



Michael D. Adams

4 April 2012

Federal Communications Commission
445 12th St SW
Washington, DC 20554

Re: Public Notice DA 12-523

To Whom It May Concern:

I am writing in response to the request for comments in Public Notice DA 12-523. I write from the background of a licensed amateur radio operator, a member of Navy/Marine Corps MARS, a communications volunteer with a municipal EOC, and a property-casualty actuary whose specialties include government relations and municipal liability risk management. I am responding on my own behalf; the comments below are my own and may not represent those of any organization I belong to, am employed by, or otherwise act as a representative for.

I suspect that you will be inundated with comments from interested parties, many of whom can answer some of the questions posed by the Public Notice far better than I. However there are specific items in the Public Notice that I would like to offer feedback on.

Items 1b-1d,1f: Advantages of Amateur Radio Service, government-sponsored planning, training, etc. Others will likely respond far more eloquently than I, but I believe that the value offered by volunteers licensed in the Amateur Radio Service is the ability to donate skilled manpower, personal equipment, technical skills, and creativity in the event that conventional resources are overwhelmed or destroyed. It is this ability to dynamically respond and adapt, without government pre-provided resources, that makes the Amateur Radio Service of value to disaster response efforts.

Probably the greatest challenge that volunteer communicators face is bridging the gap created by the ad-hoc nature of amateur efforts, FEMA requirements for certification of NIMS & ICS training, the perceived requirements of credentialing and background checks imposed by security and liability concerns, and the stigma associated with volunteers as being thought of as “amateurs”.

From my perspective, efforts to make use of the Amateur Radio Service seem to be erratic, inconsistent, and almost haphazard among different government and non-government emergency response organizations. To make the greatest use of the Amateur Radio Service’s strengths, the

government would be well-served to strongly encourage government and non-government emergency response agencies to form credentialed auxiliary communications teams from interested volunteers to make use of all communications resources at their disposal, including public safety land mobile resources that the agencies might be licensed for, and amateur radio service resources when more conventional services are overwhelmed or fail.

To promote such teams, the federal government (probably FEMA) should promulgate a standardized training curriculum, making it available to all interested volunteers, and providing a population from which agencies could draw trained, interested volunteers.

The larger amateur radio community should not be forgotten in such a structure. As mentioned above, the creativity and adaptability of amateur radio operators is a resource that cannot be underestimated. Auxiliary communications teams could provide a means for agencies to interface and interoperate with the larger amateur radio community, using the Amateur Radio Service, and providing a buffer to smooth out any rough edges on the amateur side.

An example of this buffering effect can be seen in the Skywarn operations of the Taunton, Massachusetts office of the National Weather Service. Volunteer amateur radio operators at the Taunton NWS office communicate directly with ham weather spotters throughout Taunton's forecast region, collecting and organizing information into a product comfortably usable by NWS meteorologists.

Item 1e: Specific changes to operational rules

In my opinion, the greatest weakness for the Amateur Radio Service in emergency communications is the inability to conduct voice and data communications on the same frequency on most HF bands. Passing digital traffic in a net established using voice communications is a technique that has been used to great effect within MARS, and interest has been raised in such dual-function nets through experimentation on 2m, 70cm, and (since the recent rule change) 60m.

I would welcome a change to Commission rules to designate additional spectrum within the Amateur Radio Service's HF allocation for such dual use. However, I would caution that such a revision to the rules would need to be carefully crafted, lest the revision be seen as a simple expansion of digital mode privileges into the phone bands, or vice-versa. My preference would be that an expansion be written to specify digital in conjunction with phone; an example would be communication where initial contact is made using phone, but actual traffic is passed using a digital mode.

Item 1h: Data transmission standards

I, like many amateur radio operators, question the wisdom of maintaining the current restrictions on symbol rates in the Amateur Radio Service. Those restrictions were understandable many years ago,

given the tradition that the Amateur Radio Service should be secondary to other, more conventional means of communications, and therefore there was justification in restricting the symbol rate of digital communications so as not to put amateur radio in a position of competing with evolving commercial long-distance communication. However, given the nearly universal availability of broadband communications, one wonders there is a rational basis of maintaining, for example, the 300 baud limitation on HF. Removal of the restriction would foster the development of more efficient uses of Amateur Radio Service spectrum, especially during times of disaster, with probably no change in non-competitiveness against DSL, cable internet, or commercial wireless internet services.

I can easily imagine some of my peers within the amateur radio community responding to this particular item with calls to make their preferred mode or communications package “standard”. I trust that the Commission will resist such calls, and instead continue to encourage experimentation and development of improved digital communications modes by amateur radio operators. However, I think it would be appropriate for the government to seek demonstrations of amateur radio capabilities, including the use of different modes and software. Such demonstrations should be performed by a variety of different organizations, and descriptions and the results of such demonstrations should be communicated among interested agencies and individuals.

Item 1i: Interconnection with other communications systems

I would generally caution against expanding amateur radio service privileges into public safety spectrum. However, if the auxiliary communications model described in my response to 1b-1d and 1f above were adopted, it would seem logical that such auxiliary communications teams be encouraged to use devices capable of operating on both amateur and non-amateur spectrum. Perhaps some formal tolerance for the use of equipment that is generally compliant but not certified for Part 90 by auxiliary communications teams, and/or using additional transceivers in excess of the quantity specified in a Part 90 license during limited training exercises and actual emergencies could be implemented within Commission rules.

Similarly, given the use of FRS by local CERT teams, and given the recent increased commercial availability of Part 90 certified transceivers to the amateur radio market, it might be appropriate for the Commission to codify tolerance of the use of Part 90 certified transceivers by licensed GMRS operators. Additionally, if the FCC retains licensing requirements on GMRS, perhaps it might be appropriate to consider granting Amateur Radio Service operators GMRS-equivalent privileges on GMRS frequencies, in an effort to promote interoperability among volunteer communicators.

I also think it would be appropriate to authorize more routine communication between radio services on those 60 meter frequencies authorized for amateur use. Such potential interoperability is one of the justifications for the amateur privileges on 60m; so why not formalize it? At a minimum, requesting that NTIA grant authorization for MARS and SHARES stations to join the amateur radio

service as secondary users of the five designated 60 meter channels may prove useful in the event of a major disaster.

And, although this is picky, if the Commission were to modify its rules to more explicitly provide for inter-service communications, perhaps some thought should be given to harmonizing differences in more mundane regulations. Consider, for example, differences in the requirement to identify a station among the various radio services.

Similarly, during some short-duration public safety events or emergencies, it is not unheard of for a station licensed in multiple radio services to operate in those different services in short order. For example, I recently spent a day in the woods, aiding a regional Boy Scouts group by acting as a radio operator during a weekend wilderness event. Because some operators were licensed in the Amateur Radio Service while others were users of FRS radios, I needed to switch between operating under my amateur radio license and my GMRS license. To be compliant with Commission rules, I had to be mindful of which service I was operating under for each and every transmission, in order to comply with identification requirements and to give the appropriate callsign. Compliance would have been somewhat less cumbersome if there were some official tolerance for the incidental use of another service's callsign in such short-term dual-use scenarios. In plain English: there would have been less confusion if Commission rules would have authorized me to just sign as "WQOU455/AB1OD" in both services, rather than alternating callsigns as I switched between frequencies. It would have been even simpler if individuals who hold station licenses in both the Amateur Radio Service and GMRS could use their amateur callsign as their GMRS callsign.

Item 1j: National certification program

In my response to items 1b-1d, above, I advocated promoting the concept of auxiliary communications teams formed by government and private emergency response groups. Within a structure, it would make sense for there to exist a common, basic training curriculum for team members and individuals interested in making their services available to auxiliary communications teams.

The American Radio Relay League offers an "Introduction to Emcomm" class to amateur radio operators. It has a good, well-rounded curriculum, but I think it suffers due to a perceived lack of rigor, its tendency to promote League-sponsored interests, and the potential perception that the League isn't as "official" as a federal agency.

Such training would benefit the public by facilitating the efforts of volunteers or potential volunteers who seek some form of official documentation of their familiarity with NIMS and ICS protocols, communications best practices in both the commercial/public service and amateur radio services, and the wealth of communications resources that may be available under different circumstances. And, if sponsored by a federal agency, it is more likely that such training would be found easier to

accept by potential users of volunteer communicators than random classes taught by hobbyist or advocacy organizations.

Items 2a-2e: “Unreasonable or Unnecessary” restrictions:

I am certain that the Commission will receive an abundance of responses to questions pertaining the conflict between land-use regulations and amateur radio antennas. Others are more qualified to provide specific examples of restrictions than I, although I will note that:

- In the past, when I have considered moving, I have observed that in certain parts of the country, particularly those that experienced development that outpaced the ability for local municipalities to provide tax-funded services, it is difficult to find marketable residential real estate that is not under some form of deed restriction or governance by a homeowners association. These difficulties are compounded when the choice of homes to purchase is already significantly limited by the presence of a disabled individual in one’s family. Properties compatible with mobility-restricted individuals tend to be of newer construction, and are therefore more likely subject to deed restrictions or homeowners associations.
- Had I lived in such a restricted property at the time I became interested in amateur radio, I likely would have quickly lost interest because of the excessive challenge in erecting an effective antenna that complied with such constraints. If volunteer communicators are to be widely available in the event of future emergencies or disasters, it is necessary to ensure a continuing supply of such individuals. While I am sympathetic to the probable objection of “if you didn’t want the restriction, you shouldn’t have bought a deed-restricted house” I believe it is necessary to ensure that potential new entrants to the service are not generally excluded due to the prevalence of excessive antenna restrictions in some areas.

I would like to therefore offer the following suggestions as to how the Commission could formulate rules that balance the need to support the amateur radio with the need for municipalities to oversee the use of local properties and the desire of groups of property owners to provide guidelines for the aesthetics of their immediate communities.

- A. A residential property owner should generally be permitted to erect a single VHF or UHF antenna on their property, and should be given safe harbor from external prohibitions when that antenna is the smallest size possible to be effective for general use (for example, a quarter-wave ground plane, or a j-pole), when the antenna extends no higher than five feet above the highest point of the tallest structure on the property, and when the antenna is positioned with a good faith effort to minimize visual impact when viewed from any street without significantly sacrificing the effectiveness of the antenna.

- B. A residential property owner should generally be permitted to erect a single HF antenna on their property and given safe harbor from external prohibitions when that antenna meets the either of the following criteria:
- a. The HF antenna is a vertical antenna not exceeding an elevation above ground level of 45 feet or half the distance to the closest property line, whichever is less
 - b. The HF antenna is a wire antenna not higher than 20 feet above the highest point of the structure or 45 feet above ground level, whichever is greater, supported by
 - i. trees or pre-existing permanent structures, or
 - ii. masts that are not taller than half the distance to the nearest property line.
 - c. As with my suggestions for VHF/UHF antennas, it is reasonable that any safe harbor protection require the property owner to make a good faith effort to minimize the visual impact of the HF antenna from any street without significantly sacrificing the effectiveness of the antenna.
- C. In addition to the above, it is unreasonable to prohibit amateur radio service antennas erected by property owners which are not visible to casual observers when viewed from any street.
- D. In addition to the above, it is unreasonable to prohibit amateur radio service antennas that have a greater visual impact when erected for the duration of a specific emergency, or when erected for training and practice provided that such training/practice antennas are not up more than four days in any given month, or ten days in any given year, and that such temporary installations do not involve the erection of temporary masts or towers that exceed the guideline of half the distance to the nearest property line.
- E. It is reasonable for homeowners associations or private deed restrictions to prohibit other amateur radio service antennas that fall outside guidelines A-D, above when such associations or restrictions also govern the appearance of the property over and above routine maintenance requirements.
- F. It is reasonable for local governments to prohibit other amateur radio service antennas or antenna support structures that fall outside guidelines A-D, above for properties meeting any of the following criteria:
- a. Properties that lie within designated historic districts, where the appearance and architecture of structures is generally regulated so as to harmonize with the appearance of the historic period being protected;

- b. Properties that were zoned for multi-family development at the time of purchase by the property owner; or
 - c. Properties that were zoned to permit residential densities greater than 2.2 dwelling units per acre of developable at the time of purchase by the property owner. However, it is unreasonable for local governments to prohibit other amateur radio service antennas or antenna support structures on properties zoned for agricultural use or residential properties which are 2 acres or greater in size.
- G. It is unreasonable for homeowner associations or local governments to use deed restrictions or zoning regulations to require licensed operators in the amateur radio service to be subject to permitting or design review more stringent than that required for the erection of a television or DBS antenna, for amateur radio service antennas falling within guidelines A-D, above.
- H. When local governments are barred from prohibiting amateur radio antennas or support structures due to guideline F, above, it is unreasonable for a local government to require operators in the amateur radio service to be subject to permitting or design review more stringent than that required for the erection of other appurtenant structures.
- I. It is unreasonable for a homeowners association or municipal government to require removal of an amateur radio service antenna or antenna support structure which was erected prior to any change in statute, rule, regulation, covenant or zoning classification, assuming that the erection of the antenna was legal at the time of its erection. It is also unreasonable to prohibit or unduly restrict the re-erection of such an antenna or support structure when a previously-legal/approved antenna or structure is temporarily lowered and/or replaced for maintenance and repair purposes.
- J. It is reasonable for property owners to restrict or prohibit tenants' installation of amateur radio service antennas requiring the affixing permanent or semi-permanent hardware to the structure or vegetation. However, it is unreasonable to prohibit tenants from erecting temporary amateur radio service antennas in areas provided for their exclusive use in a manner similar or analogous to that permitted for television or DBS antennas.
- K. It is reasonable for the Commission to recommend immunity for local governments and homeowners associations for claims of damage from the erection, use or collapse of an amateur radio service antenna subject to guidelines A-D, above. Amateur radio operators relying on the safe-harbor protections of A-D should exclusively bear the responsibility for ensuring the safe erection of their antennas, and for indemnifying others in the event of actual physical damage arising from their failure to do so or accidental occurrence.

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- L. None of the above guidelines should be seen as excusing any amateur radio operator from the general requirements of operating safety, under generally accepted engineering principles, of not causing harmful interference, or of registering or restricting antenna height due to proximity to an airport.

Thank-you for the opportunity to comment.

Sincerely,

A handwritten signature in blue ink that reads "Michael D. Adams". The signature is fluid and cursive, with a long horizontal line extending to the right.

Michael D. Adams