

**NATIONAL WEATHER SERVICE INSTRUCTION 10-1711**

**August 28, 2006**

**Operations and Services  
Dissemination, NDS 10-17**

**NOAA WEATHER RADIO ALL HAZARDS (NWR) SYSTEMS MANAGEMENT**

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**NOTICE:** This publication is available at: <http://www.nws.noaa.gov/directives/>.

**OPR:** W/OPS17 (C. Hodan)

**Certified by:** W/OPS1 (M.Paese)

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**SUMMARY OF REVISIONS:** This directive supersedes NWSI 10-1711, *NOAA Weather Radio System Management*, dated September 14, 2005.

The following changes were made to the document:

- A second paragraph was added to Section 5.1
- In Section 5.1 the definition of SAME was removed because it was already given in Section 2.2
- In Appendices D and E, the paragraph on Compensation was removed because it was somewhat contradictory to other provisions of the agreements.
- Minor changes were made in grammar, noun and adjective descriptions, e.g., 'Headquarters' for 'headquarters', 'activator' for 'entry point', 'Most stations are' for 'Each station is', etc.

Signed by John McNulty, Jr.

August 9, 2006

John McNulty, Jr.

Date

Director, Office of Operational Systems

**NOAA Weather Radio All Hazards (NWR) Systems Management**

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1. Document Purpose. This instruction describes how the NWS manages, operates and maintains the National Oceanic and Atmospheric Administration (NOAA) Weather Radio All Hazards (NWR) network.

2. Description. The NWR network consists of over 900 very high frequency (VHF) FM radio broadcast stations located throughout the United States and its Territories including Puerto Rico, U.S. Virgin Islands, Guam, and the Commonwealth of the Northern Marianas (Saipan). Most stations are able to broadcast weather and non-weather related emergency messages to receivers located within a 40 mile radius from the station. The broadcasts provide advance warning of potentially destructive and life-threatening situations, and allow NWR listeners time to protect family, home, and property.

2.1 Purpose of NWR. The purpose of NWR is to serve the NWS as the general public direct dissemination media for weather forecasts, advisories, watches, and warnings. The NWR network also serves as a dissemination vehicle for all-hazards (non-weather) emergency message broadcasts (see Appendix A).

Under normal circumstances NWR provides timely dissemination of weather forecasts and other meteorological and hydrological information to the general public. Under extreme conditions, where the public is at risk due to severe weather or other natural or man-made disasters, NWR provides alarms, specific information describing the threat, and recommended actions to be taken. NWR is available to relay non-weather related hazard alerts received from authorized local, regional and national emergency management agencies.

2.2 History of NWR. NWR was originally established in the early 1970's. The number of discrete frequencies has grown from the original three to seven; allowing the NWR network to expand from 100 stations in the 1970's to over 900 in 2005. Each station is remotely programmed from one of 122 local Weather Forecast Offices (WFO). Each station consists of a radio transmitter and an antenna interconnected with coaxial cable. Audio programming is delivered from a broadcast console at the WFO by means of a telecommunication link. Telecommunication links are ultra high frequency (UHF) radio sets, private microwave networks, or commercial telephone circuits, depending on local circumstances. Broadcast consoles located at each WFO are identical. They are built on personal computer platforms and designed to ingest and prepare, store, schedule and simultaneously deliver 13 individual programs to station transmitters. The consoles also provide text to synthetic voice conversion, an alert tone for triggering special receivers for severe weather and other life threatening hazardous events, and an NWR Specific Area Message Encoding (SAME) signal used to trigger special receivers, which can be programmed to react and alarm for user selected specific events and specific areas. NWR is the primary activator of the FCC Emergency Alert System (EAS).

Since the network has been in service since the 1970s, station equipment configurations vary from site to site. Transmitters at each site vary in type, manufacturer, configuration, and power

output. Antennas vary according to area needs. Antennas are generally omni-directional but may be directional to avoid sending a signal into an area where it may cause interference or to increase the signal level in a certain area. Most, but not all stations have emergency power available. Station facilities are owned by private companies, groups or individuals, or government organizations and are either leased or donated to the NWS. Maintenance and logistics are provided through numerous means including NWS Electronics Technicians (ET), the National NWR Maintenance Contract, Regional and local maintenance contract, or facility owner technicians.

2.3 NWR Goal. The goal of the NWR network is to provide a continuous flow of timely and needed weather and all-hazards warning information to 95 percent of the general public and other users in the primary coverage area (PCA) 99 percent of the time. The PCA is defined as that area enclosed by a received signal level contour of 8 micro volts per meter. Stations are designed to provide this level of signal at a nominal distance of forty miles from the station site. The size and shape of the PCA at each site is dependent on a number of factors including the height and placement of the antenna on the tower, terrain and structures in the vicinity of the station, presence of large bodies of water in the immediate area, and licensed transmitter output power.

3. Organizational Responsibilities. This section describes the responsibilities of the NWS Headquarters, Regional Headquarters, and field offices for NWR.

3.1 NWS Weather Service Headquarters (WSH). The Assistant Administrator (AA) for Weather Services has overall responsibility for the WSH NWR program.

3.1.1 Office of Operational Systems (OPS). OPS provides staff assistance to the NOAA AA for Weather Services for NWR program management and configuration control. OPS provides program and financial management and operational, engineering and communications support for NWR. OPS is responsible for providing oversight for the maintenance of NWR transmitters.

3.1.1.1 Dissemination Systems Branch of the Office of Operational Systems (OPS17). OPS17 has overall responsibility for the following:

1. Program Management of the entire NWR network;
2. Management of the NWR transmitter and system maintenance contracts;
3. Engineering and technical support for NWR stations, including programming consoles, telecommunications, and station components;
4. Technical and system management liaison with NWR stakeholders, including NWS WSH, Regional Headquarters, and WFO NWR focal points; equipment manufacturers; other Government agencies, and user communities; and
5. Outreach to Government and private organizations and to the public regarding NWR.

3.1.1.2 Engineering and Acquisition Branch (OPS11). OPS11 supports frequency management

of all NWR transmitters and radio telecommunication links.

3.1.1.3 Telecommunication Gateway Operations Branch (CIO12). CIO12 has responsibility for the overall management of NWS telecommunications programs and provides headquarters support for any commercial telecommunications services needed by NWR.

3.1.2 Office of Climate, Water and Weather Services (OS). OS is responsible for establishing service requirements and instructions for broadcasting on NWR.

3.2 Regional Headquarters (RHs). Each Regional Headquarter is responsible for the program content of NWR within its region in accordance with section 3.1.2. It is also responsible for the management of expansion and upgrade efforts for NWR stations in its area of responsibility and for coordinating and reporting to WSH on these activities. It is the responsibility of the Regional Headquarters to coordinate with the field offices for problems or operational changes and to forward to the NWR Program Manager at WSH (OPS17), any network, system maintenance, or end-user problems that cannot be resolved at the local or regional level. Regional Headquarters are responsible for maintenance on all NWS-owned transmitters that are not covered by the national contract.

3.2.1 Regional Telecommunications Managers (RTMs). RTMs are responsible for the acquisition and management of NWR telecommunications service used by NWR in their regions.

3.2.2 Regional NWR Focal Points. Regional NWR Focal Points are responsible for coordinating and managing the NWR radio frequencies within their areas of responsibility. This includes timely submission of coverage assessments and inter-modulation studies for new stations, submission of Requests for Frequency Assignments to OPS11, coordination with other NWR Focal Points when stations are in close proximity to common regional borders, resolution of interference problems, and to include coordination with counterparts in Canada or Mexico (as necessary) in accordance with established International Telecommunication Union (ITU) guidelines, and the policies and agreements signed by Department of Commerce (NOAA and NWS inclusive) and State Department.

3.3 Field Offices. The NWS field offices are responsible for the daily operations and quality control of the NWR broadcast and are the main interface with the external end-user community. They are also responsible for notifying the national maintenance contractor of transmitter system outages (if that site is maintained by the national maintenance contractor) or notifying the regional maintenance contractor or local NWS ET, as appropriate. Field offices are also responsible for supporting expansion and upgrade activities in their area.

4. Broadcast Service Area. A broadcast service area for NWR transmitters is detailed in NWS Instruction 10-1710, *NOAA Weather Radio (NWR) Dissemination*, Section 4. For the purpose of this document the broadcast service area is the specified transmitter planned coverage area (PCA) which extends approximately 40 miles from the transmitter site.

5. Weather Products and Information. The NWR broadcast formats (i.e., communications header and trailer codes, plain text language identification blocks, geographic identifier codes, etc.) conform to specific guidelines, as identified in NWS Instruction (NWSI) 10-1701, *Text*

*Product Formats and Codes.* Information broadcast to the public is selected and prioritized based on the weather needs of the people in the service area and in accordance with the guidelines established.

5.1 Severe Weather Conditions. During severe weather, NWS personnel can interrupt the routine weather broadcasts and substitute warning messages or send live broadcasts. NWS personnel can also activate SAME on special receivers. Such 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 or alert tone receivers and NWR SAME capable receivers are especially valuable for schools, stores, sport complexes, hospitals, public safety agencies, news media offices, and any other public gathering areas.

The deaf and hard of hearing community receives weather and hazard warnings via NOAA Weather Radio using alerting devices normally used in the home of deaf persons, i.e., strobe lights and pillow/bed vibrators. These warning devices plug directly to the NWR receiver and activates when a warning is received; the deaf person then tunes their captioned television or computer to their normal source for news to get complete details.

5.2 Non-weather Related Emergency and Hazard Warnings. Messages concerning non-weather related emergencies and “all-hazards” type public warnings will be provided by authorized local, state and Federal officials to NWS for dissemination. These messages and the means for their dissemination will comply with NWSI 10-1710, *NOAA Weather Radio Dissemination*, NWSI 10-1712, *Specific Area Message Encoding*, and NWSI 10-518, *National Non-weather Related Emergency Products Specification*.

6. Access to NWR Broadcast. Access to the NWR broadcast is available free of charge to all listeners.

7. NWR Maintenance.

7.1 Authority. The WSH Dissemination Systems Branch (OPS17) performs a staff function within WSH, acting with authority delegated from the AA for Weather Services. It provides direction, assistance, resources, and other support to the regions as addressed in NWSI 30-21, *Maintenance, Logistics, and Facilities*. National and Regional headquarters offices manage the NWR maintenance program.

7.2 Transmitters. NWR transmitters are normally serviced under one of four types of maintenance support available: national maintenance contractor, local maintenance contractor, Government maintained, and privately maintained.

1. National maintenance contractor is available for routine, corrective, and emergency maintenance services on NWR transmitters contracted by the NWS. NWR transmitters maintained by the national contractor are specifically identified in the maintenance contract.
2. NWS regions responsible for NWR transmitters not maintained by the national

maintenance contractor may contract with a local or regional entity to perform required maintenance.

3. NWR transmitters not under contractor maintenance are the responsibility of the local Weather Forecast Office with support, as required, from Regional Maintenance Specialists.
4. Maintenance activities for transmitters owned by private interest groups (not considered under the previous three maintenance types) are the responsibility of the interest group.

8. Private Interest Groups. Private groups such as local community organizations, state, city, or county government(s), etc., are encouraged to sponsor and fund the installation, operation and maintenance of new NWR stations. If funds required to set up and maintain the private NWR station are provided by a private sponsor or “Cooperator”, the NWS will assist in the analyses necessary for the siting and licensing of the NWR transmitter. Information on establishing a private NWR station is available from the WSH NWR Program Manager or the Regional Director at any of the NWS Regional Headquarters. An agreement (Appendix B) must be executed between the NWS and the Cooperator when a station is to be donated to the NWS. Formal acceptance of a donated station will require the execution of a Department of Commerce Form CD-210. (See NWS Instruction 30-6110, “Acceptance of Donated NOAA Weather Radio Stations” for detailed CD-210 instructions.) In the event a Cooperator wishes to retain ownership of the equipment and provide a “broadcast service-only” to NWS, the agreement in Appendix C must be executed.

9. Agreements for Access to NWR Audio Output. Private and public TV and radio stations and other organizations can have access to the signal delivered by NWR. Such an arrangement is mutually beneficial and is encouraged. The station gets a high quality signal, and the NWS has a means of disseminating broadcast material even when the normal communications links and/or transmitter go out. Regional headquarters have the authority to approve and execute agreements allowing users to obtain access to NWR audio output. There are two methods for a private party to obtain access to NWR audio output. One method is a line tap, in which a device is connected to the NWR console at the Weather Service Office. Appendix D provides the form used for line-tap agreements. The other method is a bridge tap, in which the telephone line from the console to the transmitter is tapped at the telephone company office. Appendix E provides the form used for bridge-tap agreements. Copies of signed agreements will be kept on file at the regional headquarters and appropriate field offices, with a copy being forwarded to WSH NWR Program Manager (OPS17) and Dissemination Services (OS51).

10. Notice of Station Outage. In the event of a planned outage of an NWR facility, a brief message will be broadcast periodically during the 24-hour period prior to the outage. When NWR equipment is taken off the air or an unplanned outage occurs, weather and non-weather related emergency information is still available to television and radio media via NOAA Weather Wire Service (NWWS).

10.1 Interference. When interference with other agencies requires temporary suspension of NWR broadcasts, a brief message will be aired over the NWR just prior to the suspension. An additional message should also be sent over NWWS and the local telephone recording system.

10.2 Outage Notification. Regardless of whether the outage is planned or unplanned, if it is expected to be for more than twelve hours, the NWR Program Manager (OPS17) and Dissemination Services (OS51) at WSH must be notified. If the station goes off in an emergency or potentially threatening situation, WSH must be notified as quickly as time will allow.

**APPENDIX A: National Policy for the Use of Telecommunications to Warn the General Public**

This Appendix includes the most recent affirmation (dated 6/11/02) by the Federal Emergency Management Agency (FEMA) on the use of NWR as an all-hazard warning system and the original National Policy statement (dated 01/13/75) which establishes NWR as the only federally sponsored radio transmission of warning information to the general public.



## Federal Emergency Management Agency

Washington, D.C. 20472

June 11, 2002

John J. Kelly, Jr.  
Director  
National Weather Service  
National Oceanographic and Atmospheric  
Administration  
1325 East-West Highway  
Silver Spring, MD 20910

Dear Mr. Kelly:

I am writing to express my support for using National Oceanographic and Atmospheric Administration (NOAA) weather radio for civil emergency messages involving all hazards, not just weather-related ones. Through NOAA weather radio, we have a capability in place that can help save lives. We owe it to the public, as stewards of public safety and of tax dollars, to make maximum use of that capability.

In fact, this Agency already relies on the National Weather Service (NWS) for all-hazard warning to the public. Under Emergency Support Function #2 of the Federal Response Plan, a responsibility of NWS is to "Provide public dissemination of critical pre- and post-event information over the all-hazards National Oceanographic and Atmospheric Administration Weather Radio (NWR) system, the NOAA Weather Wire Service, and the Emergency Managers' Weather Information Network (EMWIN)." This is part and parcel of authority granted to the President under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, and delegated to the Director of the Federal Emergency Management Agency (FEMA), to "utilize ... any other Federal communications system for the purpose of providing warning to governmental authorities and the civilian population in areas endangered by disasters" (42 USC 5132 (c)). Under Title VI of the same Act, it is within the FEMA Director's authority to "make appropriate provision for necessary emergency preparedness communications and for dissemination of warnings to the civilian population of a hazard." (42 USC 5196(d)).

I believe use of NOAA weather radio for all-hazard warning to the public is consistent with the Federal Response Plan, the FEMA warning-related authorities I have cited, and good government. As a coordinator of Federal preparedness and response efforts, I support your initiatives to ensure NOAA weather radio is an all-hazard warning system, and I will gladly work with you to integrate your initiatives into our overall preparedness and response program.

Sincerely,

Joe M. Allbaugh  
Director

OFFICE OF TELECOMMUNICATION POLICY (OTP)  
EXECUTIVE OFFICE OF THE PRESIDENT  
WASHINGTON D.C. 20504

January 13, 1975

NATIONAL POLICY FOR THE USE OF TELECOMMUNICATIONS  
TO WARN THE GENERAL PUBLIC

In November 1971, the Federal Government completed a review of national policies and programs for use of telecommunications to provide the American public with warning of an enemy attack or of natural disasters. It was established at that time, in a statement of national policy respecting home warning systems, that the acquisition and use of any warning receiver should be a voluntary decision by each citizen. Studies conducted since 1971 have led the Government to update and reaffirm that policy.

It now has been established that in addition to the voluntary use of a warning receiver, public interest would be served best by a single, Government-operated system for warning citizens in their homes of enemy attack or a natural disaster. In this regard, the National Oceanic and Atmospheric Administration (NOAA) Weather Radio (NWR) will be the only federally sponsored radio transmission of warning information to receivers optionally available to the general public.

The 1971 OTP policy statement committed the Federal Government to pursuing a program that would "establish a rapid, reliable warning capability, and... bring the cost of a warning receiver within reach of every American citizen." To this end, a series of tests and studies were initiated to explore several proposed home warning systems and market demands for home receivers. During 1974, the results of these studies were reviewed by the Warning Steering Committee, an interagency group chaired by the OTP, and including representatives of NOAA, the Defense Civil Preparedness Agency (DCPA), the Federal Communications Commission, the Office of Preparedness, and the Department of Transportation (DOT).

The studies focused primarily on two alternative home warning systems. The first is the Decision Information Distribution System (DIDS) of the Department of Defense. Designed originally for enemy attack warning, its scope could be expanded to include warning citizens of natural disasters. The second system is the National Weather Service's (NWS) VHF/FM Tone Alert System. (The NWS is an agency of NOAA.) This system already is operational for weather forecasting and incorporates a special tone alert signal permitting receivers to be activated automatically if desired by the owner.

After analyzing these studies, OTP concluded that the NWR is the best choice for priority expansion, and it will serve as the single national home warning system. The reasons for this are:

- (1) NWR provides routine daily weather services, tailored to local areas, thereby enhancing the marketability of receivers:

- (2) Federal investment required to complete NWR coverage of most populated areas will be much less than the investment required to complete the DIDS transmitting system, and NWR coverage can be accomplished much sooner; and
- (3) Inexpensive commercial receivers for this system are already on the market.

The development of alternative systems, if allowed to continue unchecked, could result not only in a needless proliferation of home warning systems but could also effectively split the market for receivers because of different technologies, which in turn, might keep receivers so expensive as to be a serious obstacle to widespread voluntary purchase. Therefore, in order to avoid duplication, public confusion, and unnecessary future financial burden on the public (as consumers and taxpayers), the NWR will be the only federally sponsored radio transmission of warning information to receivers optionally available to the general public. Other systems such as the DIDS should no longer be considered candidates for this function.

The market demand studies for home receivers indicated that many citizens would voluntarily purchase receivers capable of receiving home warning (if one were available); but the total number of households with such receivers would not, for the foreseeable future, constitute a majority of the population. Therefore, this policy recognizes that Government-operated home warning systems, with voluntary purchase of the receiver can only supplement other existing warning systems.

The Warning Steering Committee, chaired by the OTP, will coordinate efforts for the use of telecommunications for warning capability. In support of this effort, NOAA and DCPA will develop necessary plans to use the NWR as a supplementary attack/warnings system and will further develop plans and procedures to incorporate the civil defense siren systems into the consolidated warning system, as well as to maximize the provision of warning information to radio and TV stations.

APPENDIX B: Agreement for the Donation of a NOAA Weather Radio All Hazards Transmitter to the National Weather Service by a Private Party

**I. PURPOSE**

This agreement sets forth the terms and conditions of the National Weather Service's (NWS) acceptance of a donation of a NOAA Weather Radio All Hazards (NWR) transmitter and related equipment by \_\_\_\_\_, hereinafter referred to as the "Cooperator." The NWS is authorized to carry out the activities described in this agreement by 15 U.S.C. 313 and 49 U.S.C. 44720. In addition, the NWS is authorized to accept a donation of the NWR transmitter system and related equipment pursuant to 15 USC 1522.

**II. BACKGROUND**

Not all of the American public is within range of a NWR transmitter system. The NWS is not funded to provide equipment to cover all of the remaining unserved areas. The private sector has been encouraged to support the NWS in expanding coverage by providing transmitters and transmission equipment to serve their local communities. Transmitters and equipment owned or purchased by private sector entities may be donated to the NWS. Upon acceptance of the transmitters and related equipment, the NWS will operate and maintain the equipment.

**III. GENERAL CONDITIONS**

The NWS agrees to accept the donation of the transmitter system covered by this agreement because it will assist the NWS in carrying out its forecast and warning operations. In addition, NWS agrees to accept the transmitter system if the transmitter system satisfies the following conditions: (1) it is produced by \_\_\_\_\_, one of the contract approved vendors or suppliers (on the approved equipment source list); (2) it meets the specifications contained in the final procurement contracts entered into between the NWS and its contractors; (3) it meets NWS installation standards and specification; and (4) it has passed a 30 day operational test. Once the transmitter system is accepted into the NWR system, the NWS will have full responsibility for operation and maintenance of the equipment. The Cooperator agrees to operate the station in accordance with the license and that broadcast content will originate solely from an authorized NWS source.

To officially accept the transmitter system, the NWS will execute a Form CD-210, "Record of Gift or Bequest". The gift is not accepted by the Government until this form has been executed. This gift acceptance will conform to the requirements of 15 U.S.C. §1522 and Department Administrative Order 203-9, which set forth and govern the authority of the Department of Commerce to accept gifts from the private sector. In particular, no transmitters or equipment may be accepted from any entity with which the NWS, or, in cases of gifts valued more than \$35,000, the Department of Commerce, has a conflict of interest, or where acceptance would cause a reasonable person with knowledge of all the facts relevant to a particular case to question the integrity of agency programs or operations. In the instant case, the acceptance of the

transmitter system would not result in a conflict of interest or cause a reasonable person with knowledge of all the facts relevant to a particular case to question the integrity of agency programs or operations.

#### **IV. LOCATION**

The transmitter system covered by this agreement shall be located at \_\_\_\_\_, hereinafter referred to as \_\_\_\_\_. The Cooperator agrees that the transmitter system's primary objective is to meet the NWS's needs for forecast and warning operations and fit within the overall comprehensive national NWR system.

#### **V. EQUIPMENT PROCUREMENT AND INSTALLATION**

The Cooperator agrees to provide equipment, shelter, and installation as specified by the NWS, described in Attachment 1 to this agreement. The Cooperator agrees to be solely responsible for all aspects of equipment installation and operation until ownership of the transmitter system is transferred to the NWS. The Cooperator will be responsible for the transmitter site's compliance with local zoning laws and Federal Aviation Administration requirements, if any. The Cooperator also agrees to provide a detailed site survey on forms provided by the NWS.

#### **VI. LICENSE AND OPERATING REQUIREMENTS**

The NWS will obtain a license for the transmitter system. The license is the property of the NWS. The Cooperator agrees to provide all information required by the NWS for the license application as specified on the attached "Site Data for NWR Transmitter" document.

#### **VII. UTILITIES, LEASES, AND COMMUNICATIONS SERVICES**

Unless otherwise amended in Section XIII, the Cooperator is responsible for all installation and service-related costs for the transmitter as long as it retains ownership of the transmitter including site lease, power, and communications links to bring the audio program from the NWS office to the transmitter. This shall include all construction necessary to accept installed electrical service and an electric metering device. Once the transmitter system is accepted into the NWR system, the NWS shall be responsible for all recurring electric costs, communications costs, and maintenance costs associated with the (audio program) operation of the transmitter. If the Cooperator owns, leases or otherwise controls access to the site where the transmitter system is located, the Cooperator hereby agrees to permit the NWS and its employees to have access to the site as required for emergency and scheduled maintenance and continued use of the transmission site, the tower, and the transmitter shelter at no cost.

#### **VIII. DEFINING SERVICE AREA**

Prior to NWS's acceptance of the transmitter system, the Cooperator agrees to provide the NWS office at \_\_\_\_\_ [city, state] (which is responsible for producing the audio program service) with a map showing the area serviced by a signal level of at least eight microvolts/meter.

## **IX. MAINTENANCE**

The Cooperator is responsible for all aspects of maintenance until the time ownership of the transmitter is transferred to the NWS. The cooperator will use qualified and licensed technicians for the maintenance performed on the transmitter. Upon transfer of ownership, the NWS shall be responsible for all maintenance for the transmitter system, including parts, cables and antenna. The NWS is responsible for ensuring that transmitter emissions meet specifications. The NWS, when made aware of any Radio Frequency Interference (RFI) problem or other operational problem, will perform an immediate technical checkout of the transmitter.

## **X. PUBLICITY**

The NWS office responsible for the transmitter service area and the Cooperator will coordinate and jointly issue a public announcement covering the new service. If the service is terminated for any reason, the two agencies will also coordinate a public statement explaining the reason(s) for the termination.

## **XI. GOVERNMENT HELD HARMLESS**

The Cooperator shall hold and save the Government, its officers, agents, and employees, harmless from liability of any nature or kind, including costs and expenses, for or on account of any suits or damages of any character whatsoever resulting from injuries or damages sustained by any person or property by virtue of activities conducted under this agreement.

## **XII. FINANCIAL RESPONSIBILITY**

All costs associated with the installation, operation, and maintenance of the transmitter system up until the time of transfer of ownership to the NWS shall be borne by the Cooperator. Until the NWS officially accepts the donation of the transmitter system, the NWS's responsibility for costs incurred under this agreement are limited to those necessary to make available the audio program at the NWS programming office. Once the transmitter system is accepted by the NWS, the NWS shall be responsible for all costs to operate and maintain the transmitter system. The NWS's obligations under this agreement are subject to the availability of funds. TM

## **XIII. AMENDMENTS AND TERMINATION**

This agreement may be amended or modified at any time by mutual consent of the parties. It may also be terminated at any time by mutual consent, or terminated unilaterally by either party by giving at least 60 calendar days advance written notice to the other. The parties agree that if this agreement is terminated by either party or by mutual consent, the transmitter system shall remain the property of the Government. Special considerations mutually agreed upon by both parties and negotiated as a condition for establishing a partnership between the NWS and the Cooperator will be included here and will be subject to review and approval by the NWS NWR Program Office and legal counsel prior to inclusion in the final agreement.

**XIV. EFFECTIVE DATE**

This agreement is effective as of the last date shown below when signed by both parties, and shall remain in effect until terminated by either party.

**Cooperator:** \_\_\_\_\_

**NOAA's National Weather Service**

**By:** \_\_\_\_\_

**By:** \_\_\_\_\_

**Title:** \_\_\_\_\_

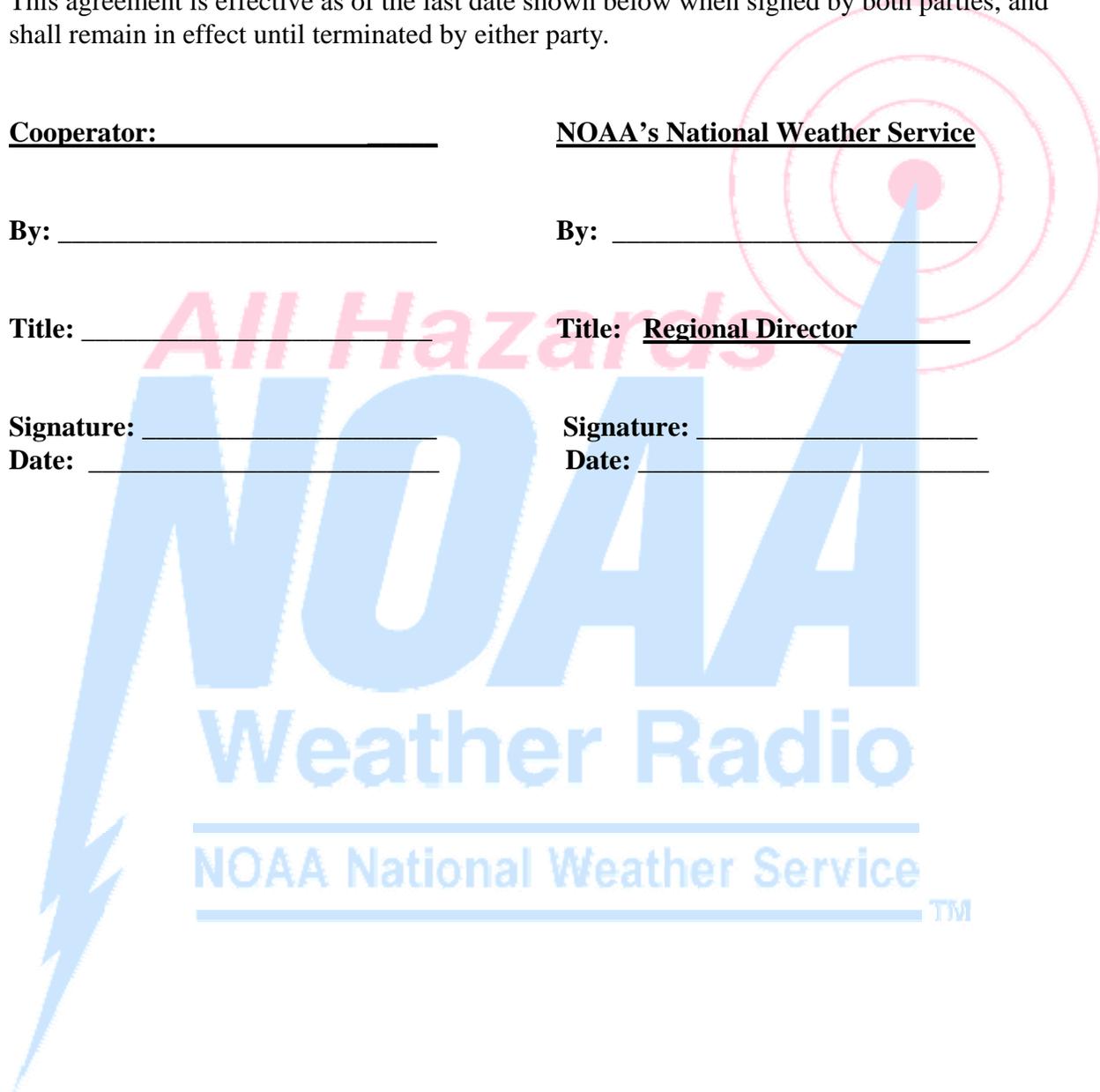
**Title:** Regional Director

**Signature:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Date:** \_\_\_\_\_



APPENDIX C: Memorandum of Agreement for NWR Broadcast Services

**U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL WEATHER SERVICE**

**MEMORANDUM OF AGREEMENT  
FOR  
NOAA WEATHER RADIO ALL HAZARDS (NWR) BROADCASTING  
SERVICES**

**I. PURPOSE**

THIS AGREEMENT governs the cooperation between the National Weather Service, herein after referred to as NWS and \_\_\_\_\_, herein after referred to as the “Cooperator”, for the provision of NOAA Weather Radio All Hazards, herein after referred to as NWR Broadcasting Services, for the area surrounding \_\_\_\_\_, \_\_\_\_\_. The NWS enters into this agreement pursuant to the authority at 15 U.S.C. 313, and 15 U.S.C. 1525.

**II. BACKGROUND**

Not all of the American public is within range of an NWR station, and the NWS is not funded to provide service to cover all of the remaining unserved areas. The private sector and federal, state, and local jurisdictions have been encouraged to support the NWS in expanding NWR coverage by providing new NWR Stations (transmitters, transmission equipment, facilities, and utilities) to serve their local communities. This service can be provided in two ways, (1) NWR stations purchased and owned by Cooperators may be donated to, and operated and maintained by the NWS, or (2) ownership, operation, and maintenance of the NWR station may be retained by the Cooperator with the NWR providing the audio program for broadcast by the Cooperator. This agreement is for condition (2), where the Cooperator retains ownership of the NWR station. When ownership is retained by the Cooperator, the operation and maintenance of the station will be the sole responsibility of the Cooperator.

**III. GENERAL CONDITIONS**

The NWR Broadcasting Services covered by this agreement will assist the NWS in carrying out its Mission of providing warnings and forecasts directly to the public to protect life and property. The Cooperator agrees to provide the NWR Broadcasting Services and operate the NWR station in accordance with the license obtained by the NWS for that purpose and agrees that broadcast content will originate solely from an authorized NWS source. NWS’ obligations under this agreement are subject to the availability of appropriated funds.

#### **IV. NWS CERTIFICATIONS**

The NWS certifies that this project is in the mutual interest of the parties, and that it can not be done at all or as effectively without the participation of the Cooperator and that the project is essential to the NWR program.

#### **V. LOCATION**

The NWR Broadcasting Service provided by this agreement shall be from an NWR station located at \_\_\_\_\_, \_\_\_\_\_, hereinafter referred to as \_\_\_\_\_. The NWS agrees to provide suitable programming for the station from the NWS Forecast Office at \_\_\_\_\_, \_\_\_\_\_. The Cooperator agrees that the NWR Broadcasting Services' primary objective is to meet the NWS's needs for forecast and warning operations and that the service must meet the needs of the overall comprehensive national and state NWS NWR network coverage plan.

#### **VI. EQUIPMENT, FACILITIES, AND SERVICES PROCUREMENT AND INSTALLATION**

The Cooperator agrees to provide equipment, facilities, utilities, and installation to satisfy the NWS coverage and performance requirements. The Cooperator agrees to be solely responsible for all aspects of equipment, facility and utility installation and operation. The Cooperator will be responsible for the transmitter site's compliance with local zoning laws and Federal Aviation Administration requirements, if any. The Cooperator also agrees to provide timely information for a detailed site survey on forms provided by the NWS.

#### **VII. LICENSE AND OPERATING REQUIREMENTS**

The NWS will obtain a license for the transmitter system, and if necessary, a license for a radio link between the NWS programming office and the transmitter. The license(s) remains the property of the NWS. The Cooperator agrees to provide all information required by the NWS for the license application as specified on the attached "Site Data for NWR Transmitter" document. Licenses will be canceled upon termination of this agreement.

The Cooperator agrees to operate the NWR station in conformance with NWS requirements and all pertinent government regulations. NWS requires 24 hours per day, 7 days per week operation, and that broadcast content must originate solely from an authorized NWS source. The Cooperator agrees to use a positive means of transmitter carrier control. The use of "audio off-air capture" is not permitted. Failure to comply with the operating conditions as defined in this Agreement will serve as a basis for the possible termination of this Agreement. The NWS reserves the right to perform random checks on the transmitted signal and to inspect the transmitter, antenna, and/or supporting facilities to ensure compliance with the specifications and the terms of this Agreement. The NWS agrees to coordinate with the Cooperator prior to any equipment or supporting facility inspection. The Cooperator agrees to provide access to any equipment and supporting facility covered by this Agreement within 24 hours of the NWS request.

## VIII. UTILITIES, LEASES, AND COMMUNICATIONS SERVICES

The Cooperator is responsible for all installation and service-related costs for the new NWR station, including site lease, power, and communications links to bring the audio program from the NWS office to the transmitter. This shall include all construction necessary to accept installed electrical service and an electric metering device.

The NWS agrees to provide, within the limits of available resources, at the NWS NWR programming office, space and electrical power for Cooperator-owned ancillary telecommunication equipment such as a UHF/microwave transmitter and antenna or telephone interface equipment to communicate the program audio to the Cooperator-owned transmitter. The NWS reserves the right to require the Cooperator to use commercially available communications services if the space is required for other NWS operational needs, power consumption exceeds an NWS-determined limit, or otherwise interferes with the needs of the NWS.

## IX. DEFINING SERVICE AREA

Prior to initiating Broadcasting Services under this Agreement, the NWS and Cooperator agree to produce and provide a map showing the area serviced by a signal level of at least eight micro volts/meter.

## X. MAINTENANCE

The Cooperator is responsible for all aspects of maintenance for the NWR station. The Cooperator will use qualified and licensed technicians for the maintenance performed on the NWR station. It will assure that the maintenance program for the NWR Station meets minimum NWS standards. The Cooperator agrees to assign sufficient priority to the maintenance of the NWR station to ensure that outages are kept to a minimum, breakdowns and malfunctions are acted upon quickly, and equipment routinely performs within technical specifications. The Cooperator agrees to the installation by NWR or its contractor of an NWS Remote Off Air Monitoring System (ROAMS) in its NWR station facility to automatically monitor performance and notify the Cooperator and NWS of system failures.

The Cooperator agrees to notify the NWS office identified in section IV whenever the transmitter goes off the air and when service is again restored. The Cooperator agrees to maintain a log of station operation and maintenance provide NWS access to that information as necessary, and report all maintenance through the Engineering Maintenance Reporting System (EMRS).

The NWS is responsible for ensuring that the programming console and transmitter emissions meet specifications. The NWS, when made aware of any Radio Frequency Interference (RFI) problem or other operational problem that degrades the quality of the broadcast, will perform an immediate technical checkout of the NWR system in coordination with the Cooperator. If any RFI problem persists, the transmitter will be shut down by the Cooperator at the request of the NWS until the problem is solved.

The Cooperator will perform routine maintenance on a regular basis, will notify the programming office 24 hours in advance of any scheduled outage and will postpone scheduled maintenance in the event of predicted severe weather.

#### **XI. PUBLICITY**

The NWS office responsible for the transmitter service area and the Cooperator will coordinate and jointly issue a public announcement covering the new service. If the service is terminated for any reason, the two parties will also coordinate a public statement explaining the reason(s) for the termination.

#### **XII. GOVERNMENT HELD HARMLESS**

The Cooperator shall hold and save the Government, its officers, agents, and employees, harmless from liability of any nature or kind, including costs and expenses, for or on account of any suits or damages of any character whatsoever resulting from injuries or damages sustained by any person, or persons, or property by virtue of this agreement. Notwithstanding anything contained herein to the contrary, any liability of the Cooperator hereunder shall be subject to the limits of liability set forth in applicable state law.

The Federal Government agrees to promptly consider and adjudicate any and all claims which may arise out of this agreement and to pay for any damage or injury as may be required by Federal law. Such adjudication will be pursued under the Federal Torts Claim Act, 28 U.S.C. 2671 et seq., or such other legal authority as may be pertinent. The Government also agrees to consider and adjudicate any claims for damage or injury sustained by NOAA/NWS personnel in the performance of their official duties under the terms of this Agreement. Such adjudication will be made pursuant to the Federal Employees Compensation Act, 5 U.S.C. 8101 et seq., or other such Federal law as may be pertinent.

#### **XIII. FINANCIAL RESPONSIBILITY**

All costs associated with the installation, operation, and maintenance of the transmitter system shall be borne by the Cooperator. The NWS's responsibility for costs is limited to those necessary to make available the audio program at the NWS programming office, unless otherwise stipulated in Section XIV. The NWS's obligations under this agreement are subject to the availability of funds.

#### **XIV. AMENDMENTS**

This agreement may be amended or modified at any time by mutual written consent of the parties.

#### **XV. SPECIAL CONSIDERATIONS**

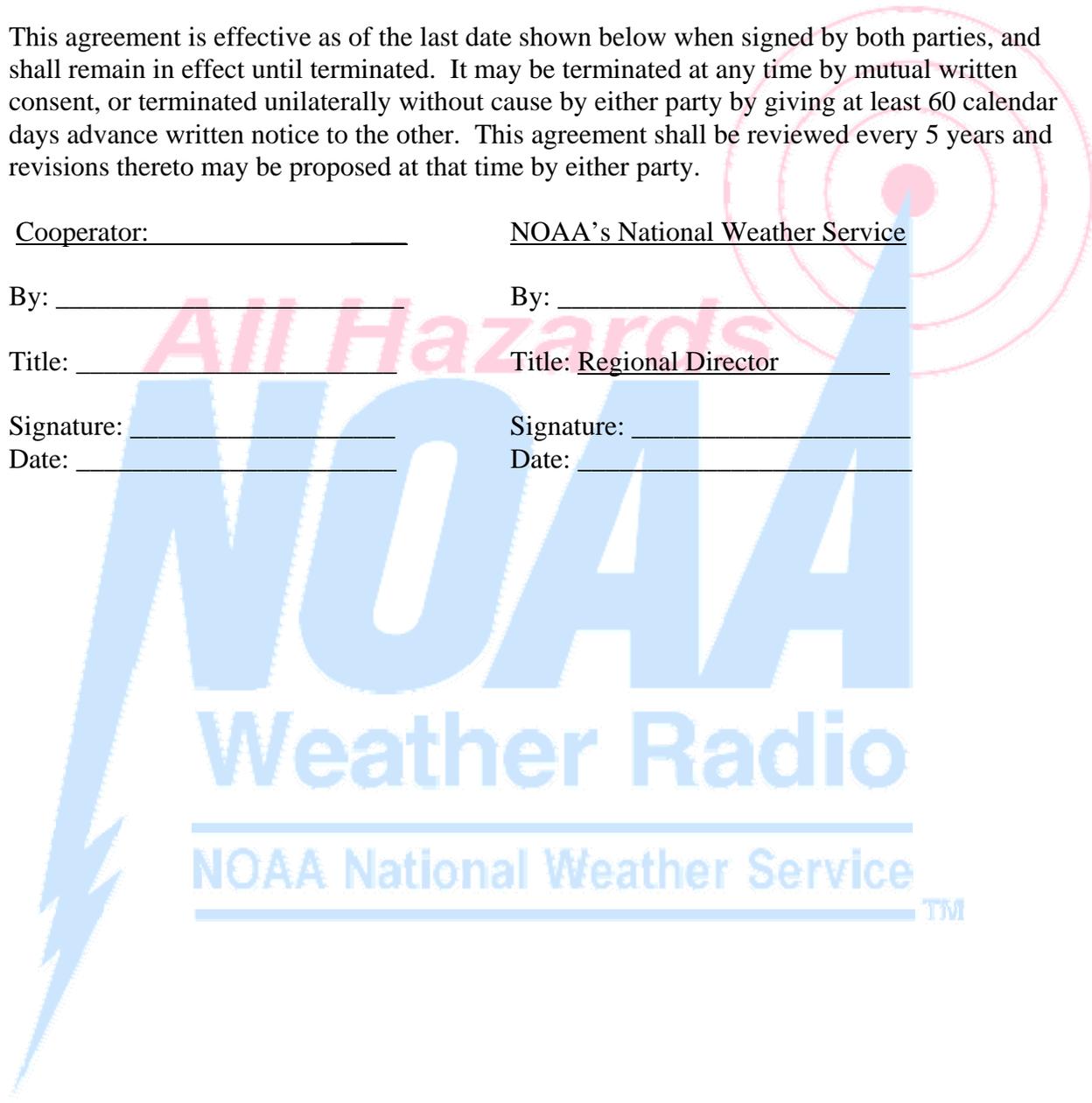
*[If there are any special considerations mutually agreed upon by both parties and*

*negotiated as a condition for establishing a partnership between the NWS and the Cooperator, they will be included here and will be subject to review and approval by the NWS NWR Program Office, and Legal Counsel prior to inclusion in the final agreement if they require the expenditure of appropriated funds.]*

**XVI. EFFECTIVE DATE AND TERMINATION**

This agreement is effective as of the last date shown below when signed by both parties, and shall remain in effect until terminated. It may be terminated at any time by mutual written consent, or terminated unilaterally without cause by either party by giving at least 60 calendar days advance written notice to the other. This agreement shall be reviewed every 5 years and revisions thereto may be proposed at that time by either party.

Cooperator: \_\_\_\_\_ NOAA's National Weather Service  
By: \_\_\_\_\_ By: \_\_\_\_\_  
Title: \_\_\_\_\_ Title: Regional Director  
Signature: \_\_\_\_\_ Signature: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_



APPENDIX D: Agreement for Direct Access to NWS NWR Audio Output Signal Using Non-government Communications Facilities

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL WEATHER SERVICE

AGREEMENT FOR ACCESS TO NATIONAL WEATHER SERVICE NOAA WEATHER  
RADIO ALL HAZARDS AUDIO OUTPUT SIGNAL  
USING NON-GOVERNMENT COMMUNICATIONS FACILITIES

THIS AGREEMENT is entered into between the United States of America, Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, hereinafter referred to as "NWS," and \_\_\_\_\_ hereinafter referred to as the "Station." The NWS enters this agreement pursuant to the authority at 15 U.S.C. 313 and 15 U.S.C. 1525. In order to provide for dissemination of meteorological and hydrological information and warning messages to the general public by means of re-broadcasting or simulcasting audio messages from NOAA Weather Radio All Hazards (NWR), the parties do hereby mutually agree:

RESPONSIBILITIES:

(A) STATION AGREES:

1. That the granting of this authorization by NWS does not vest in the Station any exclusive or permanent right to receive this service and that the service may be modified or suspended at any time, without recourse, at the discretion of NWS.
2. That NWS cannot guarantee that the NWR equipment will function at all times.
3. To install, service, maintain, and remove, when this agreement is terminated, at no cost to NWS, equipment required to carry electrical signaling directly from the NWR control console serving the area located at the NWS Office in to be used by Station for broadcast by Station to the general public or its subscribers. Connections to the NWR control console shall be under the direction of an NWS ET or appointed agent technician and in accordance with the best modern practice. The design of any device used by Station to connect to the NWS control console as well as its final construction must be first inspected by the NWS before the connection is made. The design of the output device to Station's communications link must be capable of allowing for multiple connections from other users, if they desire, without cost or fee to the other user, except for the communications links.

The Station equipment will be designed so that it will be matched, balanced, and isolated from NWS's control console-to-transmitter communications link. If electrical energy is not

conveniently available, the Station shall bear the expense of providing metered outlets.

4. That the NWS be allowed to periodically check the effect of Station equipment on NWS equipment.
5. That Station will keep the NWS advised of the locations of all receiving terminals.
6. To obtain any necessary permits and to abide by all applicable rules, regulations, or laws pertaining to operation of equipment and agreements with the U.S. Government and the NWS.
7. To give full credit and acknowledge that messages broadcast originate from NWS and to take due care to avoid any implication that the service is provided by others.
8. That the content or meaning of messages broadcast will not be edited or altered in any way so as to change the original meaning.
9. That no audio or visual commercial message or announcement shall be broadcast before, during, or after NOAA Weather Radio All Hazards broadcasts to indicate or imply that the NWS or the United States Government endorses any commercial product advertised.
10. To pay all costs and expenses resulting from this Agreement, except electrical energy when furnished by the NWS under paragraph (B) 1. below.
11. To hold the NWS free of liability for loss or damage to Station property installed to carry out this Agreement.
12. To assume full responsibility for the use made of any information broadcast or otherwise disseminated and to hold the NWS and its employees harmless for any damage that may arise from this arrangement.

**(B) NWS AGREES:**

1. To furnish electrical energy required for the equipment if this can be done easily within existing electrical service but not to include electrical energy for microwave transmitters or the installation of special circuits for Station equipment.
2. To allow Station to install at Station's expense, special electrical circuits for its equipment provided the circuit design and related installation first meet with NWS approval in writing.
3. That NWS personnel will exercise reasonable care to protect property of Station.

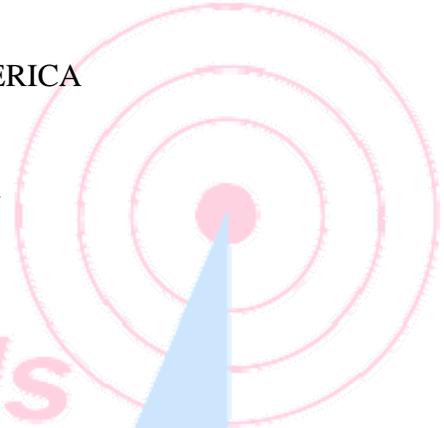
**TERMINATION**--This authorization shall continue indefinitely unless terminated at any time, with or without cause, by either party with written notice to the other. Such notice of termination shall be effective on date of mailing.

**LIMITATION**--Broadcasting by Station shall be at such time as determined by the Station but

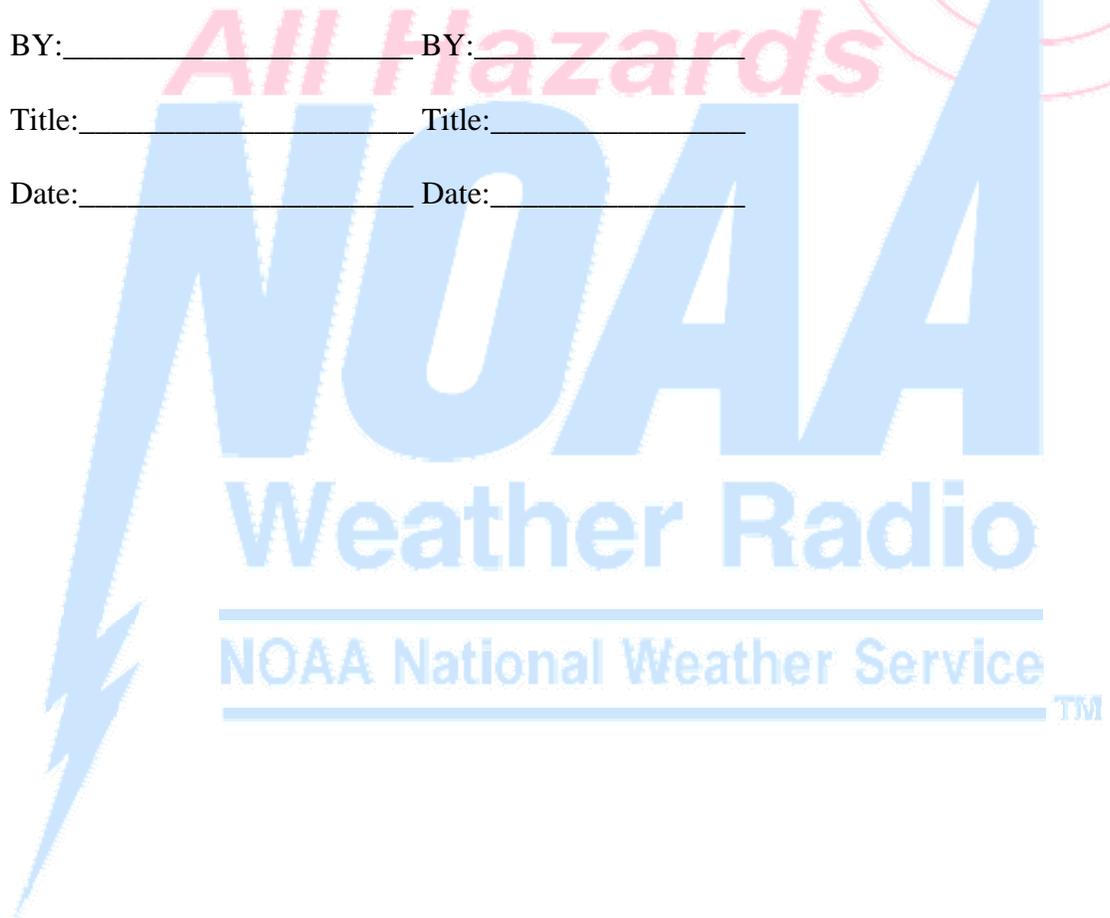
all messages broadcast will be broadcast within 1 hour of their receipt by the Station. Any schedule arranged shall be subject to modification and/or suspension at any time at the senior NWS representative's discretion. The NWS cannot guarantee that its equipment will operate continuously.

IN WITNESS THEREOF the parties hereto have executed this Agreement effective as of the latest date written below:

_____	UNITED STATES OF AMERICA
Station Name or Call Letters	Department of Commerce
_____	National Oceanic and
_____	Atmospheric Administration
_____	National Weather Service



BY: \_\_\_\_\_ BY: \_\_\_\_\_  
Title: \_\_\_\_\_ Title: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_



APPENDIX E: Agreement for Direct Access to NWS NWR Audio Output Signal Using Non-government Communications Facilities by Bridge Tap

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL WEATHER SERVICE

AGREEMENT FOR ACCESS TO NATIONAL WEATHER SERVICE NOAA WEATHER  
RADIO ALL HAZARDS AUDIO OUTPUT SIGNAL  
USING NON-GOVERNMENT COMMUNICATIONS FACILITIES BY BRIDGE TAP

THIS AGREEMENT is entered into between the United States of America, Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, hereinafter referred to as "NWS" and \_\_\_\_\_ hereinafter referred to as the "User." The NWS enters this agreement pursuant to the authority at 15 U.S.C. 313 and 15 U.S.C. 1525. In order to provide for dissemination of meteorological and hydrological information and warning messages to the general public by means of re-broadcasting or simulcasting audio messages from NOAA Weather Radio All Hazards, the parties do hereby mutually agree:

RESPONSIBILITIES:

(A) THE NWS AGREES:

1. To authorize the User to obtain from the appropriate telephone company, at the User's discretion and cost, an appropriate receive-only bridge tap extension user connection to the NOAA Weather Radio All Hazards circuit # \_\_\_\_\_ that feeds the NWS VHF transmitter located at \_\_\_\_\_.

2. That the signal quality shall be maintained as close as possible to the Government-established standard but cannot guarantee overall quality from original source to User because of Government/commercial carrier interface mixture.

(B) THE USER AGREES:

1. That the granting of this authorization by NWS does not vest in the User any exclusive or permanent right to receive this service, and that the service, broadcast program material, or schedule may be modified or suspended at any time, without recourse, at the discretion of NWS.

2. That NWS cannot guarantee that the NOAA Weather Radio All Hazards equipment will function at all times.

3. At the User's discretion to have the appropriate telephone company install and maintain a

receive-only bridge tap extension user connection to the NOAA Weather Radio All Hazards circuit #\_\_\_\_\_ that feeds the NWS VHF transmitter located at \_\_\_\_\_. The NWS will not be responsible for maintenance service of User terminal equipment or for coordination with the telephone company concerning communications problems associated with facilities leased by User. The NWS will not provide diagnostic testing of the communications circuit.

4. That the NWS be allowed to periodically check the effect of User's connection on NWS equipment.

5. That User will keep the NWS advised of the locations of all receiving terminals.

6. To obtain any necessary permits and to abide by all applicable rules, regulations, or laws pertaining to operation of equipment and agreements with the United States Government and NWS.

7. To give full credit and identification that messages broadcast originate from NWS and to take due care to avoid any implication that the service is provided by others.

8. That the content or meaning of messages broadcast will not be edited or altered in any way so as to change the original meaning.

9. That no audio or visual commercial message or announcement shall be broadcast before, during, or after NOAA Weather Radio All Hazards broadcasts to indicate or imply that the NWS or the United States Government endorses any commercial product advertised.

10. To pay all costs and expenses resulting from this Agreement.

11. To hold the NWS free of liability for loss or damage to User property installed to carry out this Agreement.

12. To assume full responsibility for the use made of any information broadcast or otherwise disseminated and to hold the NWS and its employees harmless from any injuries or damages that may arise from this arrangement.

**TERMINATION**--This authorization shall continue indefinitely unless terminated at any time, with or without cause, by either party on written notice to the other. Such notice of termination shall be effective on date of mailing.

**LIMITATION**--Broadcasting by the User shall be at such time as determined by the User, but all messages broadcast will be broadcast within 1 hour of their receipt by the User. Any schedule arranged shall be subject to modification and/or suspension at any time at the senior NWS representative's discretion. The NWS cannot guarantee that the NWS equipment will operate continuously.

IN WITNESS THEREOF the parties hereto have executed this Agreement effective as of the latest date written below:

\_\_\_\_\_  
Station Name or Call Letters      UNITED STATES OF AMERICA  
\_\_\_\_\_  
Department of Commerce  
\_\_\_\_\_  
National Oceanic and  
\_\_\_\_\_  
Atmospheric Administration  
\_\_\_\_\_  
National Weather Service

BY: \_\_\_\_\_ BY: \_\_\_\_\_

Title: \_\_\_\_\_ Title: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

