

**Statement of Michael Lisenco
on behalf of
ARRL, the national association for Amateur Radio**



**Hearing entitled
“This is not a Drill: An Examination of Emergency Alert Systems”**

**Before the Senate Committee on Commerce, Science and
Transportation**

United States Senate

January 25, 2018

I. Summary of Testimony

1. In emergencies, prior to and during disasters and their immediate aftermath, when other communications systems have failed or are overwhelmed, volunteer Amateur Radio operators are ready, willing, able and prepared to provide alerting information, restoration communications; interoperable communications for first responders which lack that capability; health and welfare message traffic, and operations and support communications for disaster relief organizations and served agencies.

2. Radio Amateurs quickly re-establish communications during that critical window of time between a disaster's occurrence and the re-establishment of normal communications.

3. Amateur Radio operators contributed substantially to the dissemination of accurate information following the recent missile alert in Hawaii; and Amateur Radio is a key component of communications planning in the event of an actual ballistic missile attack in Hawaii.

4. The extensive Amateur Radio deployment of 50 volunteers from the U.S. mainland to Puerto Rico, and the long-term dedication of more than 75 resident Amateur Radio operators in the first few days of the recovery effort following the devastation there was the best example of the value of Amateur Radio in disaster relief communications. Virtually all communications infrastructure on the Island was destroyed or crippled by the high winds. Amateur Radio operators provided restoration communications for weeks following the hurricane, and in fact local radio Amateurs are still providing communications for power utilities.

5. The value of Amateur Radio in disasters, and in emergency alerting, weather spotting and in message traffic relay for served agencies is due not only to the extensive training and the ubiquitous geographic distribution of residential Amateur Radio stations throughout the United States. It is due also to the fact that hardened Amateur Radio stations with effective outdoor antennas capable of operation on multiple frequency allocations throughout the radio spectrum at a moment's notice are available ahead of time. Absent that, Amateur radio cannot provide the kind of volunteer public service communications for which it is deservedly well-known.

6. Had the level of devastation that occurred in Puerto Rico happened in Hawaii instead, the Amateur Radio response that was provided so effectively after Hurricane Maria could not have been provided to the same extent in Hawaii. The difference is that in Puerto Rico, there is not the same level of ubiquitous, preclusive private land use regulations that preclude the installation of effective outdoor antennas at the licensees' residences. These must be in place and operational well before a disaster occurs.

7. Given the prevalence and increasing numbers of private land use regulated communities in the United States, residential Amateur Radio antennas cannot be installed or maintained in most of them. An Amateur Radio licensee who must live in a deed restricted community currently will almost inevitably be subject to either (1) a complete prohibition of his or her Amateur Radio operation, or (2) the unlimited jurisdiction of a community association or architectural control committee or board which makes decisions concerning Amateur Radio antennas without any standards or limits whatsoever.

8. There is now pending before this Committee the Amateur Radio Parity Act of 2017. The House version of this Bill, H.R. 555 passed the House unanimously in January of 2017. The current Senate Bill, S. 1534 was introduced in July of 2017 by Senators Wicker and Blumenthal. This is a balanced, completely bipartisan bill that would fully protect both the entitlement of Amateur Radio volunteers to be able to utilize their FCC-issued licenses to provide emergency, disaster relief and public service communications, while at the same time protecting the aesthetic concerns and the jurisdiction of homeowners' associations. The Bill is supported by ARRL and the Community Associations Institute (CAI) which is the only national association of homeowners' associations. ARRL and CAI, at the urging of members of this Committee, cooperatively and carefully negotiated the precise, current language of the Bill, and both organizations have stated their support for it. Homeowner's associations can enact reasonable written rules governing height, location, size and aesthetic impact of, and installation requirements for, outdoor antennas and support structures for amateur communications. Absent this legislation, the volunteer emergency communications services provided by Amateur Radio will be precluded. We urge the Committee in the strongest terms to please approve and send this legislation forward without delay.

**II. Statement of Michael Lisenco
on behalf of
ARRL, the national association for Amateur Radio**

“...After sheltering in place, you basically turn on AM/FM radio for word from Hawaii Civil Defense and other authorities. The story we are working on for MSNBC Left Field is that, in the case of electromagnetic pulse from a blast, and they expect... 90 percent of the people will be without communication, and ham radio is actually one of the ways that you will be able to hear what is happening throughout the islands, whether or not people are OK, who is alive, where that might be. Again, let’s be very clear, this is a false alarm, but if it were to happen they have a system in place, a very specific, stringent, structured system for this, if this was to happen.”

Joel Soboroff, reporting for MSNBC’s *Left Field* from Waikiki Beach on Saturday, January 13, 2018.

<http://www.msnbc.com/msnbc/watch/breaking-down-the-false-alarm-hawaii-missile-threat-1136479811623>

Thank you, Chairman Thune, Ranking Member Nelson and other members of the Committee for this opportunity to testify on the topic of emergency alerting and emergency communications.

The Amateur Radio Service

I have had the privilege of serving for the past 5 years as a member of the Board of Directors of ARRL, the national association for Amateur Radio (formally known as the American Radio Relay League, Incorporated). I also chair its legislative advocacy committee. ARRL is a Connecticut non-profit association which has for more than a century represented and advocated the interests of the nation’s 750,000 Amateur Radio operators, all of whom are licensed by the Federal Communications Commission to serve the public, especially in times of natural and other disasters. Amateur Radio exists for a number of reasons, principal among which (as the FCC regulations put it) is its value "to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency

communications." The FCC has at various times described the Amateur Service as a "model of volunteerism" and a "priceless public benefit."

Amateur Radio operators are not first responders. But in emergencies, and during disasters and their immediate aftermath, when other communications systems have failed, volunteer amateur radio operators are ready, willing, able and prepared to provide restoration communications; interoperable communications for first responders which lack that capability; operations and support communications for disaster relief organizations and served agencies such as the American National Red Cross and the Salvation Army, and as ubiquitous sources of information for emergency alerting. Amateur Radio is durable and is not susceptible to the same disruptions caused by disasters as are broadband networks; cellular networks; and even public safety dispatch systems. This is because Amateur Radio does not rely on centralized or decentralized infrastructure. Because of Amateur Radio operators' technical self-training and flexibility, they can and do provide emergency communications with no infrastructure at all. Amateur Radio mobile and portable facilities can be established on site and at strategic locations off-site to provide reliable, immediate disaster relief communications instantly, within or outside the disaster area, over any path distance and to any location whatsoever. This flexibility makes it possible to provide communications for first responders and served agencies, as well as temporary interoperability facilities for first responders. As but a single example, in the aftermath of Hurricane Katrina, Amateur Radio operators provided communications from helicopters to first responders on the ground to facilitate rescue operations.

Amateurs are best known for their immediate responses to hurricanes, tornadoes, earthquakes, snow and ice storms, floods and other natural disasters, and their preparedness for immediate, organized deployment in large numbers. They are immediately available in large numbers during and in the aftermath of such events, and they provide communications in support of public safety and disaster relief agencies and state emergency response agencies without any advance request to do so. The level of organization and preparedness comes from regular drills, exercises and emergency simulations and they are integrated into emergency planning at all levels of government. ARRL conducts emergency communications certification courses that provide the educational background necessary for such serious work.

The large volume of public-spirited volunteer communicators in the Service stems from the fact that reliable, hardened Amateur Radio stations capable of local, regional or worldwide communications, with effective, outdoor antennas are widely and evenly distributed throughout the country, located in the residences of the licensees. There are, as the result, always going to be radio Amateurs inside and outside a disaster area, already on site before the disaster strikes, ready to transmit local conditions to first responders and state offices of emergency management. Because of this ubiquity, Amateur Radio serves as an early weather alerting service through programs designed to prepare the public for natural disasters and weather-related emergencies.

Emergency Alerting Via Amateur Radio

The Amateur Radio Service interfaces with the National Weather Service (NWS) and the National Hurricane Center (NHC). The SKYWARN program of the NWS provides thousands of volunteers nationwide to serve as the “eyes” of the NWS using Amateur Radio stations at their residences when severe weather is imminent. These spotters also provide critical meteorological data that cannot be observed at ground level by NWS radar systems. While there are some trained SKYWARN spotters who participate from their personal vehicles as mobile units positioned at certain strategic locations, the majority of SKYWARN participants provide their detailed observations from their home station locations. Effective and reliable stations and antennas are needed in order for these home stations to provide these detailed observations to NWS and NHC. The timeliness of SKYWARN reports submitted via Amateur Radio confirms what NWS sees on weather radars; it substantially increases the precision of severe weather forecasting; and it allows NWS to increase the warning and preparation times for those citizens in harm’s way. The program works very well: according to statistics from the NWS, approximately 290,000 trained SKYWARN spotters – *the majority being licensed Amateur Radio operators* – assist the NWS in providing accurate, reliable and immediate information on approximately 10,000 severe thunderstorms, 5,000 floods and 1,000 tornadoes on average each year.

The NHC, on the campus of Florida International University in Miami, is the second major National Weather Service program supported by Amateur Radio. For the past 32 years, volunteer operators at the NHC’s dedicated Amateur Radio station (FCC callsign WX4NHC) have been

present during any hurricane activation. Because reports arrive from the Atlantic and Pacific basins, High Frequency (HF) communication serves as a core component of this valuable NWS tool. The utility of HF communications in this life-saving effort requires that Amateur stations provide their information to the NHC via effective, reliable HF stations from the residences of licensees.

The Resiliency of Amateur Radio Disaster Relief Communications

Radio Amateurs have proved over and over again that because of their training and their willingness to bring personal radio gear into disaster areas that they can quickly re-establish communications during that critical window of time between a disaster's occurrence and the re-establishment of normal communications. These are the times of great threat to life and property: the "hottest" phase of the disaster's aftermath. Radio Amateurs are also trained and prepared to provide supplementary communications after normal communications have been restored. We have always been interoperable. For us it is not a goal, it is a fact. Although we are not first responders, we have a long history of cooperating with first responders when needed to help them perform their essential tasks for the public.

The absence of disaster-susceptible communications infrastructure inherent in Amateur Radio insures a unique level of resilience in times of disaster and afterward. This is not found in broadband networks, conventional or trunked public safety communications systems or cellular architecture. Surely enough, improvements in public safety systems and interoperability permit more reliable communications and a better level of organization among disparate public safety agencies and at different levels of government. That said, however, no one should believe that current generation public safety interoperable networks, be they broadband or narrowband, and regardless of the way these networks are designed, will be sufficiently durable in all disaster incidents. Because of their system architecture, all are subject to disruptions, overload, or failure under certain circumstances. It will continue to be necessary in the future for Amateur Radio operators to provide emergency alerting data, temporary communications and facilities for first responders and disaster recovery agencies at the outset of local and regional disasters and it will be necessary to provide temporary interoperability between and among first responders and disaster relief agencies. Former Federal Emergency Management Agency (FEMA) Director Craig Fugate, at an FCC earthquake forum

concerning emergency communications planning several years ago, stated that:

“Finally, I have got to get back to Amateur Radio...They are the first ones in the first days getting the word out as the other systems come back up. I think that there is a tendency (to believe) that we have done so much to build infrastructure and resiliency in all of our other systems, we have tended to dismiss that role -when everything else fails, Amateur Radio often times is our last line of defense. And I think at times we get so sophisticated, and we have gotten so used to the reliability and resilience in our wireless and wired and our broadcast industry, and in all our public safety communications, that we can never fathom that they will fail. They do. They have. They will. When you need Amateur Radio (operators), you really need them.”

Amateur Radio is available, ready, willing and able to do provide these services at no cost to anyone. As former FEMA Administrator Fugate noted, Amateur Radio operators are always there, using their own radios, on their own frequencies, and “nobody pays them.” Indeed, we will be there “when all else fails.”

The Hawaii Missile Alert

It is indeed an instructive time to discuss the value of Amateur radio in emergency alerting, emergency communications generally and disaster relief communications. Amateur Radio was involved in the effort to achieve normalcy in Hawaii after the recent ballistic missile alert. The Hawaii State Radio Amateur Civil Emergency Service (RACES) network was activated on UHF frequencies and also using a VHF inter-island repeater network. Amateur stations monitored the alert/cancellation activity. Only 20 hours earlier, the RACES network had completed an Amateur Radio communications exercise State Emergency Operations Center. The phone lines into the State EOC were soon overwhelmed and congested, and the website was overwhelmed with public inquiries. At these times, Amateur radio volunteers are normally present at either or both of the state or county EOC offices and at the State Warning Point, Hawaii Emergency Management Agency.

The Hawaii false alert notice (i.e. the cancellation notice) was circulated on various information mechanisms after 13 minutes. That was picked up and relayed through the Amateur Radio networks. The cellphone alert system could not be used for the cancellation notice until prior FEMA approval was obtained. Once that was obtained, the cancellation alert went out to the cellphone network after 38 minutes from the initial alert. There were lessons learned by the Hawaii Amateur Radio community from this event. The emergency communications certification training that Amateurs in Hawaii are given urges use of the warning siren as an alerting mechanism to trigger for Amateur Radio emergency communications networks, but in this case the sirens were not activated, thus causing some confusion. Amateur Radio emergency communications certification classes specifically teach about warnings, the three kinds of siren warning sounding in Hawaii (including the attack or wailing sound) and about preparedness for all hazards. This incident has expanded discussions in Hawaii about the means by which Amateur Radio networks are activated.

Hawaii Amateur Radio operators report that Amateur Radio played an important role in relaying the cancellation notice. For example, an early Coast Guard cancellation notice was relayed by an Amateur Radio operator to the Amateur Radio networks and disseminated very quickly. The State Warning Point waited to obtain FEMA authorization to send out a particular type of message that would show up on cellular phones similarly to the original alert message. Many people had received the warning first on their cell phones through the Wireless Emergency Alert (WEA) system, but a cancellation on that same system was substantially delayed; the result was that Amateur Radio networks disseminated validated cancellation information long before the cellular networks were able to do so.

There is no single model for effective communications in advance of, during and after disasters and emergencies. Emergencies range from a localized situation affecting one community, or an insular area such as Puerto Rico or the Virgin Islands, to regional events affecting multiple counties or larger areas. Wide area disasters may affect multiple states or entire regions of the country (such as a hurricane which, in its course, can impact states from Florida up the entire Eastern portion of the United States to Maine, as occurred in Hurricane Sandy, and/or the entire Gulf coast and southern United States into Texas as occurred with Hurricanes Katrina and Rita). Because of the differences in propagation at various times of the day and the distances and paths that emergency communications may need to

cover, the ability for Amateurs to utilize any and all of their authorized frequency allocations [from medium-frequency (MF) through ultra-high frequency (UHF) and above] efficiently is necessary in order for the Service to be fully effective in disasters and emergency relief. All of these allocations require the use of an effective outdoor antenna.

Hurricane Maria and Amateur Radio's Role in Recovery Operations in Puerto Rico

Because of the utter devastation that occurred in Puerto Rico from Hurricane Maria recently, the approximately 500 local Amateur Radio operators who are actively and regularly available there for emergency communications purposes were not all available to provide restorative and other emergency communications because many of the operators were concerned at the outset with basic survival for themselves and their families. ARRL estimates that there were approximately 75 Amateur Radio stations throughout the Island providing communications at all times during the entire process -- from before the Hurricane hit until very late in the recovery effort. Indeed, even today, local Amateur Radio operators are providing communications for power utility workers doing power grid restoration. However, it was obvious at the outset that additional resources were going to be needed. ARRL called upon the mainland Amateur Radio community to provide up to 25 two-person teams of highly qualified licensees. Amateur Radio volunteers responded immediately, without hesitation. Fifty of the nation's most accomplished Amateur Radio operators responded within 24 hours to the call to deploy to Puerto Rico and provide emergency communications for a three-week tour of duty, sponsored by the American National Red Cross.

The group's principal mission was to move health-and-welfare information from the Island back to the US mainland, where that data was used by the Red Cross. The group remained on the island for 3 weeks. ARRL equipped each two-person team with a modern digital HF transceiver, special software, a wire antenna, a power supply and all the connecting cables, fitted in a rugged waterproof container. In addition, ARRL sent a number of small, 2,000-Watt portable generators as well as solar-powered battery chargers of the variety the US military uses on extended deployments, and some VHF and UHF equipment for local use. ARRL's Ham Aid program adapted and provided nearly \$75,000 in Amateur Radio equipment to the volunteers that deployed to Puerto Rico and to the ARRL

members resident in Puerto Rico. Some of this equipment is still being used in Puerto Rico for the recovery effort. Because Hurricane Maria devastated the island's communications infrastructure, without electricity and telephone service, and with most of the cell sites inoperative, millions of Americans were cut off from communicating. Shelters were unable to reach local emergency services. Nor could people check on the welfare of their family members. The situation was dire and the Amateur Radio response was timely in order to address the crisis. Referred to as the "Force of 50," the Amateur Radio volunteers provided communications for local law enforcement and utility managers; island-to-mainland health-and-welfare traffic, and outgoing communications from the more remote areas of Puerto Rico in the mountains to San Juan and other municipios. Fire officials in Puerto Rico facilitated safe passage, food, shelter, and water for the volunteers at fire stations on the island, as needed. The volunteers initially gathered at the convention center in San Juan, which served as the Puerto Rico Emergency Management Agency (PREMA) headquarters. The Force of 50 and local radio Amateurs staffed VHF and HF nets at the American Red Cross temporary headquarters, despite severe damage to their own homes. The nets covered nearly two-thirds of the island. In addition to the health and welfare traffic and Red Cross information transfer, the volunteers handled traffic to and from the power company, Autoridad de Energía Eléctrica (AEE), and state and local authorities relative to power restoration efforts. Twelve team members were assigned to provide communication for engineers tasked with repair to the island's power distribution centers.

The Red Cross Headquarters net, staffed by radio Amateurs, provided 24-hour operation in preparation for an anticipated emergency involving the Guajataca hydroelectric dam. Amateurs provided notices to residents in the districts of Quebradillas, Isabela, and San Sebastián of the danger. An Amateur volunteer was stationed in Quebradillas to provide emergency communication if needed and to maintain contact between AEE and its Monacillo control center. An Amateur Radio station was installed and an operator embedded at the Puerto Rico Emergency Operations Center (PREOC). Local radio Amateurs established VHF communication capabilities at 51 hospitals throughout the island, so they could have direct contact with the PREOC. The Amateur embedded at the PREOC served as liaison between the PREOC and the FEMA Emergency Support Function (ESF-2) task force, relaying information among the Red Cross, ARRL, FEMA, and the ESF-2 task force.

Two team members deployed in the westernmost end of the Island. “Team Oeste (Mayagüez)” were stationed at a Red Cross shelter in Mayagüez, providing the only emergency communication link from that city to San Juan initially. That team relayed needs and conditions of those living in and around Mayagüez and coordinated water delivery and other urgent necessities, such as non-perishable food items, extended-life dry milk, blankets, baby formula, and dust masks. They provided communications for the medical staff set up at the Palacio de Recreacion y Deportes, a sports facility in Mayagüez converted to a medical facility. Lists of medical needs were relayed to the Red Cross as well as to FEMA and Puerto Rico’s Emergency Management Agency. An HF station with data transfer capability and a VHF/UHF station were set up in the FEMA disaster field office, and volunteers reported in by radio from around the island to post situation reports. Amateur operators were also posted at four power-generation facilities, at the request of the power company. Superacueducto, the water utility, asked for several Amateur Radio Operators to help in re-establishing water flow from Arecibo to San Juan. Four Amateur Radio volunteers were positioned to accompany and provide VHF communication at Red Cross distribution centers on a daily basis. Two volunteers also were sent to Culebra Island to establish VHF and HF communication there. Those volunteers provided the first communications from Culebra following the storm.

Critical to the value of the Amateur Radio response to Hurricane Maria were the partnerships that had been established long before the event. ARRL has national partnerships with, *inter alia*, the American Red Cross, the Federal Emergency Management Agency, and The Salvation Army. ARRL worked closely with the Red Cross in Puerto Rico and, due to the work of local volunteers associated with ARRL in Puerto Rico, a network of relationships across the island has been in place for many years. Amateur Radio emergency and disaster preparedness through building partnerships allows our volunteers to be integrated into response in an effective way on exceptionally short notice. The radio Amateurs in Puerto Rico are extremely well-organized, and, given the severity of the damage and personal deprivations suffered by everyone, including the vast majority of local Amateur Radio licensees, they responded in large, and sufficient, numbers. They are deserving of a great deal of credit for their performance in the face of tremendous personal loss and sacrifice.

ARRL worked with partners such as US Army Military Affiliate Radio Service members, the National Hurricane Center, and the Salvation Army Team Emergency Radio Network (SATERN) so the broader Amateur Radio response was coordinated and made effective use of each group's strengths and assets.

There were several lessons learned from this extensive test of Amateur Radio's emergency capabilities. Throughout Puerto Rico, normal communications were disrupted, isolating communities and hampering emergency response. Amateur Radio operators extensively utilized conventional, analog VHF systems and HF radio email systems to successfully pass lifesaving messages between government and non-government entities. Through our volunteers deployed from the mainland to Puerto Rico and the resident ARRL Puerto Rico Section, radio Amateurs effectively integrated into the FEMA Joint Field Office (JFO) in ESF-2 (Communications). This allowed for an effective flow of information between Amateur Radio volunteers throughout the island and Federal responders responsible for communications restoration. The Department of Homeland Security SHARES program also played a key role in providing Amateur Radio support to JFO ESF-2 when the volunteers there were at the end of their tour. Finally, radio Amateurs provided support to military responders when clear channel HF communications were needed for military missions. Among other things, Amateur Radio operators provided HF communications for the military when helicopters were out of line-of-sight range and needed to communicate with base stations obscured by the extremely mountainous terrain in Puerto Rico.

Effective Outdoor Antennas are Critical to the Amateur Radio Response in Disasters

The expertise radio amateurs have with HF communications is tremendously valuable when frequency selection, interference and propagation hinder response and where, as in Hurricane Maria, there is a large volume of message traffic between the U.S. Mainland and geographically separated Caribbean islands. In this case perhaps the most urgent lesson learned is that *the value of an active and engaged group of local Amateur Radio operators with pre-existing effective outdoor antennas cannot be overstated. Local radio amateurs understand their communities, the threats faced, and the response culture better than do volunteers from the outside.* The "Force of 50" would not have been successful but for the

exceptional spirit of volunteerism by Puerto Rico radio Amateurs and their relatively unfettered ability to erect effective outdoor antennas, and the fact that those local Amateur stations were in place and ready to provide communications long before the 2017 hurricane season. It was local radio Amateurs, using stations at their residences and portable stations who initiated restorative communications operations before the Force of 50 arrived, and they continued those efforts many weeks after the Hurricane.

Amateur Radio operators need very little from the Federal government. We do what we do because we love the medium and we are public spirited volunteers who derive personal satisfaction from using our avocation for the benefit of people in need of help. We do, however, have a very urgent need that will cost no one anything, nor create any controversy whatsoever. The Amateur Service, in order to ensure the continuation of emergency communications readiness, absolutely requires some relief from the ubiquitous presence of, and the exponential increase in unreasonable and unnecessary private land use regulations in the United States that, essentially universally preclude the ability of licensed radio amateurs to erect and maintain any effective outdoor antenna at all. This is without any doubt the largest threat to the Amateur Radio community's ability to respond to disasters, severe weather, and other threats to lives and property in the United States.

Perhaps the most important element of the ability of local radio Amateurs throughout Puerto Rico to be immediately ready to provide the restorative communications that they did provide very effectively is that they had the ability, long before the Hurricane arrived, to install and maintain effective outdoor antennas for the HF and VHF and UHF bands at their residences. There is not yet in Puerto Rico the prevalence of preclusive private land use regulations that now exists in the rest of the United States, but the situation is dire in most other suburban, urban and exurban areas. It is important in analyzing this issue to view the Amateur Service as a decentralized network of individual stations working together in emergency situations and in preparing for the same. The essentially uniform distribution of Amateur Radio stations in residential areas makes those individual stations very important in a given weather disaster in the area where those stations are located when commercial communications systems are disabled or overloaded, or in other areas for purposes of relay of message traffic. Amateur stations are often called on to report severe weather, and the geographic distribution of stations in residential areas is critical for this

function as well. Furthermore, while modern Amateur stations are portable, and transportable to remote disaster locations, it is critical to have stations located at one's residence in order to regularly participate in disaster preparedness training exercises and drills. It is impossible to prepare adequately for the use of Amateur Radio communications in emergencies when the ability to self-train and self-educate by means of an effective, reliable Amateur Radio station at one's residence is precluded by the inability to install a functional outdoor antenna.

Private Land Use Regulations Increasingly Preclude Amateur Radio Disaster Response

There is no substitute for the ready availability of a residential Amateur Radio station in daily operation from a licensee's residence. The licensee cannot be expected to have the ability to communicate into or from a disaster site unless he or she has a station with an effective outdoor antenna capable of operation on multiple frequency bands at once, which is ready to be pressed into service from the licensee's residence at a moment's notice. The major value of Amateur Radio emergency communications is during the first hours, days or weeks of a disaster when commercial and public safety communications facilities are not functional or are overloaded. Stations must be ready to operate when needed and emergency communications are most often conducted from a licensee's residence. For some disabled persons, home stations represent their only opportunity to participate in emergency communications. Private land use regulations which exclude Amateur Radio stations from entire communities preclude emergency communications readiness.

According to the Community Associations Institute, 90 percent of new housing starts in the United States are subject to private land use regulations. This is because, now, essentially all lenders for land developers in the United States require, as a condition for funding a new housing development, all require a declaration of covenants be filed with the subdivision plat. Given the prevalence and increasing numbers of private land use regulated communities in the United States, residential Amateur Radio antennas cannot be installed or maintained in most of them. An Amateur Radio licensee who must live in a deed restricted community currently will almost inevitably be subject to either (1) a complete prohibition of his or her Amateur Radio operation, or (2) the unlimited jurisdiction of a community association or architectural control committee or

board which makes decisions concerning Amateur Radio antennas without any standards or limits whatsoever. Those private land use regulations (or the application of them) which prohibit outdoor Amateur Radio antennas or transmissions, and thus preclude Amateur Radio entirely; those which fail to permit the installation of effective outdoor Amateur Radio antennas; and those which do not constitute the minimum practicable regulation to accomplish the (aesthetic) goals of a homeowner's association are unreasonable and unnecessary.

The Amateur Radio Parity Act of 2017

There is now pending before this Committee the Amateur Radio Parity Act of 2017. The House version of this Bill, H.R. 555 passed the House unanimously in January of 2017. An identical predecessor House Bill, H.R. 1301 passed the House unanimously in the 114th Congress. The current Senate Bill, S. 1534 was introduced in July of 2017 by Senators Wicker and Blumenthal. This is a balanced, completely bipartisan bill that would fully protect both the entitlement of Amateur Radio volunteers to be able to utilize their FCC-issued licenses to provide emergency, disaster relief and public service communications, while at the same time protecting the aesthetic concerns and the jurisdiction of homeowners' associations. The Bill is *unopposed*: it has the support – in writing -- of both ARRL and the Community Associations Institute (CAI) which is the only national association of homeowners' associations. ARRL and CAI, *at the urging of members of this Committee*, cooperatively and carefully negotiated the precise, current language of the Bill, and both organizations have stated their support for the present version.

The Bill calls on the Commission to enact rules that prohibit the application to Amateur Radio stations of deed restrictions which preclude Amateur Radio communications. Also prohibited are those deed restrictions which do not permit an Amateur Radio operator living in a deed-restricted community to install and maintain an effective outdoor antenna on property under the exclusive use or control of the licensee; and those restrictions which do not impose the minimum practicable restriction on Amateur communications to accomplish the lawful purposes of a Homeowner's Association (HOA) seeking to enforce the restriction. Amateurs who wish to install an antenna in a deed restricted community may be required to notify and obtain prior approval of the HOA. HOAs can preclude Amateur antennas in common areas (i.e. property not under the exclusive use of the

licensee). HOAs can enact reasonable written rules governing height, location, size and aesthetic impact of, and installation requirements for, outdoor antennas and support structures for amateur communications but the effective outdoor antenna requirement is paramount. We are in desperate need of this legislation, and without it, the volunteer emergency communications services provided by Amateur Radio will be precluded. We urge the Committee in the strongest terms to please approve and send this legislation forward without delay.

ARRL is grateful for the opportunity to submit this testimony and to make our concerns known to the Committee. We look forward to the opportunity to bring to your attention the good work of a large number of volunteers who look forward to every chance to serve their country whenever and wherever they are needed.

Respectfully submitted,
Mike Lisenco
ARRL, the national association for Amateur Radio