



Enabling Residents to Hear and Heed Severe Weather Warnings

Full Mitigation Best Practice Story

Portage County, Wisconsin



Portage County, Wisconsin has a population of approximately 70,000 residents living in an area that is 62 percent urban and 38 percent rural (agricultural areas that are geographically separated). With 11.9 percent of the population 65 years old or older, there was concern that some residents might not be able to hear the County's warning system regarding impending severe weather. Recognizing the deficiency in the ability to warn the elderly and individuals living in rural areas, the County's emergency management coordinator came up with the idea of purchasing weather radios.

"We have a lot of residents living in mobile homes in rural areas and we have a substantial number of elderly residents. These individuals are significantly at risk," said Sandy Curtiss, Emergency Management Coordinator. "They don't always hear the warnings."

To remedy the problem, the County applied to Wisconsin Emergency Management for a grant under the Federal Emergency Management Agency's (FEMA's) Hazard Mitigation Grant Program (HMGP) to purchase 150 National Oceanic and Atmospheric Administration (NOAA) All Hazards Weather Radios. The project was initiated following a 2002 presidential declaration for a windstorm event and the total project cost was \$6,951.50. The HMGP grant totalled \$5,200. The Non-federal share was \$1,700 (the State and local governments paid \$850 each). The County also paid an extra \$51.50 for a cost overrun.

What is a NOAA All Hazards Weather Radio? The National Weather Service (NWS) provides local weather broadcasts, called NOAA Weather Radio, from over 700 different transmitters nationwide. It is estimated that over 85 percent of the population now resides within the service area of at least one transmitter. NOAA Weather Radio is a service of NOAA of the U.S. Department of Commerce. As the "Voice of the National Weather Service," it provides continuous broadcasts of the latest weather information from local NWS offices. Weather messages are repeated every 4 to 7 minutes, and are routinely updated every 1 to 3 hours or more frequently in rapidly changing local weather, or if a nearby hazardous environmental condition exists. This service operates 24 hours a day.

The regular broadcasts are specifically tailored to weather information needs of the people within the service area of the transmitter. For example, in addition to general weather information, stations in coastal areas provide information of interest to mariners. Other specialized information, such as hydrological forecasts and climatological data, are also broadcast.

During severe weather, NWS forecasters can interrupt the routine weather broadcasts and insert special warning messages concerning imminent threats to life and property. The forecaster can also add special signals to warnings that trigger "alerting" features of specially equipped receivers. This is known as the tone alert feature, and acts much like a smoke detector in that it will send an alarm when necessary to warn of an impending hazard. In the past, ALL receivers equipped with the tone alert feature within the listening area would alarm anytime a warning was issued. However, the advent of Specific Area Message Encoding (SAME) technology permits newer receivers to alarm only if a warning is broadcast that pertains to a particular location. The newer receivers allow individuals to choose the warning locations the receiver will target.

Why purchase a NOAA All Hazards Weather Radio? Under a January 1975 White House policy statement, the NOAA All Hazards Weather Radio was designated the sole government-operated radio system to provide direct warnings into private homes for both natural disasters and nuclear attacks. This concept is being expanded to include warnings for all hazardous conditions that pose a threat to life and safety, both at a local and national level.

As one of the backbones of the NWS communications system, the NOAA All Hazards Weather Radio is the easiest way to get around-the-clock weather information. Each transmitter broadcasts current weather conditions, forecasts, special statements, and weather watches and warnings for a specific area.

Special NOAA All Hazards Weather Radio SAME receivers have features useful to people who are deaf or hard of hearing, such as an output to activate external devices. These radio receivers can be programmed to set off an alarm for specific events (e.g., tornado, flash flood, toxic spill, evacuation, etc.) and specific locations of interest. They are equipped with special output connectors that activate alerting devices - bed shakers, pillow vibrators, sirens, and strobe lights or other alerting systems.

Residents in Portage County thought the idea to be well-founded. "With just one press release the radios went like hot cakes," said Curtiss. "We drafted a flyer on how to use the radio and we gave a back-up battery (because the radio is electric) to each recipient." Now 150 additional families will have first-hand information regarding emergency situations, which will enable them to take the necessary actions to protect their lives and property in a much timelier manner.

For additional information, check with your local NWS office or visit the Internet site to determine if your county is covered by NOAA Weather Radio. NWS watches and warnings are also available on the Internet by selecting your local NWS office at www.nws.noaa.gov/nwr or by going to the NWS home page.

Activity/Project Location

Geographical Area: **Single County (County-wide)**

FEMA Region: **Region V**

State: **Wisconsin**

County: **Portage County**

Key Activity/Project Information

Sector: **Public**

Typhoon; Winter Storm; Severe Storm; Tornado; Earthquake; Flooding; Hurricane/Tropical Storm; Extreme Temperatures; Fire; Mudslide/Landslide; Nuclear; Terrorism; Tsunami; Volcano; Wildfire; Virus Threat; Drought; Chemical/Biological; Coastal Storm; Dam/Levee Break;

Hazard Type: **Technological; Industry Hardship; Emergency Planning and Security**

Activity/Project Type: **Warning Systems**

Activity/Project Start Date: **02/2003**

Activity/Project End Date: **06/2003**

Funding Source: **Hazard Mitigation Grant Program (HMGP)**

Funding Recipient: **Property Owner - Residential**

Application/Project Number: **1432.01-F**

Activity/Project Economic Analysis

Cost: **\$6,951.00 (Actual)**

Non FEMA Cost: **1700**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**

Federal Disaster #: **1432 , 09/10/2002**

Federal Disaster Year: **2002**

Value Tested By Disaster? **Unknown**

Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: <http://www.nws.noaa.gov/nwr>

Main Points

No Main Points were entered.



One style of a NOAA All Hazards Weather Radio. The price range of the radios is \$20 to \$200.