

NOAA Weather Radio

NOAA WEATHER RADIO NEEDS MARKETING!

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ABSTRACT

The author demonstrates, using telephone and shopping mall surveys, and by questioning some leading retailers of radio receivers, that public understanding of NOAA Weather Radio has suffered from lack of advertising and promotion by the National Weather Service. Practical suggestions, in increasing public awareness of NWR, are outlined.

1. INTRODUCTION

The National Weather Service (NWS) provides weather information to the general public, the media, and to agriculture, aviation and marine interests. Its most important function, however, is the saving of lives through weather warnings to the general public. One of the means the NWS uses to disseminate warnings is NOAA Weather Radio.

Most National Weather Service (NWS) offices prepare NOAA Weather Radio (NWR) broadcasts, 3–6 minute continuous VHF-FM broadcasts on tape, for use 24-hours per day. A radio having the 162.46–162.55 MHz band is needed for reception. Content of the broadcast is tailored by each office to meet user needs, and ranges from general weather and observations to forecasts, marine information, and special weather warnings when needed.

2. DISSEMINATION OF WEATHER INFORMATION

The role of television and radio in disseminating weather information to the general public is of utmost importance; also, the rapid technological advances and the emergence of cable television brought about an increase in public awareness of detailed National Weather Service forecasts that were available but not normally distributed.

National Weather Service forecast exposure has been increased in recent years by the Weather Channel in Atlanta, GA; it has brought the detailed NWS forecasts to much of the general public through the medium of cable television. Prior to cable television, the needs of many segments of the population were not being served, despite radio and television coverage. The need for more detailed information, such as wind, sky cover, and humidity for both the general public and industry, was growing. Certain industries such as the cotton and fruit-growing rely heavily on detailed weather information; they are rarely served by the 2-minute weather forecasts offered by private services, geographically removed from the location they serve, and unaware of the local climate and terrain influences. There was a need for more current and detailed weather information.

3. NOAA WEATHER RADIO

In October 1970 the Environmental Science Services Administration (ESSA) became the National Oceanic and Atmospheric Administration (NOAA); the National Weather Service now a part of NOAA, continued as the government's sole provider of weather forecasts to the general public. With the need for weather

information growing, NOAA received funding to develop a continuous radio information source which at first was geared to meet only the needs of the maritime community. NOAA's VHF-FM continuous weather broadcast became a reality when a number of coastal cities along the Atlantic, Gulf, and Pacific Coasts were selected as pilot sites for the continuous broadcast. It could be received only with a special weather radio because the frequencies chosen were not in the public AM or FM bands. Also, weather radios were not readily available since only a few companies produced limited quantities. Thus, with limited public awareness and few retail outlets for receivers, NOAA Weather Radio grew slowly. The small amount of advertising done by NOAA was done at trade fairs and marine shows. Badly needed, was NOAA Weather Radio advertising that would reach the average household.

As the number of permanent and seasonal residents increased along our coastline, and coastal property increased in value, weather information was becoming more important to that segment of the population. Recreational boating interests and the offshore fishing industry put pressure on local representatives for better service from the National Weather Service, because of the growing need for more specialized marine weather information.

The middle and late 1970's brought an expansion of the NOAA Weather Radio network to almost every area of the country, including Alaska, Hawaii and Puerto Rico. Now, over 350 broadcasts originate from weather offices throughout the United States and related territories. As broadcast stations were added, more radio manufacturers began to include the weather band on their radios. Seven VHF-FM frequencies exist, each serving an area with a radius of about 40 mi; reception depends on location, terrain, type of receiver, and height of the transmitter. Transmitted information covers: public weather forecasts; hourly weather at selected cities; degree-day and climatological information; agricultural weather; coastal and offshore marine forecasts; general weather stories and summaries; weather statements and warnings dealing with severe thunderstorms and tornados; and warnings of winter weather hazards. Also included are hourly network and local-warning radar reports and special event forecasts. Most offices broadcast information 24-hours-a-day, 7-days-a-week and broadcasts are revised every 1 to 3 hours. The broadcast information is tailored to meet specific needs of the particular user population in a given area.

In January 1975, a White House policy statement designated NOAA Weather Radio as the sole government operating system to provide direct warnings to private homes for both natural disasters and nuclear attack; NWR was to be supplemented by commercial radio and television. During severe weather or in the case of a weather warning, National Weather Service personnel can interrupt regular cycling of the broadcast and transmit a twenty-second "warning" tone, which activates those receivers with "tone alert" capability. Those receivers either sound an alarm, indicating that a life-threatening situation exists, or when operated in a muted mode, automatically turn up the volume.

4. NEED FOR NOAA WEATHER RADIO

During the late 1970s and early 1980s, as NWR continued to expand, many cable television markets signed agreements with local NWS offices to rebroadcast or retransmit the broadcast on their local information channel as an audio while local weather data was being shown on the screen. A few AM radio stations, not served by private meteorologists and not having access to the local weather wire, also retransmitted the broadcast. This, in part, served to increase the visibility of the program and the National Weather Service, and subscribers with local weather data channels had the opportunity to "hear" the National Weather Service and become familiar with the broadcast.

Along with the rapid expansion of cable television during the early 1980's, came the idea to provide instant weather information to a large segment of the population who had previously relied on local broadcasters. John Coleman, former television meteorologist, initiated a cable-oriented 24-hour 7-days-a-week TV channel devoted entirely to domestic and world-wide weather information. Staffed by more than 60 professional meteorologists, the Weather Channel served a segment of the population that NWR did not reach. The Weather Channel, carried by a large number of cable companies, transmits detailed NWS forecasts and warnings to a large segment of the population. The need for more weather information was met by sound business analysis; identifying a demand and then through advertising, marketing a product or service and thereby meeting that demand. Mr. Coleman is now gone, but the success of the Weather Channel seems to indicate that the mass-marketing of a product, increasing the number of outlets, is one of the means a company, in this case the National Weather Service, should consider if it wants to achieve visibility with the general public. The concept of NWR is excellent, but many more steps must be taken by the National Weather Service to make NWR a widely used and well-recognized product in the average American household.

5. PUBLIC AWARENESS OF NOAA WEATHER RADIO—THE SURVEYS

In an attempt to obtain an insight into how well the National Weather Service has "sold" NWR to the general public, the author conducted two informal telephone surveys and a shopping mall survey. The telephone surveys were taken during the operational 1300–2300 GMT day shifts on the Boston NWS public access line as individuals called for weather information. The survey taken on Tuesday, October 15, 1985, was believed to be random and representative since the days before and after holidays (Columbus day) are unusually busy phone-wise and the calls were not solicited. The second survey, taken on Monday, November 4, 1985, was also considered representative as it was the day before State elections and rain was in the forecast, making for a large number of calls into the office.

Three questions were asked of the callers: 1. Are you aware of the National Weather Service and what it does? 2. Have you viewed on commercial or cable television or heard direct mention of a National Weather Service forecast on the radio? 3. Do you know about NOAA Weather Radio, the National Weather Service's continuous weather broadcasts? The wording and the survey results are given in Table 1.

Twenty calls were taken on Tuesday, October 15 and twenty-one calls on Monday, November 4. On Question 1, 75% and 86% of the people, respectively, said they were familiar with the National Weather Service, its function and what it did. Of the eight callers who said they were not familiar, four respondents claimed they did not even know whom they were calling, having been referred to the telephone number by an operator, or an acquaintance.

On Question 2, 65% and 71% respectively stated that they had associated the National Weather Service with a current weather

Table 1. Questions and responses from telephone surveys of October 15, 1985 and November 4, 1985.

	Tuesday Oct. 15, 1985	Monday Nov. 4, 1985
	20 calls	21 calls
1. Are you aware of the National Weather Service and what it does?		
2. Have you seen on commercial or cable television or heard direct mention of a National Weather Service Forecast on the radio?		
3. Do you know about NOAA Weather Radio, the National Weather Service's continuous VHF-FM broadcast?		
	20 calls	21 calls
Question 1—75% Yes	25% No	86% Yes 14% No
Question 2—65% Yes	35% No	71% Yes 29% No
Question 3—20% Yes	80% No	24% Yes 76% No

forecast; those who responded "Yes", were asked where the forecast had been seen or heard. Slightly more than 50% said they saw the forecast on the Weather Channel. The people that heard the forecast primarily on the radio, stated that most of the time it was in connection with severe weather or a severe weather warning. Almost all respondents claimed they never heard the National Weather Service mentioned in connection with forecasts viewed on the major television stations in the Boston market. On Question 3, perhaps the most important question, being familiar with NWR, only 20% on the 15th, and 24% on the 4th, said they had heard of it! This was a surprisingly low number considering that most callers were aware of the National Weather Service and its functions. The telephone surveys sampled a small number of people and were taken on 2 days, but the results seem to indicate that the NWR, does suffer from a lack of exposure among the general public.

In an additional attempt to determine the public's knowledge of NWR, the author sampled shoppers at a local shopping mall on Friday, November 14, 1986 (Table 2). The shopper's poll represented an effort to measure how well the NWS had promoted NOAA Weather Radio. The results clearly indicate that the National Weather Service has not adequately marketed NWR, a most valuable product and service, to the general public.

6. MARKETING IDEAS FOR NOAA WEATHER RADIO

The NOAA office of Public Affairs publishes material for the general public and related users (2,3,4,5), but generally the material does not leave the local NWS office. What is needed, are ways to distribute information to the general public. Use of existing NWS resources and manpower in the participation of local shopping mall exhibits and events would be fruitful in highlighting the Weather Service's products and responsibilities. Automobile makers should be encouraged to include NOAA weather frequencies in car radios in future model years. The availability of these frequencies would stimulate an increased usage, providing the NWS with a dramatic increase in exposure. Advertising NWR capabilities in local newspapers and publications would certainly boost its use and availability. Interested groups, convinced of its usefulness, would subsidize the cost of the ads. Finally, the NWS should consider the creation of a "sales" position; the person operating in this capacity would be responsible for informing the public of the services and information available at the NWS and from the NWR.

Other agencies, such as the Federal Emergency Management agency (FEMA), publish related weather material in cooperation with the National Weather Service (6). Other agencies and private manufactures might enter into cooperative agreements with

Table 2. Questions and responses from a survey of 29 people conducted at a local shopping mall on the afternoon of Friday, November 14, 1986.

1) Do you own a weather radio for obtaining weather information for your personal use?	No—79%	Yes—21%
2) Are you aware that certain stores sell radios designed to receive weather information?	No—38%	Yes—62%
3) Have you recently seen an advertisement for these radios?	No—93%	Yes—7%
4) If you own a weather radio, do you know who does the broadcast you hear on the radio?	No—17%	Yes—83%
5) If you own a weather radio, do you know where the broadcast comes from?	No—50%	Yes—50%
6) If you own a weather radio, do you know about the warning alarm and its purpose? (6 owners)	No—50%	Yes—50%
7) Did you ever hear of the National Weather Service?	No—7%	Yes—93%
8) If you have heard of the National Weather Service, do you know what it does?	No—52%	Yes—48%
9) Have you ever seen or have you ever heard direct mention of the National Weather Service in connection with a weather forecast?	No—65%	Yes—35%
10) Where do you get most of your weather information?		
Television—68%	Radio—24%	
Weather Channel—4%*	Weather Radio—4%	

*The survey was conducted in a community where the local cable company does not feature the Weather Channel at this time. It is received by some of the surrounding communities.

the National Weather Service to "advertise" NWR. Clearly, the NWS must make an attempt to gain recognition through joint or cooperative advertising or name promotion with companies that manufacture products that provide weather information and utilize its data. In a recent advertisement for weather radios at Radio Shack (7), no mention of the National Weather Service appeared in the ad.

In a brief telephone survey taken the morning of Wednesday, November 15, 1985, the author contacted five greater Boston area Radio Shack Stores. Two questions were asked of the store managers:

- 1) Have you had any representative from the National Weather Service contact your store regarding a joint promotion of the weather radio and the National Weather Service?
- 2) Would you welcome a promotional program?

All five store managers responded No to question 1 and Yes to question 2. Four of the five store managers suggested that the author call the Boston area District Manager. In conversation with the managers, it was determined that such a promotional program would be welcomed.

NOAA Weather Radio has been brought into many highway rest areas in several states throughout the country through the cooperation of the Federal Highway Administration and the National Weather Service. This is a good example of joint promotion and serves to increase the public's knowledge of NWR.

The idea is a good one and should be expanded, assuming state and federal highway funds continue at current levels.

In a very successful advertising campaign, the warning preparedness meteorologist from the National Weather Service Office in Lubbock, Texas, promoted NWR through the local Radio Shack store. The author is familiar with the Lubbock area, having spent part of his met intern training time at the WSFO in Lubbock. While in Lubbock, the author noted that a high level of weather awareness existed in the Texas panhandle and surrounding areas; many newspapers, radio and television stations cooperated excellently with the Lubbock Forecast Office and the Disaster Preparedness meteorologist. This type of awareness, present only to a small degree across the New England area, can only be heightened through advertising and promotion of NWS products and services.

The Disaster Preparedness program initiated by the National Weather Service during the middle 1970s served an important function—that of selling—to local and federal officials, schools, hospitals, churches, and most importantly, the general public, the need to be prepared for catastrophic weather events. The individual doing that job was often "on the road" not only acting as liaison with the local media and officials, but attending local exhibits that advertised NWR. However, a curtailment of funds by congress during the late 1970's and in the 1980's forced the National Weather Service to eliminate the position. The Disaster Preparedness job was shared by shift workers who had little time to "sell" services and products. During 1984, the author served in this capacity at the Boston WSFO. A program should be funded to allow the National Weather Service to expand its publicity efforts.

The NOAA Office of Public Affairs is responsible for supplementing local awareness at the national level, often in cooperation with "open house" days at the local NWS office. This gives the general public a chance to become familiar with operations at a weather office including NWR. One question arises, how many times has a NWS office held an open house during the week, usually when very few can attend? Are we informing the public and are we promoting our services? The public needs to "see" a weather office, not just hear what it puts out. The NWR needs to become a "visible" product and service, but will only accomplish it through advertising. The National Weather Service seems to be isolating itself and its meteorologists from the general public, a move in the wrong direction.

While promotion and advertising are organizational marketing functions, and in this case the responsibility of the National Weather Service Headquarters, much more promotion and advertising can be done by the local weather offices. The author has done some limited promoting of NOAA Weather Radio on his own. Handouts on the program were distributed to individuals in connection with his survey, and the local newspaper was contacted on the idea of running an NWR story. The local cable company was also contacted in an effort to place a small "crawl" or ad on the community bulletin board. The author contacted a local Radio Shack store in an effort to advertise the NWR program in connection with sales of their weather radios. During the holiday season, public service posters can be placed in many retail stores in connection with NWR. Many such possibilities exist; the National Weather Service must expand its promotional efforts to accomplish this task.

7. SUMMARY AND CONCLUSION

Several surveys were conducted to gain some knowledge of the general public's awareness of the NOAA Weather Radio program. The results showed that very few people were aware of NWR. Perhaps the most important question asked to test the author's hypothesis—that the majority of the general public does not know about this program because of poor promotion—was

whether or not the individual had seen an advertisement for these radios. According to the mall survey results, 93% said that they had never seen any advertisement. While the samples were not large, the author feels that each survey was reasonably representative. Therefore, even though a large percentage of the general public sampled (93% from the mall survey) knew about the National Weather Service, most of the people did not know about the NWR program owing to the lack of advertising and promotion.

The National Weather Service should increase its promotional and advertising efforts for NWR through the full-funding of its Disaster Preparedness Program, a vital link to the general public; meteorologists at each weather office may wish to undertake promotional programs of their own in their respective communities. There is some evidence that large local retailers of weather radios will cooperate. In this time of tight budgets, it may be difficult to carry on successful promotional and advertising campaigns; however, it needs to be done since NWR can carry the message of a potential life-saving warning to every household in the United States. Indeed, every household in the country should have a weather radio.

NOTES AND REFERENCES

1. Mr. Degregorio is a General Forecaster at the Boston Weather Service Forecast Office. He graduated with a B.S. degree in Meteorology from Lowell Technological Institute in 1971 and worked for the Internal Revenue Service before entering the National Weather Service as a Met Intern at Lubbock, Texas in November 1973. Mr. Degregorio worked as a CWSU meteorologist at the FAA Air Traffic Control Center in Nashua,

New Hampshire from 1978 to 1980 before returning to the Boston Forecast Office.

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