

STATE OF OHIO EMERGENCY OPERATIONS PLAN



EMERGENCY SUPPORT FUNCTION # 2 COMMUNICATIONS AND INFORMATION TECHNOLOGY

TAB A – OHIO WARNING PLAN

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COMMUNICATIONS AND INFORMATION TECHNOLOGY

TAB A – OHIO WARNING PLAN

I. PURPOSE

- A. The purpose of this plan is to describe the process for the dissemination of warning information throughout the State of Ohio and to define and outline the responsibilities of the Federal Emergency Management Agency (FEMA), the Ohio Emergency Management Agency (EMA), the Ohio State Highway Patrol and the applicable National Oceanic and Atmospheric Administration (NOAA) Weather Service Offices, relating to the operation and utilization of the existing Ohio warning systems.
- B. In this Plan, special attention is given to the use of the National Warning System (NAWAS), NOAA Weather Radio, Ohio EMA Weather Paging System, Ohio Emergency Alert System (EAS), State of Ohio Rain/Snow Monitoring System (STORMS), Weather Emergency Notification System and the Law Enforcement Automated Data System (LEADS), County Notification System, for the dissemination of information of impending disaster, man-made or natural.

II. SITUATION

- A. There are two NAWAS warning points in Ohio; one is at the State of Ohio Emergency Operations Center in Columbus, Ohio and the other is at the Ohio State Highway Patrol Post in Cambridge, Ohio.
- B. National level warnings will be received from the Federal Emergency Management Agency (FEMA), over the NAWAS system, or other federal notification systems.
- C. National Weather Service weather watches and warnings are automatically relayed to Ohio EMA and transmitted over weather radio and the NOAA weather wire.
- D. The Ohio warning network is comprised of NAWAS, LEADS, NOAA Weather Radio, STORMS, Ohio EMA Pager System, County Notification System and EAS. Each of these systems is designed to operate on a 24-hour basis.
- E. Operational telephone, radio and data communications systems are used to assist in the dissemination of warnings to the general public.
- F. LEADS terminals are in place in all County Sheriffs' Offices.
- G. County warning plans outline the dissemination of warnings from the County Sheriff to the general public and all county agencies.

- H. Local print and broadcast media are used to assist in the dissemination of warnings to the general public.

III. ASSUMPTIONS

- A. The use of NAWAS, LEADS, NOAA Weather Radio, Emergency Alert System (EAS) and other supplemental warning networks will be required to rapidly disseminate warning information.
- B. County warning systems and procedures exist for the dissemination of warnings throughout individual counties once a County Sheriff has been notified.
- C. Warnings will be disseminated prior to equipment failure directly resulting from the effects of a disaster.

IV. CONCEPT OF OPERATIONS

A. General

- 1. An effective warning system must provide for the receipt and dissemination of warnings on a 24-hour/day basis.
- 2. Each of the 88 Ohio County Sheriffs is able to receive NAWAS warnings from the two State-level Warning Points.
- 3. In addition to this Plan, Ohio EMA's Technical Support Division maintains in a separate Plan:
 - a. A Roll Call Response Checklist for Warning Points within the State of Ohio.
 - b. A County Sheriff Notification List that lists the telephone contact numbers for State Highway Patrol and County Sheriffs' offices.
 - c. A list of NOAA Weather Radio Stations' locations and frequencies.
 - d. A NAWAS test form.
 - e. A NAWAS Warning Fan-Out contact schematic.

B. Direction and Control

- 1. National Warning System
 - a. The national warning center is located in a combat operations center at the North American Air Defense (NORAD) command headquarters at Colorado Springs, Colorado. National warnings originate from this facility.

- b. An alternate national warning center is located in Maryland and can assume the functions of the national warning center when necessary.
- c. Sources of Warning Information
 - i. The National Weather Services (NWS) of the U.S. Department of Commerce, NOAA is the government agency responsible for the declaration and dissemination of “Severe Weather Watches and Warnings.” Weather warning information is distributed direct from the National Weather Service over the NOAA weather radio and weather wire. An agreement between FEMA and NOAA provides for the utilization of NAWAS by weather service offices for the dissemination of severe weather watches and warnings.
 - ii. The National Earthquake Information Center, U.S. Geological Survey, Department of the Interior provides earthquake information.
 - iii. An agreement between the National Weather Service of the U.S. Department of Commerce and the Ohio EMA provide the state EMA and county EMA the ability to disseminate non-weather related warning messages over the NOAA weather radio system.
 - iv. Non-weather related warnings for the state of Ohio can originate at the state level or counties.
- d. Types of Warnings
 - i. Warnings of a disaster or emergency, such as a tornado, storm, flood, high-water, wind-driven water, earthquake, landslide, mudslide, snow storm, fire, explosion, peacetime nuclear incident, aircraft crash or other potential hazards to the public’s health, safety and property will follow a specific area message encoder format.
 - ii. Warning titles will follow those outlined for use by the National Weather Service and EAS, specified in the Federal Communications Commission (FCC) EAS Rules and Regulations. These warning codes can be found in the State of Ohio’s EAS Plan.
- e. Warnings will be disseminated simultaneously by the national warning center to all warning points on the National Warning System (NAWAS) or when required by the alternate national warning center.
- f. The State of Ohio’s primary warning point is located at the State Emergency Operations Center/Joint Dispatch Facility (EOC/JDF), Ohio State Highway Patrol Dispatch Center, 2855 West Dublin Granville Road, Columbus, Ohio 43235-2206, telephone 614 466-2660.
- g. The Alternate Warning Point in the State of Ohio is located at the Ohio State Highway Patrol, Cambridge District Headquarters, 7051 Glenn Highway Road, Cambridge, Ohio 43725, telephone 614 439-1388.

- h. Receipt and Dissemination of National Warnings
 - i. Peacetime Disaster Messages, National Warnings or Special Emergency Information. The national warning system may be used for national warnings, peacetime disaster messages or for the relay of special emergency information or announcements. All messages must be short, but give all essential information. In most instances, the usage would involve only state and local portions of the system. This information may originate either above or below a warning point.
 - ii. Peacetime disaster warnings in Ohio are usually the result of severe winds, rain, snow, thunderstorms, floods, earthquakes, tornadoes, peacetime nuclear incidents, and air craft crashes, chemical spills, all of which are threats to the public's health, safety and property.
 - iii. After determining that a national warning or peacetime disaster message should be issued, the national warning center will disseminate the warning simultaneously to all warning points on NAWAS.
 - iv. As soon as the Ohio warning point receives a warning, the State warning point operator will immediately disseminate the warning over LEADS and call the role of the warning points within the state to announce the warning.
 - v. The Ohio EMA duty officer will be immediately notified of any warnings received over NAWAS.
- i. Use of NAWAS by the National Oceanic and Atmospheric Administration (NOAA)
 - i. When necessary, the Weather Service Forecast Offices (WSFO) in Cleveland, Wilmington, Pittsburgh PA or Charleston WV, may determine that a weather warning should be transmitted over NAWAS.
- j. Termination of NAWAS Warnings
 - i. As soon as the Ohio warning point receives a NAWAS warning termination announcement, the state warning point operator will immediately call the roll of the warning points within the state and announce the warning termination. Dissemination of the termination will also be made over LEADS.

2. NOAA Weather Radio

- a. Ohio has partnered with the National Weather Service to create statewide National Oceanic and Atmospheric Administration (NOAA) weather radio coverage. NOAA weather radio provides continuous 24-hour/day weather forecasts and warnings to listeners. The Ohio NOAA weather radio program serves Ohio through 23 transmitters, and the service is available to more than 99% of Ohio's population. These transmitters are maintained by Ohio EMA through a

contract with the National Weather Service. Transmitters are operated by the National Weather Service Offices serving Ohio.

- a. The State and local EMAs may activate NOAA weather radios for non-weather related emergencies through an agreement between Ohio EMA and the National Weather Service.
- c. Warnings are transmitted using specific area message encoding to allow for the activation of muted receivers. Ohio radio and television stations, as part of their EAS monitoring assignments, monitor NOAA weather radio and re-transmit severe weather warnings.
- d. NOAA weather radio is also used for the transmission of non-weather related emergency information. An agreement between Ohio EMA and the National Weather Service allows the state and county EMAs to request system activation.

3. State of Ohio Rain/Snow Monitoring System

- a. The State of Ohio Rain/Snow Monitoring System (STORMS) was developed to improve the ability to forecast flash-flooding throughout Ohio. The primary mission of the STORMS is to provide the National Weather Service with real-time precipitation data for use in flood forecasting. The secondary mission is to provide data to other federal, state and local users. STORMS installation was prioritized to serve the areas at greatest risk for flash-flooding. Drainage basins with a slope of 45' per mile and eight square miles or greater were targeted with STORMS. STORMS gauges appear in 63 of Ohio's 88 counties.
- b. The STORMS is made up of 241 rain gauges as well as 64 river gauges which report real-time rainfall information to Ohio EMA, the National Weather Service and other users. Rain gauge systems from the Corps of Engineers, U.S. Geological Survey, Miami Conservancy District and city systems are also linked to STORMS, bringing the total number of reporting gauges to 345.
- c. The primary user of the STORMS is the National Weather Service, which uses STORMS data to formulate flood and flash-flood warnings. STORMS software provides text, tabular and alarm information through a graphics display. Alarms based on rainfall in comparison to flash-flood guidance are automatically generated. System maintenance is performed by Ohio EMA.
- d. STORMS gauges report to remote tower sites, which are directly linked to the state EOC. STORMS data is then forwarded to the National Weather Service Office in Cleveland.
- e. STORMS servers are located at the State Emergency Operations Center/Joint Dispatch Facility (EOC/JDF), the Cleveland National Weather Service and the Wilmington National Service Office. These servers receive raw rain gauge data and convert that data to tabular and graphic formats for use by the National Weather Service and other STORMS users. Redundancy is provided through these units and dual servers at the state EOC/JDF.

- f. In addition to providing rainfall data, the STORMS alarms when 80% or 100% of flash-flood guidance is exceeded. A gauge yellow condition exists at 80% and a red condition exists at 100%.
4. Weather Paging System
 - a. The Ohio EMA weather paging system provides subscribers with weather warnings to wireless devices as well as e-mail notification. The system was developed in coordination with the National Weather Service to provide Ohio government leaders and first responders with real-time weather warnings.
 - b. The weather paging system is designed to allow users to self-subscribe over an internet accessible application. Subscribers can register devices to receive notification and select the types of warnings to be received.
 5. Ohio Emergency Alert System (EAS)
 - a. The Ohio EAS is designed around twelve Operational Areas. Each of these areas has an assigned Primary and Alternate radio station called a Local Primary 1 and Local Primary 2 station. These stations serve as entry points into the EAS for the Operational Area. All other radio stations in the Operational Area monitor these Local Primary stations. A statewide EAS backbone provides for the statewide relay of information to all Local Primary stations for statewide activations.
 - b. The EAS can be activated by authorized notifiers. Ohio authorized notifiers include; the Governor, State Emergency Management Agency, Ohio State Highway Patrol, County Emergency Management Agency Directors and County Sheriffs. Activation is accomplished through the use of EAS encoders at county and state activation points.
 - c. The use of the Ohio EAS is governed through the State and Twelve Operational Area EAS Plans.
 6. County Notification System
 - a. The Ohio EMA county notification system provides county EMA directors with the immediate notification of important information. Notification is sent by facsimile, e-mail and telephone. Telephone notification includes; home, office, wireless device and dispatch centers.
 7. Public Safety Emergency Notification System
 - a. During times of severe weather or other events that can impede the travel of state employees to and from work or close state government offices, the Governor, through the Director of Public Safety, may order non-essential state employees to stay home from the work place. The weather Emergency Notification System is used in disseminating information related to the requirements of these employees to report to work.

- b. When triggered, the Weather Emergency Notification System provides notification to contacts in each department, agency, and boards and commissions of the declaration. Notification is made by e-mail, facsimile and by the telephone to multiple devices. Information is posted on a state website for employee access and on an employee call-in number. The notification is also sent to radio and television stations for public broadcast.
8. Law Enforcement Automated Data System (LEADS)
- a. The LEADS is a state of Ohio data system used by all Ohio law enforcement agencies for the sharing of law enforcement information and communications. The LEADS is managed by the Ohio State Highway Patrol through the guidance of a steering committee.
 - b. The LEADS is used as an information sharing system for the dissemination of warnings to all Ohio law enforcement agencies. Software linking of the LEADS to the NOAA weather wire automatically forwards weather warnings to all law enforcement agencies with LEADS terminals.
9. Receipt and Dissemination of Warnings over the Ohio NAWAS
- a. As soon as the Ohio warning point has received a national level warning, the state operator will immediately call the roll of the warning points in the state. Each warning point not answering the roll call will be contacted by telephone or radio immediately after roll call, repeating the warning message.
 - b. In addition to disseminating the national warnings over NAWAS, the state warning point will disseminate national warnings and other emergency information over LEADS to Ohio law enforcement agencies.
 - c. The state warning point will be responsible for verifying the dissemination of weather service announcements over LEADS and if necessary disseminating the message over NAWAS to district warning points for further dissemination by district warning points to affected County Sheriffs. Tornado warnings received by the state warning point will be transmitted over LEADS and receipt verified by the district warning points.
 - d. If LEADS and NAWAS are inoperable, the state warning point will contact by alternate means of communications any warning point that did not receive the weather warning.
 - e. When the above procedures have been established, the state (Ohio) is, essentially, in a status of “watching--readiness.” Warning points should begin the reverse process of relaying “sightings” and weather intelligence to the National Weather Service (NWS) in a coordinated manner so that this information can be used by the NWS offices in formulating further announcements and forecasts.

10. Weather Observations

- a. Weather observations may be requested by a WSO. The state warning point will coordinate obtaining such information from Highway Patrol mobile units, other warning points, Sheriff's Offices, etc., for "on-site" reports to supplement radar observations during the development period of adverse weather.
- b. Any warning point desiring updated information regarding weather affecting their area may call the WSO direct using the NAWAS circuit.
- c. If the county (local) EMA director, Sheriff, or other authorized official issues a "warning" for his/her county (area), the sighting and action taken must be immediately reported to the WSO responsible for that area.

11. Ohio EMA Weather Paging System

- a. The Ohio EMA weather paging system provides cellular telephone, pager and e-mail notification of weather warnings issued for Ohio counties. The system is hosted at a server at the Ohio EMA EOC/JDF and utilizes custom-built software to take weather warnings received from the National Weather Service and forward them to end-users.
- b. First responders and local government officials register devices to receive warnings through an internet accessible registration system. The device, type of warnings desired and counties for which warnings are to be received are entered. Upon the issuance of warning by the National Weather Service system, notifications are automatically sent. Messages are sent in two formats; as an abbreviated text message or as a full e-mail containing the entire warning content.
- c. System maintenance and customer assistance is provided by the Ohio EMA Data Management Branch. System testing and verification of forwarding applications are tested daily.

V. ADMINISTRATION and LOGISTICS

A. The National Warning System (NAWAS)

1. The Federal Emergency Management Agency (FEMA) has the responsibility for disseminating national warnings. NAWAS is a FEMA dedicated, nationwide, telephone system operated on a 24-hour basis. It has two national warning centers, manned continuously by warning officers. Its special-purpose telephone circuits connect the national warning centers to FEMA Headquarters, 9 FEMA Regional Offices, 346 other federal agency and military installations in the Continental United States, and approximately 2,300 city and county warning points.

B. Emergency Alert System (EAS)

1. The national level Emergency Alert System (EAS) provides the President a readily available and reliable emergency communications with the American people. It affords a communications capability in grave emergencies when national communications resources may have been damaged and the survival of the Nation is threatened. Presidential broadcasts over EAS would be made to reassure and give direction to the public regarding survival and recovery of the Nation. The national level EAS is activated only upon the order of the President.
2. The EAS has also been designed to provide operational capability to the state, and local governments. It uses facilities and personnel of non-government communications industry on a voluntary basis, and is operated by the industry under appropriate government regulations in a controlled manner consistent with national security requirements during a national emergency. It consists of broadcast stations licensed by the Federal Communications Commission (FCC) and participating in the EAS.
3. The state EAS and local EAS may be used to broadcast information on peacetime disasters or emergencies. Such use is encouraged, especially for announcing tornado watches and warnings and other natural or man-made disaster information. It also may be used at state or local government option to disseminate new weather related information to the public in their areas of responsibility.
4. Procedures for the use of EAS throughout the State of Ohio are outlined in the State of Ohio Emergency Alert System Plan.

a. NOAA Weather Radio System

2. The operations of the NOAA weather radio system are the responsibility of the National Weather Service (NWS). System maintenance is performed by Ohio EMA in accordance with a contract with the NWS. Use of the system and non-weather related emergencies is triggered by state and local EMAs.
3. NOAA weather radio stations provide continuous around-the-clock broadcasts of the latest weather information directly from WSO. Recorded weather messages are repeated every 4 to 6 minutes and routinely revised every 2 to 3 hours or more frequently if needed.
4. NOAA weather radio is designated the government-operated radio system to provide direct warnings into private homes for both natural disaster and nuclear attack. This capability supplements warnings by sirens and by commercial radio, television and cable television.
5. Twenty-three NOAA weather radio stations are currently providing broadcasts to Ohio. Broadcasts are made on all 7 high-band FM frequencies. A list of locations of stations to include appropriate programming and broadcasting WSO is maintained by Ohio EMA's Technical Support Division.

6. During severe weather, weather service forecasters will interrupt their routine weather broadcasts and substitute special warning messages. Forecasters will also activate specially designed warning receivers. These receivers either sound an alarm indicating that an emergency exists, alerting the listener to turn the receiver up to an audible volume; or, when operated in a muted mode, are automatically turned on so that the warning message is heard. Warning alarm receivers are especially valuable for schools, hospital, public-safety agencies, and news media offices.
7. Ohio EMA and County EMAs are permitted, after coordinating with the appropriate programming and broadcasting WSO, to preempt selected NOAA weather transmissions during or after any disaster, man-made or natural, when such disaster could result in loss of life or property and there is a need for the rapid dissemination of pertinent information to the affected area.
8. In the event of an incident at a nuclear power plant, the NOAA weather radio system, along with EAS and other warning systems will be used to provide rapid public notification of plant status and emergency actions to be taken. The access of the NOAA weather radio system for notification of a nuclear power plant incident is outlined in the Ohio plan for response to radiological emergencies at licensed nuclear facilities.

D. Weather Radar

1. A weather watch is maintained by the WSO at Cleveland, Ohio, Wilmington, Ohio, Pittsburgh PA, Northwestern, Indiana and Charleston, WV. Weather service specialists operating radar and other monitoring equipment have the capability of tracking severe storms; therefore, are key in the “Weather Watch and Warning System” for the State of Ohio.
2. In line with the foregoing, the radar units function to initiate early action suggestions for counties who come under the jurisdiction of the WSFO. Conversations on NAWAS and the MARCS radio between WSFO can be monitored by NAWAS officials. This system allows everyone on the circuit to follow the progress of radar observed events and automatically alerts warning points of “new events” taking place in their respective areas.
3. EMA and NAWAS officials are asked to solicit local reports on the basis of information gathered from the monitoring of the conversions. These reports should be fed back to the NWS as soon as possible, so they may be added to other information which is being used to make weather status decisions at the forecast office.
4. Direct contact with the warning points by the WSO is encouraged. An exchange of information during a period when severe phenomena is developing can yield immediate and direct benefit while also establishing a high level of confidence and mutual respect between the cooperators.

E. State of Ohio NAWAS

1. Operating that portion of NAWAS within the state is the responsibility of the Director of Public Safety. The Ohio primary warning point is located at the State EOC/JDF, Dispatch room, 2855 West Dublin Granville Road, Columbus, Ohio 43235-2206. Telephone numbers are: Primary 614-466-2660, Alternate 614-889-7150.

F. Ohio EMA Pager System

1. The development of procedures and maintenance of the system is the responsibility of the Ohio EMA.
2. The issuance and supply of the weather watches and warnings to the Ohio EMA Pager System is the responsibility of the NWS offices.
3. The user device information and types of messaging received is the responsibility of the county EMA director and/or their designated representative.

G. Emergency Alert System (EAS)

2. The development of plans and procedures for the system and notifier activation is the responsibility of the Ohio EMA.
3. Individual broadcast stations are responsible for station equipment configuration, station equipment maintenance, the development of station procedures and the airing of EAS messages in accordance with The EAS Plans and the Federal Communications Commission (FCC) Rules and Regulations.
4. Notifier equipment maintenance is the responsibility of the owning agency. Ohio EMA provides technical Assistance on equipment maintenance, equipment software configuration and programming, level settings related to installation and user training is provided by Ohio EMA.

H. State of Ohio Rain/Snow Monitoring System (STORMS)

1. Maintenance of the STORMS is the responsibility of Ohio EMA. This includes the maintenance of remote gauges, the backbone transmission system, and computer hardware and software applications.
3. The NWS is responsible for providing flash-flood guidance data to Ohio EMA, the monitoring of STORMS, and the formulation and issuance of flood and flash-flood warnings.
4. Other STORMS users are responsible for locally used hardware and system monitoring. Client software and technical assistance is provided by Ohio EMA.

I. Weather Emergency Notification System

1. Ohio EMA is responsible for coordinating the decision process for the issuance of a weather emergency.
2. Activation of the system is accomplished by the Ohio State Highway Patrol.
3. Maintenance of the e-mail, facsimile and calling system is the responsibility of Ohio EMA. As part of this maintenance, Ohio EMA has the responsibility to maintain contact information and to conduct training on system use and for message recipients.
4. The Department of Administrative Services (DAS) issues the Policy Directive on the notification of a weather emergency. The 1-800 employee call-in-number is also provided by DAS. Message recording and 1-800 line activation is accomplished by the Ohio State Highway Patrol. Procedure development is the responsibility of Ohio EMA. DAS is responsible to assist Ohio EMA in agency training.
5. Ohio Department of Public Safety and Governor's Office Public Information staff are responsible for the media notification of a weather emergency.
6. Each state agency, and Boards and Commissions is responsible for providing primary and secondary agency contacts, agencies are responsible for developing internal notification procedures, the notification of employees, the handling of employee inquiries and to attend annual training on the notification process.

J. County Notification System

1. The county notification is activated by Ohio EMA.
5. Director telephone number, e-mail and other system updates are accomplished by Ohio EMA.
6. Training and procedure development is accomplished by Ohio EMA.

K. Local Warning Dissemination

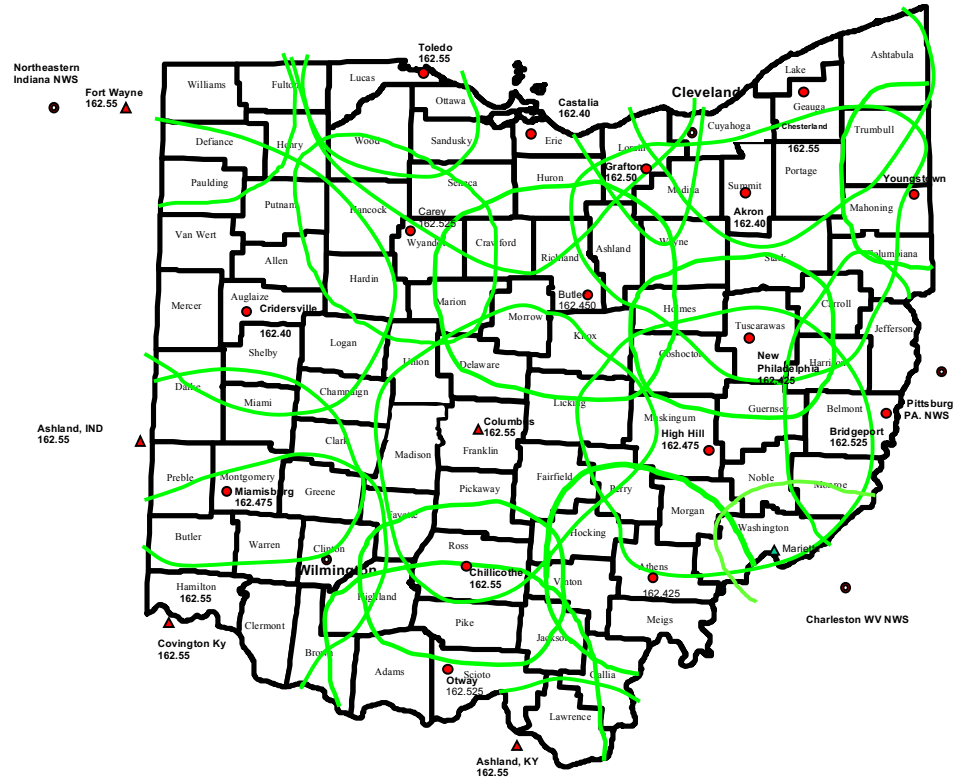
1. Sheriffs of each county will receive warnings from the state and district warning posts.
2. The development of procedures for the dissemination of the warnings and emergency information from Sheriffs' Offices to officials of government, industry and to the public is a responsibility of local government. Each county, city and village should establish a system and procedures to insure that warnings are rapidly disseminated. This may necessitate the use of:
 - a. Outdoor and indoor warning devices, i.e., sirens, public address systems, automated calling systems and tone activated radio receivers, etc.

- b. Commercial radio, television and cable television broadcast through the Emergency Alert System (EAS).
- L. Warning and Notification of vulnerable populations, including, but not limited to, hearing impaired or non-English speaking persons may, be accomplished by local jurisdiction response using door-to-door or mobile public address notification by local emergency service officers.

VI. PLAN DEVELOPMENT AND MAINTENANCE

- A. This Warning Plan is maintained by the State of Ohio Emergency Management Agency (EMA) which is responsible for its review and update. Notification of changes to this plan should be submitted to the State of Ohio Emergency Management Agency, 2855 West Dublin Granville Road, Columbus, Ohio 43235-2206.

NOAA Radio Coverage Map



- Transmitter Locations
- National Weather Service Offices
- ▲ Weather Radio Stations for which Ohio EMA is not responsible