minimum Reporting Standards and be reported in the book.

For more information or instruction on how to update your station's facility information, visit Arbitron's Web site www.arbitron.com, click on "Radio Stations," then "Station Information on File at Arbitron." You can also call Radio Station Relations at (410) 312-8062 and fax station updates to (410) 312-8619.

What to Do When the “Event” Book Comes Out

When the ratings book comes out after an event such as a natural disaster, program directors are eager to know how their programming was received by their listeners. At minimum, PDs should run the following reports to isolate the event and analyze the ratings:

- 1. Run a Trend Report in Maximi\$er[®] and be sure to request the “Market Total.”**
The Trend Report will show you if your station is up or down in overall listening and whether it is in line with the overall market. Select various demos and dayparts to see if there were significant changes with the market and your station(s).
- 2. Run an Hour-by-Hour Report in Maximi\$er (under “Rankers”) or PD Advantage[®] Report 4 to get even more granular data than a multihour daypart.**
- 3. For the most specific information, go to the Sports/ Events Report in Maximi\$er and look at the days and hours surrounding the event.** This report can isolate specific hours in specific days of the survey.
- 4. In PD Advantage, run Report 13, the Diary Distribution Report, to see how the Arbitron sample was returned during the event for both the market and your station(s).**
- 5. In PD Advantage, always run the Vital Signs Report. This report is an excellent diagnostic tool for your station.** Use the “View Comparison” option to see how the survey differs from others without the special event. To see a bar graph of the changes for the most important estimates, run Report 7, the Leading Indicators Report.

Running these reports will answer many of your questions about what happened to your station while broadcasting during a natural disaster. If you need assistance generating any of these reports, call 1-800-543-7300 and Arbitron’s experienced Customer Service & Support staff can help you 24 hours a day, seven days a week.

Recommendations

1. **Remember, your biggest audiences may be listening during and after the storm, not before.** The audience estimates and perceptual study support that listeners are either preparing their homes or watching television until the storm hits and the power goes off. After the storm hits, do not assume your listeners are finished tuning in. Your biggest audiences may just be starting to listen.
2. **Take advantage of the local power of traditional radio and keep information as local as possible.** Listeners crave local, actionable information. If possible, give information that will assist listeners outside of the immediate metro area. In many cases, the radio is the only information source, so do not assume they are getting information from other sources.
3. **Keep information about the event as detailed as possible, and be the “eyes” for the listener.** There is no such thing as “too much detail” when radio reports on hurricanes and gives information. Listeners want as much detail as possible in two areas: how to get resources and the effects/damage from the event. Give them detailed information about where and how to obtain help. Give them as much information as possible about the damage or effects of the storms. Many are in their boarded-up houses with no electricity and very much want to know what is going on. This is needed particularly in times of power outages, when listeners cannot see, and they depend on radio for all information.
4. **Keep information up to date.** This sounds self-evident, but in times of crisis listeners need the most up-to-date information. Respondents in the perceptual study said this was the most important aspect of information-getting for them. Circumstances can change often in a natural disaster, and listeners want to have confidence that the media source they choose will give them up-to-the minute information.
5. **Leave the sensationalism and melodrama to other media outlets.** Listeners are looking for as much objective and detailed information as possible without the element of panic. When listeners are using words like “reliable” and “comforting” to describe why they choose radio, make sure your broadcast lives up to those expectations.
6. **Remember that listeners take comfort in radio’s voice.** When speaking to them, know that they want up-to-date information, and they find callers and air personalities very comforting. Sometimes radio is their only link to the world outside of their home. Some are trying to adjust their radio dials in the dark, some are sitting in their cars in their driveways for periodic updates, and some are in shelters.

- 7. Advise listeners to get their portable radios and batteries before the storm season hits.** As one respondent recalled, “You couldn’t find a radio anywhere; they were all sold out.” This goes for any station, anywhere. Listeners should remember that battery-powered radio could be a lifeline in times of emergencies.
- 8. After the event, analyze your ratings.** Only you know the exact programming changes that were made at your station. Use the audience estimates to see first how listeners in your market responded to radio overall, then how they responded to your station.
- 9. Have an action plan ready for your station.** In a natural-disaster event such as this, your employees may need to be at home or away from the station periodically to ensure the safety of their families. Almost any region of the country is susceptible to a natural disaster of some kind. Make sure you are ready to have employees work in shifts so they can attend to business at home, or if your station situation calls for it, have a simulcast plan in place to get the best possible information to listeners.

For a complete download of *Riding Out the Storm*, please visit www.arbitron.com, click on “Radio Stations,” then “Free Studies & Reports.” If you have questions regarding this study, please contact Claudine Knisley, manager, Diary Analysis and Communications, at (410) 312-8720.

Acknowledgments

A study this size does not get completed without many contributors. The success of this study is largely due to the expertise and dedication from far too many to list.

A formal thank-you does, however, go to a few who spent countless hours designing the program director and consentor callback questionnaires, preparing our system for these Web-based surveys, collecting and analyzing Summer 2004 data, and presenting the findings in various ways.

The following people are applauded for their efforts:

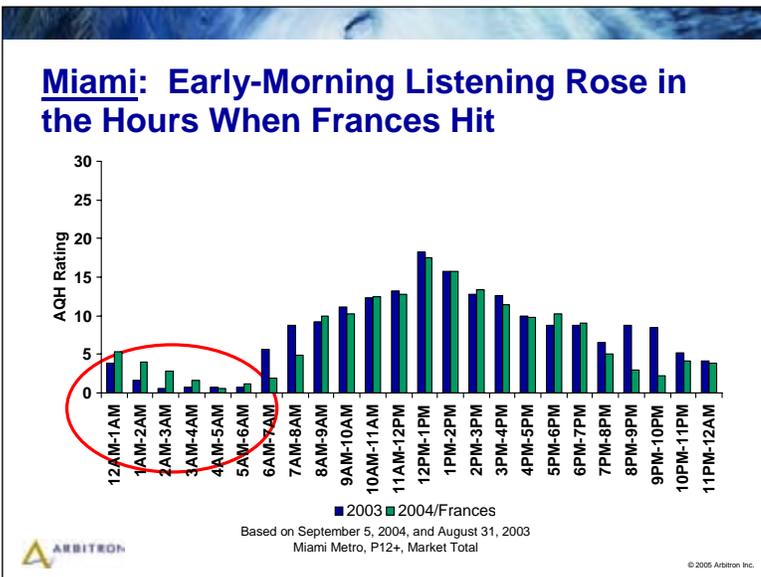
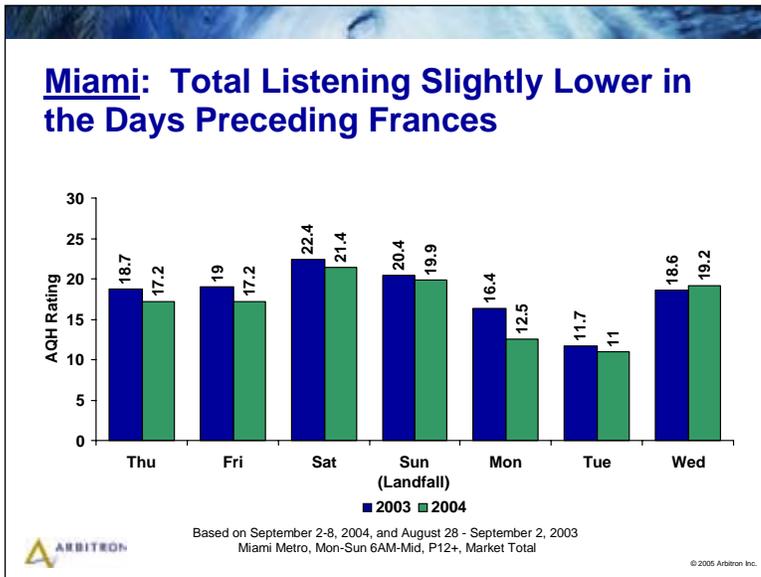
Laura Ivey	Arbitron Consultant
Bob Lloyd	Arbitron Senior Policy Analyst, Customer Analysis
Christina Frederick	Arbitron Project Leader, Methods Development & Evaluation
Robin Gentry	Arbitron Project Leader, Methods Research
Omari Bishop	Arbitron Specialist, Diary Analysis and Communications
Irene Howard	Arbitron Training Specialist, Columbia Interviewing Center
Scott Haste	Arbitron Senior UNIX Administrator, System Services

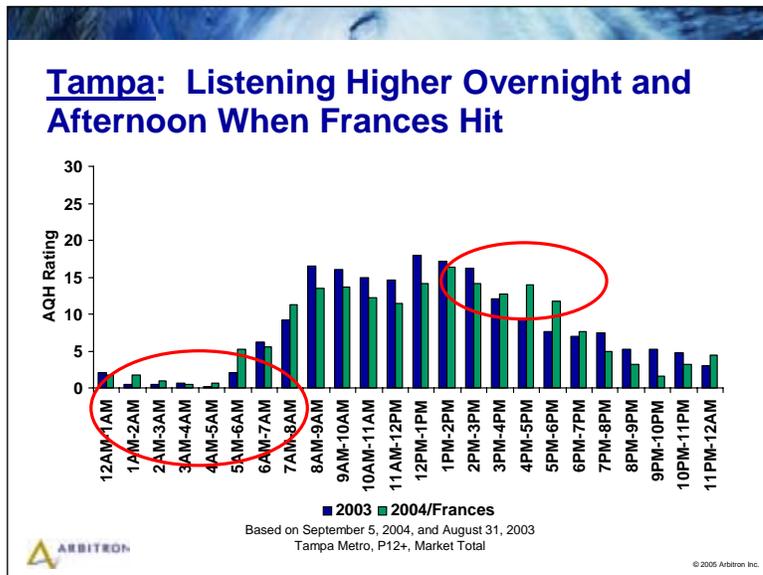
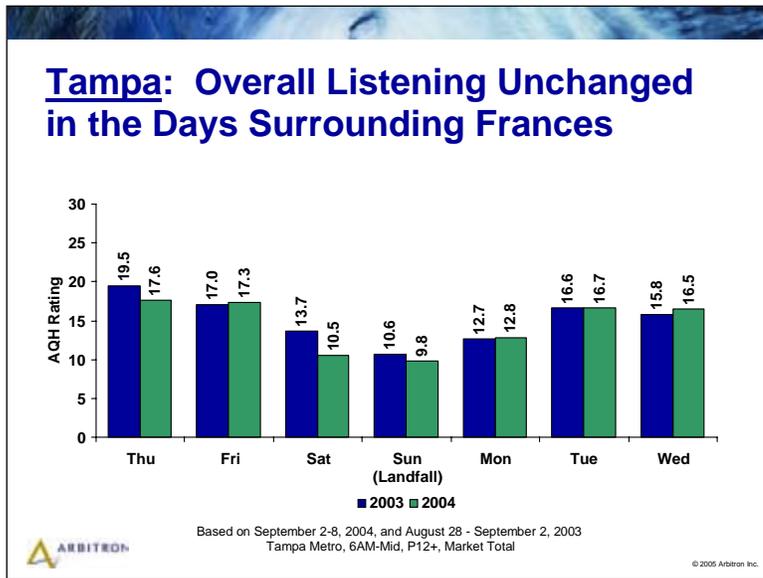
Special thanks go to the following broadcasters for providing invaluable information about programming their stations during the hurricanes of 2004:

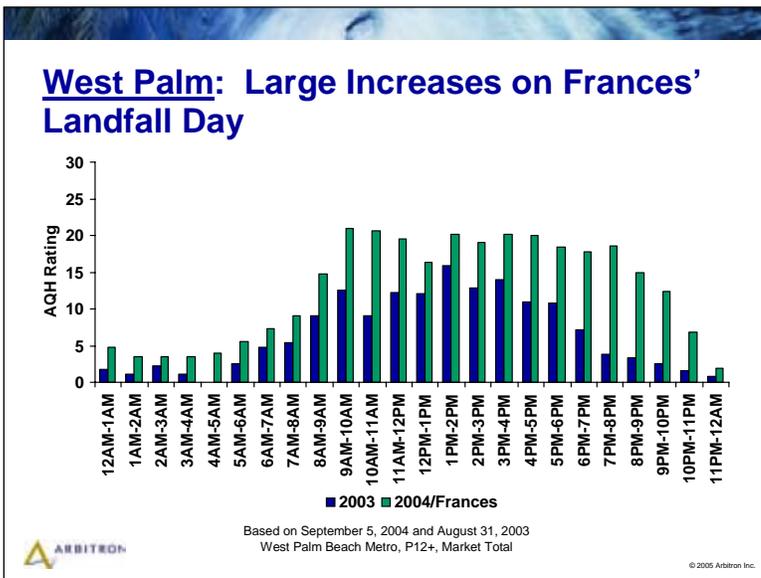
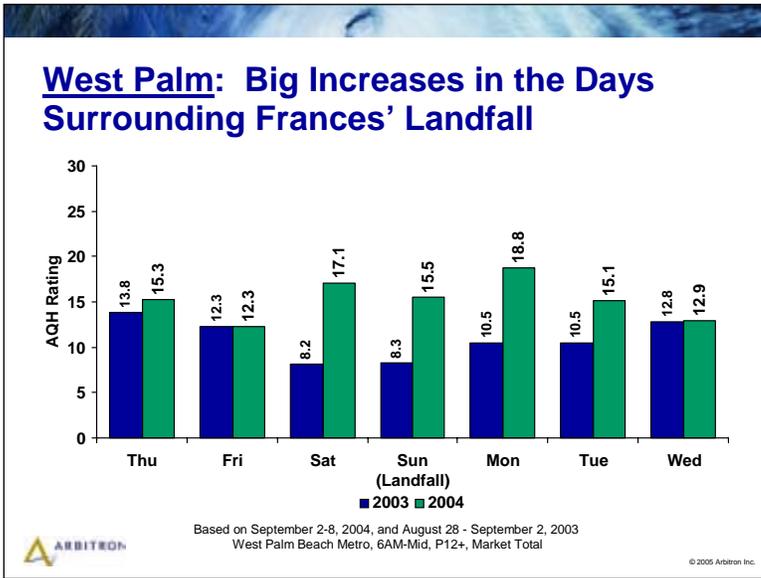
Beasley Broadcast Group	Miami
Clear Channel	Miami, Mobile, Orlando, Tampa and West Palm Beach
Cox	Miami, Orlando and Tampa
Cumulus	Mobile
Dittman Group	Mobile
Gross Communications	Orlando
Infinity Broadcasting	Orlando, Tampa and West Palm Beach
Jefferson-Pilot	Miami
Mega Communications	Tampa
Palm Beach Broadcasting	West Palm Beach
Spanish Broadcasting System	Miami
Univision	Miami
ZGS Broadcast Holdings	Tampa

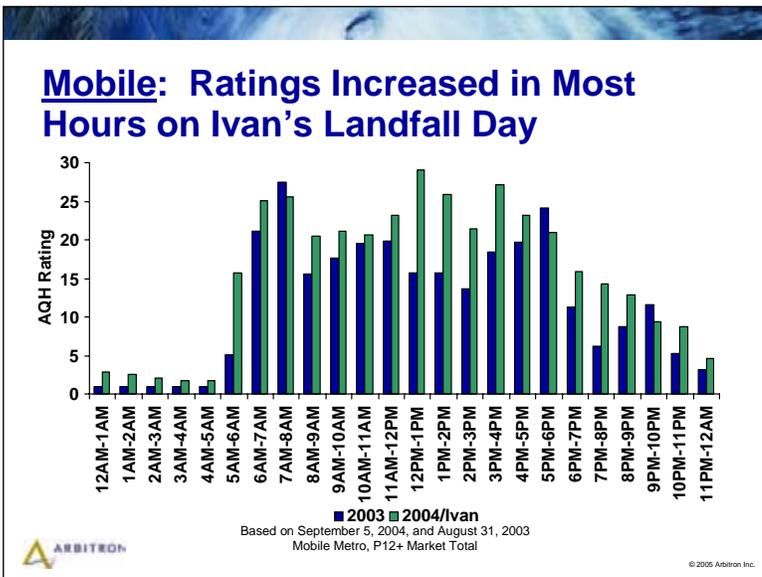
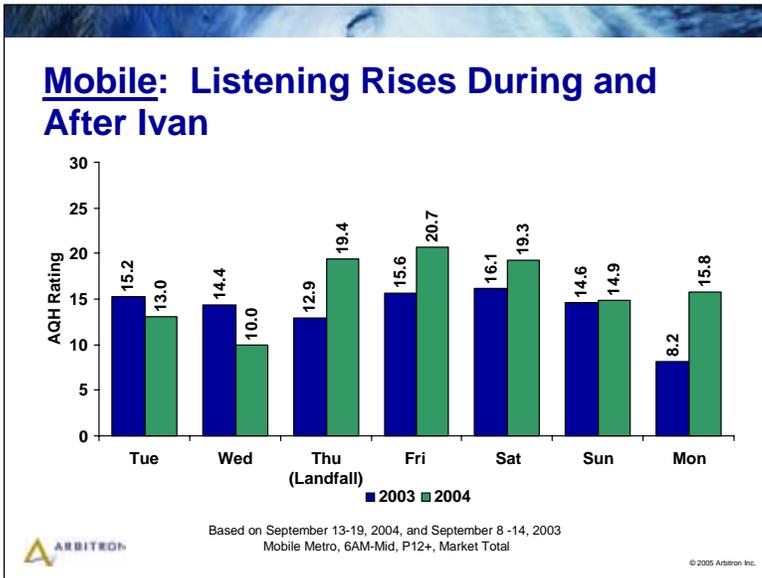
Appendix

Each market analyzed for this survey has two charts: The first shows *daily* AQH Ratings for the seven days surrounding the storms; the second shows *hourly* listening on what is considered landfall day. In many cases, it takes examination of the hourly listening to see the change in listening levels around the storms.









More diary comments provide insight into how listeners use radio—and their diaries—during the storms.

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 08/09
 Survey: SU04 Phase:3 County:(9799) PALM BEACH REM BALANCE
 01-05-2005 09:13:48 Diary ID:007085987902 User ID:EDPPRODW

Quick questions...
For you
 The following questions apply to you yourself. Each household member should complete these questions in his or her own diary. Your answers will be kept in the strictest confidence.

1 What is your age?
 [60] years

2 Are you male or female?
 [M] Male [F] Female

3 Where do you live?
 City Boca Raton
 County Palm Beach
 State FLORIDA ZIP 33416

4 Are you employed either full time or part time?
 [Y] Yes [N] No
 If yes, how many hours per week are you usually employed? Mark it on [35] or more
 What is the ZIP code at your usual place of work?
 [33416]

5 What was the last grade of school you completed?
 Mark it on [105.5] or more
 Less than 12th grade
 High school graduate or GED
 More than 12th (some colleges)
 Bachelor's degree or higher

6 Thinking back 6 months ago, what radio station did you listen to the most at that time? Write down call letters, and rating or station name. Mark it AM or FM.
 [105.5] AM
 [WRRF] WRRF (WRRF) WRRF

7 How many children under age 12 live in this household?
 Enter number None of children

8 Which of the following categories best describes your total household income from all sources (before taxes) for the past year? Mark it on [35,000 - \$40,000]
 Less than \$20,000
 \$20,000 - \$40,000
 \$40,000 - \$70,000
 \$70,000 or more

Your opinion counts
 Use this space to make any comments you like about specific stations, announcements or programs.
 This diary may not truly be a true portrayal of our radio listening behavior, since we are under a "hurricane Frances" warning and we are busy shuttering windows & preparing - No time for listening other than emergency storm tracking etc.

This diarykeeper gets specific about what kinds of activities keep him from listening to radio, including shuttering the windows of his home.

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 04/09
 Survey: SU04 Phase:3 County:(9799) PALM BEACH REM BALANCE
 01-05-2005 09:05:20 Diary ID:007085057901 User ID:EDPPRODW

SATURDAY

	Time		Station	Mark it on		Mark it on		
	Start	Stop		AM	FM	At Home	At Work	Other Place
Early Morning (from 5 AM)	10:00	:	WRRF 99.9 (Cable TV out -)	✓	✓			
Midday	:	:	EMERGENCY info on Hurricane					
Late Afternoon	:	:						
Night (to 5 AM Sunday)	:	11:00						

If you didn't hear a radio today, please mark (X) here.

Day Start Stop Station QHrs Loc ID Method
 Sat 10:00 AM 11:00 PM WRRF F 52 1 CF

Radio is a more dependable medium in the event of power loss and other disruptions. Even with electricity on, cable television can still go out.

ARBITRON Client Services USER ID:EDPPROOW 01-05-2005 Page 03/09
 Survey: SU04 Phase:3 County:(1797) MOBILE BALANCE
 01-05-2005 09:06:29 Diary ID:007053099101 User ID:EDPPROOW

FRIDAY							
Time	Station		Place		Start/Stop		Call letters, call setting or station name Start time/ The program name
	Start	Stop	AM	PM	At Home	At Work	
Early Morning (from 5 AM)	:	:					
Midday	12:00	1:00					Local News & Hurricane Coverage
Late Afternoon	:	:					
Night (to 5 AM Saturday)	:	:					

If you didn't hear a radio today, please mark (X) here.

Day Start Stop Station QHrs Loc ID Method
 Fri 12:00 PM 01:00 PM WMXC F 4 2 0

This diarykeeper noted that they were listening to the music station but hearing hurricane coverage. As cited in "The Survey Process at Arbitron" section of this study, most diarykeepers continued to identify their radio listening by station call letters, frequencies and/or Station Names. Of the few entries including a reference to the storm or one of the hurricanes (as in the example to the left), these entries *also included* an additional station descriptor that clearly identified the station to which the diarykeeper was listening.

ARBITRON Client Services USER ID:EDPPROOW 01-05-2005 Page 05/09
 Survey: FA04 Phase:1 County:(5609) PALM BEACH REM HDBA
 01-05-2005 09:08:57 Diary ID:007146811501 User ID:EDPPROOW

SUNDAY							
Time	Station		Place		Start/Stop		Call letters, call setting or station name Start time/ The program name
	Start	Stop	AM	PM	At Home	At Work	
Early Morning (from 5 AM)	9:00	:					Walt Disney
Midday	:	:					for a good part of the day, only those talking about the storm were heard
Late Afternoon	:	:					primarily 3 stations, hard to see dist in the dark & did not
Night (to 5 AM Monday)	:	:					

If you didn't hear a radio today, please mark (X) here.

Day Start Stop Station QHrs Loc ID Method
 Sun 09:00 AM 11:00 PM UUUUA 56 1 0

It's not often that cases of Unidentified Listening happen because the listener is changing stations in the dark!

ARBITRON Client Services USER ID:EDPPRODW 01-05-2005 Page 04/08
 Survey: SU04 Phase:3 County:(9799) PALM BEACH REM BALANCE
 01-05-2005 09:06:08 Diary ID:007086020101 User ID:EDPPRODW

SATURDAY									
	Time		Station	Mark/Class		Mark/Class			
	Start	Stop	Call letters, did nothing or station name Start time/ the program name	AM	FM	AM	FM	TV	Other
Early Morning (from 9 AM)	6:30	:	WRMF 7.7.7						
	:	:	Simulcast with						
	:	:	Channel 5 TV						
Midday	:	:	for hours						
	:	:	information						
	:	:							
Late Afternoon	:	:							
	:	:							
	:	:							
Night (to 9 AM Sunday)	:	10:30							
	11:00	5:00							
	:	:							

If you didn't hear a radio today, please mark here.

Day	Start	Stop	Station	QHrs	Loc	ID Method
Sat	06:30 AM	10:00 PM	WRMF F	62	1	0
Sat	04:00 AM	05:00 AM	WRMF F	4	1	8

Diarykeepers seemed to understand exactly what they were listening to—in this case, a simulcast of a television station on their radio frequency. When a television reference is included in an entry that also includes a radio station descriptor, then that radio station is credited with the listening. If the entry includes only a TV reference (for example, “TV Channel 5”), then that entry is considered only television viewing and is not included in Persons Using Radio (PUR) estimates.



New York

142 West 57th Street
New York, NY 10019-3300
(212) 887-1300

Chicago

222 South Riverside Plaza
Suite 1050
Chicago, IL 60606-6101
(312) 542-1900

Atlanta

9000 Central Parkway
Suite 300
Atlanta, GA 30328-1639
(770) 668-5400

Los Angeles

10877 Wilshire Boulevard
Suite 1600
Los Angeles, CA 90024-4341
(310) 824-6600

Dallas

13355 Noel Road
Suite 1120
Dallas, TX 75240-6646
(972) 385-5388

Washington/Baltimore

9705 Patuxent Woods Drive
Columbia, MD 21046-1572
(410) 312-8000

Birmingham

3500 Colonnade Parkway
Suite 400
Birmingham, AL 35243