

September 27, 2019

Via FCC Electronic Comment Filing System

Ms. Marlene Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554  
Re: WC Docket No. 19-238, Comp. Pol. File No. 1561

Ms. Dortch:

In accordance with section 63.71 of the Federal Communication Commission (Commission) rules, the National Weather Service (NWS), of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, hereby files its objection to the Section 214 Discontinuation Application made by AT&T Services, Inc., on behalf of its listed affiliates in WC Docket No. 19-238, Comp. Pol. File No. 1561 termination of certain copper-based telecommunications circuits as outlined in the application by AT&T Services, Inc. and posted in Public Notice DA-19-815 on 30 August 2019.

The National Weather Service (NWS) provides weather, water, and climate data, forecasts and warnings for the protection of life and property and the enhancement of the national economy. NOAA's mission is one of science, service, and stewardship. Service involves the communication of NOAA's research, data, information, and knowledge for use by the Nation's businesses, communities, and people in their daily lives. NOAA services include climate predictions and projections; weather and water reports, forecasts and warnings; nautical charts and navigational information; and the continuous delivery of a range of Earth observations and scientific data sets for use by public, private, and academic sectors.

The arbitrary deadlines in the proposal for the discontinuance of traditional copper-based service will have significant consequences for a U.S. Government agency dependent on annual appropriations to make necessary upgrades and changes. The NWS, as well as other components of NOAA, have diverse mission portfolios and a large number of facilities that depend upon existing phone lines to fulfill their statutory mandates. Agency plans to upgrade its communication links are dependent upon annual budget allocations for completion, and the agency is prohibited by federal law from committing to spend funds that are not appropriated. A discontinuance of copper-based service to any particular facility has significant potential to endanger life and property that the agency is required to protect. In addition, there are potentially severe implications for commercial activities that depend upon the data and products NOAA generates and disseminates.

For the reasons explained below, because of the severe implications and uncertainty regarding the agency's ability to fulfill its mission to protect life and property and enhance the national

economy, the proposed discontinuance will adversely impact the public convenience and necessity. In addition, absent the ability to continue traditional copper-based service until such time as the agency is able to adapt its various communication systems to maintain its operations with digital lines and receivers, the agency must conclude that it will not be able to receive service or a reasonable substitute from another carrier in all instances that its mission requires, thus endangering life and property and having potential ramifications for the Nation's economy.

### **NEED FOR CONTINUATION OF SERVICE**

The NWS requests that the FCC delay the termination of these circuits, including the discontinuance of renewed service agreements and responses to requests for physical changes to existing service until the end of the Federal Government Fiscal Year 2025. The reasons are outlined below, but the overriding concern is that the termination of these circuits will negatively impact the NWS mission to preserve life and property and enhance the Nation's economy, as well as the overall NOAA mission to provide a host of services to the Nation. Some specific examples include:

- NOAA Weather Radio (NWR). NWR is a nationwide network of over 1,000 radio transmitters broadcasting official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week to all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. NWR is also monitored by broadcasters for Emergency Alert System (EAS) activation. NWR requires analog circuits to function and maintain broadcast capability. There are 1572 analog circuits\* associated with NWR. If analog circuits are turned off before the transition to newer technology, NWR coverage and availability would be significantly reduced, resulting in increased risk for loss of life and property. Ability to provide EAS activation for weather events would also be negatively impacted.
- Automated Surface Observing System (ASOS). The ASOS program is a joint effort of the NWS, the Federal Aviation Administration (FAA), and the Department of Defense (DOD). The ASOS systems serves as the Nation's primary surface weather observing network for support to the aviation community. ASOS provides weather observations required by aviation for take-off and landing operations at airports. The systems also support issuance of weather forecasts and timely issuance of warnings and advisories and, at the same time, supports the needs of the meteorological, hydrological, and climatological research communities. Termination of the 16 (AT&T) (372 total) analog circuits\*\* identified in this specific application would impact safety and operation of the National Air Space, including potential shutdown of parts of the National Airspace. Analog lines also support remote maintenance operations and would affect availability of the data when the equipment is not operating.
- Next Generation Weather Radar (NEXRAD). NEXRAD is a network of 159 high-resolution S-band Doppler weather radars jointly operated by the NWS, FAA, and the U.S. Air Force. NEXRAD is the most important severe storm observation tool used by the NWS

to acquire information about tornadoes and severe storms (storms containing damaging winds, hail, turbulence, heavy rain/flooding and lightning). NEXRAD data are integrated into America's decision support serving air traffic management, military operations, emergency management, and enhancing commerce through safe air and surface transportation, improved water management, agriculture and forest management, and snow removal management, which are crucial for a Weather-Ready Nation. There are 41 AT&T analog circuits impacted by the current application, and potentially 102 total analog circuits nationwide that could be impacted by future applications by other carriers.\*\* If these NEXRAD circuits are terminated, then National public safety is at heightened risk. The availability of radar data is potentially decreased due to loss of remote maintenance capability and diminished troubleshooting capability. Regional (multi-radar) and/or extended radar outages in metropolitan areas vastly increase the risk for loss of life and property, as well as the risk of significant economic impacts.

The NWS Primary Mission Essential Functions, which support the NOAA Primary Essential Functions, are:

1. Ingest, encode, collect, and distribute surface, upper air, space-based, and electro-magnetic observations;
2. Generate forecasts; and
3. Issue watches, warnings, and advisories of severe weather and other hydro-meteorological and electromagnetic events.

NWR, NEXRAD, and ASOS all fall within these criteria. Access to operational phone lines is crucial to the operation and maintenance of these systems.

## **BACKGROUND**

**NOAA Weather Radio (NWR)** – Dedicated Analog Circuits from Weather Forecast Offices (WFO) to Transmitter sites and Dial-up Plain Old Telephone Service (POTS) maintenance circuits at Transmitters.

- 762 dedicated analog circuits for the primary broadcast audio feed are provisioned under the GSA Networkx contract.
- 810 other circuits for the remaining primary broadcast audio feed & Remote Off-Air Monitoring Systems (ROAMS) monitor & control (including diagnostics) are locally procured directly from vendors and are not provisioned under the GSA Networkx contract.
- Discontinuation of these circuits as early as August 2020 would force NWS to migrate analog feed to alternate higher cost solutions or to terminate broadcasting.
- Loss of circuits would disable primary broadcast audio feed and the current maintenance reporting service capabilities used to sustain high availability of service.
- Inadequate resources and budget to make alternate technology transitions within the announced timeline.

- Alternate solutions using fiber or network connections are cost-prohibitive and are not supported under current budgets.
- Evaluation and testing are underway by the NWS to evaluate the replacement of analog circuits with wireless devices (2 to 3 fold cost increase).
- Replacing the analog circuits with wireless has moderate risk and requires site-by-site testing, and will necessitate an initial investment in IT hardware.
- Resources to perform hardware deployment and performance verification will require funding increases above the current budget.

**Automated Surface Observing System (ASOS) -- 16 (AT&T) (372 total) dedicated Analog**  
Circuits from supporting ASOS sites are not provisioned under the GSA Network contract.

- Provides up-to-the-minute weather observations to support the National Air Space, which will be affected if circuits are terminated with no viable alternative.
- Serves as reporting stations for aviation by generating required Meteorological Aerodrome Report (METAR) and Meteorological Aerodrome Report Special (SPECI) weather observations used by participants in active runway airport operations and generating the daily and monthly authoritative climate reports.
- Provides weather observations to support issuance of weather warning and advisories, as well as support emergency services, insurance, and risk assessments, utility operations, transportation, and other business-related activities for both real-time and historic capacities.
- Investigating alternative communications solutions expected to be ready in FY23 at the earliest.

**(Next Generation Weather Radar) NEXRAD -- 41 (AT&T) (102 total) dedicated Dedicated**  
Analog Circuits supporting NEXRAD radar sites are not provisioned under the GSA Network contract.

- NEXRAD is the NWS' #1 observational system for making threshold decisions during severe storm advisory and warning operations underpinning weather forecast services nationwide.
- The NEXRAD operational availability standard is 96% (percentage of time the system is providing data to forecast services) established in the NWS Modernization Act of 1992 by Congress. This standard is not possible without timely and reliable communication between the system and the forecast offices of the FAA NWS, and DoD.
- Loss of these circuits will negatively impact data availability increasing the likelihood of extended radar outages. These would potentially impact neighboring radar systems resulting in large-scale "regional" outages, thus eliminating the overlap of coverage designed to minimize single-station outages.
- Loss of these circuits will impact NEXRAD electronic technician personal safety and remote maintenance capabilities.
- The circuits are installed at the most remote of radar locations for emergencies, e.g. electrical shock, climbing incident, etc. Some radars are several hours away from a hospital, away from emergency response services and outside cellular coverage.

- Loss of circuits prior to an alternative solution will compromise current maintenance practices vital to sustaining high availability of service impacting the availability of radar data. Electronic technicians will be isolated from troubleshooting assistance necessary for complex system outage situations, e.g., calls to WFO, NEXRAD Hotline.
- This situation also impacts contracted NEXRAD maintenance and repair services, e.g., tower/radome services, Service Life Extension Program (SLEP), etc..

## **CONCLUSION**

In the interest of public safety and the protection of life and property, the FCC should deny the requested discontinuance of service until the NWS is able to update its infrastructure or arrange to receive service or a reasonable substitute from another carrier. NWS requests the phased discontinuation be delayed until such time as the NWS finds feasible technical solutions to replace the analog circuits beginning in FY21 and finishing in FY25.

Due to the large scale of the agency's geographically-dispersed infrastructure, the range of important services it provides to the Nation, and the short time in which a response is required, as well as the anticipated discontinuance of copper-based service by other providers, not all impacts have been uncovered or disclosed in this letter. Therefore, NWS requests the opportunity to meet with FCC staff to augment the record in support of its objection.

Sincerely,

/s/

Bernard Werwinski

Chief, Network and Infrastructure Branch

Office of Dissemination

National Weather Service

National Oceanic and Atmospheric Administration

U.S. Department of Commerce

\* The NWS is currently working on identifying the exact numbers of circuits supporting NWR which are provisioned by AT&T, but we are including all circuits as we have received similar notices from other telecommunications companies indicating that they are pursuing similar measures.

\*\* We specify the number of AT&T circuits as this is a response to an AT&T application, but we have received similar notices from other telecommunications companies indicating that they are pursuing similar measures.