

**Statement of the American Radio Relay League, Incorporated Relative to  
Pending Legislation Concerning Amateur Radio Antennas and  
Communications**

**Senate Bill 15-041**

**Concerning a Requirement that Local Governments Regulate Amateur Radio  
Communications in Accordance with an Existing Federal Preemption Established by the  
Federal Communications Commission**

The American Radio Relay League, Incorporated (the "League") a Connecticut not-for-profit corporation, is the national association of amateur radio operators in the United States. The League is aware of the pendency of the above-referenced Bill, which is of extreme importance to, and would benefit, federally licensed Radio Amateurs in Colorado. **The Bill would also benefit those many people that are assisted by Amateur Radio operators through emergency communications, disaster relief, and public service communications throughout Colorado, other Western States, and the United States.** The Bill, which is similar in substance and format to legislation already enacted in thirty-one states, and would guarantee to radio amateurs the opportunity to install and maintain antennas of reasonable, and sufficient height and dimensions at their residences to permit public service communications.

On behalf of the more than 730,000 licensed Amateur Radio operators in the United States, more than 13,000 of whom live in the State of Colorado, the League would ask that that this Bill proceed to enactment. The following provides some background which may be useful in understanding the need for this legislation, and the Federal policies supportive of the Bill.

Municipal land use regulation of Amateur Radio antennas is subject to Federal regulation [47 C.F.R. §97.15(b)], a subject with which we have some expertise. State legislation provides some necessary flexibility to Amateur Radio operators in their efforts to install and maintain reliable, functional Amateur antennas, and some guidance to municipal governments and land use officials who typically are not familiar with the needs of Amateur Radio Operators, the limits of municipal jurisdiction, or the effects of Federal communications law and policy on local land use regulation. However, because municipal land use jurisdiction stems from the Police Power of the States, municipalities are more sensitive to, and aware of, State policy in this same area.

**A. The League's Interest In This Matter.**

The American Radio Relay League, Incorporated, a Connecticut non-profit corporation, is an educational and scientific organization which has traditionally been the principal representative of and spokesman for all federally licensed Amateur Radio operators in the United States. The League, with approximately 170,000 members, is the largest Amateur Radio organization in the world and is viewed by Federal government agencies, the United States Congress, and the communications industry generally as the national representative of the interests of licensed Amateur Radio operators. The purposes of the League, as stated in its Articles of Association, include the following:

...the promotion of interest in amateur radio communication and experimentation; the relaying of messages without charge; the furtherance of the public welfare; the advancement of the radio art; the fostering and promotion of intercommunication by electronic means for the benefit of the members and without pecuniary gain; [and] the fostering of education in the field of electronic communications...

The League's headquarters office is in Newington, Connecticut. The League is the Secretariat for the International Amateur Radio Union (IARU), which is composed of national amateur radio organizations similar to the League in more than 110 countries around the world.

The League prepares and publishes technical literature, develops and tests new equipment ideas in its laboratories, prepares training materials, assists local clubs in establishing introductory courses in amateur radio theory and Morse code, and coordinates examination sessions for FCC licenses throughout the United States and for U.S. citizens overseas. It also coordinates the National Traffic System for the systematic processing and conveyance of routine and emergency messages, and maintains liaison with the Federal Communications Commission (which regulates amateur radio), the Department of Defense (which regards the Amateur Radio Service as a standby communications reserve for national security/emergency preparedness purposes), the Department of Homeland Security (and independently, the Federal Emergency Management Agency, the American National Red Cross (which relies on radio amateurs for much of its emergency and disaster relief communications); the National Weather Service; the Salvation Army, and other groups and served agencies.

Thus, the League, in furtherance of the interest of its members (and of the Federal government) in efficient, reliable worldwide communication via Amateur Radio, has a significant interest in the occasional instances of overly burdensome restrictions on the operation of amateur radio stations which preclude effective amateur radio communications. Amateur radio stations are individually licensed by the FCC, and together constitute a network of stations which link all parts of the United States, and the world, at all times of the day and night. Amateurs participate in communications activities and in the emergency preparedness capabilities of the Amateur Service. The communications effectiveness of each amateur station is important as a link in the network of amateur stations which provide important communications worldwide, nationally, regionally, and locally.

## **B. Amateur Radio**

The Amateur Radio Service in the United States operates under the detailed rules and regulations of the Federal Communications Commission (the "Commission" or "FCC") enacted pursuant to Article 41 of the Radio Regulations of the International Telecommunications Union (Geneva 1979), to which the United States is a signatory, and the Communications Act of 1934, as amended, 47 U.S.C. Section 151, *et seq.* As of the end of

2002, there were more than 680,000 United States amateur radio operators licensed by the FCC. These stations are licensed to individuals, with the expectation that the non-commercial, public service communications will be conducted from the licensee's residence.

An amateur station is, by definition, a radio station operated by a duly authorized person interested in radio technique solely with a personal aim and without pecuniary interest. Communications Act of 1934, as amended, 47 U.S.C. §153(q) (1976). See also 47 C.F.R. §97.3. The basis and purpose of the Amateur Radio Service as defined by FCC Rules (47 C.F.R. §97.1) is as follows:

§97.1 Basis and Purpose.--The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

- (a) Recognition and enhancement of the value of the amateur service to the public as a voluntary non-commercial communication service, particularly with respect to providing emergency communications.
- (b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.
- (c) Encouragement and improvement of the amateur radio service through rules which provide for advancing skills in both the communication and technical phases of the art.
- (d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians and electronics experts.
- (e) Continuation and extension of the amateur's unique ability to enhance international good will.

Amateur radio operators are perhaps best known for providing communications for rescues at sea, communications with disaster-stricken areas following storms, earthquakes and other natural disasters, when normal channels of communications are cut; and the handling of messages, for families of persons stationed in remote scientific or military outposts. The Amateur Radio Service consistently fulfills its responsibility to provide public service communications, especially in emergency situations when other forms of communications are overloaded or nonexistent.<sup>1</sup> These services are provided locally, nationally and

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<sup>1</sup> A commendation for amateur radio operators appears at 129 Cong. Rec. S15216 (Daily Ed., November 2, 1983) in connection with amateurs' efforts during the United States invasion of Grenada:

During the first 2 or 3 days during which our forces were conducting operations in Grenada, the island was virtually cut off from the outside world communications-wise. Yes, we have spent millions of dollars on

internationally. The services and value of the Amateur Radio Service are well known to virtually every city, county and state emergency preparedness officer and agency. Amateurs in communications networks coordinate and provide services during bad weather, such as transportation for physicians, search and rescue, and radio/telephone interconnection for fast reporting of individual emergencies. Amateurs participate in SkyWarn, a severe weather spotting network organized under the auspices of the National Oceanic and Atmospheric Administration and the National Weather Service. It has been credited with protecting the public from hurricanes and tornadoes by advance warning and tracking. Amateur radio operators provide communications between the United States and areas affected by hurricanes, volcano eruptions, forest fires, earthquakes, and ice storms. Amateurs also provide public safety communications and post-search communications after plane crashes, shipwrecks, and similar tragedies.

Radio amateurs also contribute to the advancement of the radio art through technical innovation and advancement of communications skills. The radio amateurs' unique ability to enhance goodwill at home and abroad make them special ambassadors of our country. These goals and duties are achieved by well-organized networks of privately owned, Federally licensed amateur radio stations assembled by those interested in radio as a source of public service and self-training, without pecuniary interest. They use post-tax dollars to do so. The Federal Communications Commission in late December, 1983, described the Amateur Radio Service as "a service that is a model of public responsiveness in times of emergency and distress and a service that is a model of self-enforcement and volunteerism." Report and Order, FCC Docket 83-28, released December 23, 1983.

The U.S. Congress has repeatedly spoken of the benefits of a healthy, efficient Amateur Radio Service, such as in the Conference Report to the Communications Amendments Act of 1982, Pub. Law #97-259 (1982), as follows:

- A. Amateur radio service-- The amateur radio service is as old as radio itself. Every single one of the early radio pioneers, experimenters, and inventors was an amateur--commercial, military, and government radio was unknown. The zeal and dedication to the service of mankind of those early pioneers has provided the spiritual foundation for amateur radio

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communications for our military for use in crisis and wartime situations. However, on this particular occasion probably the most up to date accounts of what was happening in and around St. George's Medical College area, were given by ham radio operators. Mark Barettella, KA2ORK/J3, and Don Atkinson, J37AH, maintained communications throughout a very critical situation and were, at times, the only sources of information coming from Grenada. Ham radio operators here in the United States monitored frequencies used by Mark and Don and stayed in contact with them night and day. Ham radio operators provided a great service, not only to their government, but also to the people of the United States. Like hams that have gone before them, they have a tradition of service in times of local and national emergencies.

I think it is fitting today that we should honor these amateurs, and the amateur radio community in general, for also being a part of the finest traditions of this country. They are a national resource that we should be proud of and should appreciate.

over the years. The contributions of amateur radio operators to our present day communication techniques, facilities, and emergency communications have been invaluable.

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Amateurs are pioneering still today. Space or satellite communications are a most important part of amateur radio. Through Program OSCAR (Orbiting Satellite Carrying Amateur Radio), amateurs have been utilizing advanced technology from their relatively simple, inexpensive ground stations. Seven amateur satellites have been built to date by amateurs at their expense. The amateur space activities are playing an important role in attracting the young people of America to scientific fields.

Almost every nation has amateurs who communicate each day with fellow amateurs in other countries and on other continents passing vital emergency message traffic and acting as ambassadors of international goodwill. The modes of communication include Morse code telegraphy, telephone or teleprinters, television and facsimile. Equipment ranges from home-built transmitters and receivers using parts from discarded radio and television receiver and costing only a few dollars, to the most sophisticated equipment manufactured for commercial, government, and military use costing many hundreds of dollars.

There are approximately 400,000 amateurs in the United States and almost 900,000 throughout the world. At any time of every day, thousands of amateurs scattered throughout the world are listening to and communicating with fellow amateurs over distances varying from only a few miles within a city to thousands of miles across the world. It is the large number of amateurs dispersed around the world operating the five high frequency bands that has made it possible to provide the first, and for some time thereafter, the only communication links between areas devastated by natural disasters--earthquakes, tidal waves, hurricanes, tornadoes, blizzards and floods--and the outside world.

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The Amateur Radio Service has been praised for being self-regulated. The Commission has reported that less time has been devoted to the monitoring and regulating the Amateur Service than to any other service because of its self-policing discipline.

One primary purpose of the Conference Substitute is to provide the Federal Communications Commission with the authority to implement various programs which will result in improvements in administration, requiring even less expenditure of government time and effort than in the past.

In the "Federal Communications Authorization Act of 1988, Public Law 100-594, Congress established its policy regarding protection of amateur radio communications:

#### **SENSE OF CONGRESS**

Sec. 10. (a) The Congress finds that -

(1) More than four hundred and thirty-five thousand four hundred radio amateurs in the United States are licensed by the Federal Communications Commission upon examination in radio regulations, technical principles, and the international Morse Code;

(2) by international treaty and the Federal Communications Commission regulation, the amateur is authorized to operate his or her station in a radio service of intercommunications and technical investigations solely with a personal aim and without pecuniary interest;

(3) among the basic purposes for the Amateur Radio Service is the provision of voluntary, noncommercial radio service, particularly emergency communications; and

(4) volunteer emergency communications services have consistently and reliably been provided before, during and after floods, tornadoes, forest fires, earthquakes, blizzards, train wrecks, chemical spills, and other disasters.

(b) It is the sense of the Congress that -

(1) it strongly encourages and supports the Amateur Radio Service and its emergency communications efforts; and

(2) Government agencies shall take into account the valuable contributions made by amateur radio operators when considering actions affecting the Amateur Radio Service.

There are three primary factors relating to the Federal interest in amateur radio communications which must be taken into consideration when the ability of an amateur operator to provide basic communications is jeopardized by municipal land use regulation: (1) the public service provided by amateurs, especially with regard to emergency communications; (2) advancement of the radio art; and (3) the foreign affairs power of the Federal government. The ability of an amateur operator to communicate on a worldwide basis represents far more than the pursuit of an avocation. Amateurs routinely volunteer their services, risking lives and equipment to provide emergency communications during disasters. To preclude or impair the amateur's ability to communicate by arbitrarily prohibiting or restricting the height or location of his or her antenna, and especially by establishing inflexible height or dimensional limitations without regard to the effect thereof on amateur radio communications, without an accommodating variation therefrom, could therefore result in the unnecessary loss of lives or property.

The second area of concern deals with the advancement of the radio art. A significant part of the Amateur Radio Service is devoted to state of the art technological research and experimental uses of radio, including high-speed digital communications and low-earth-orbit satellite communications. Unreasonable local municipal restrictions on the placement, height or dimensions of antennas employed for experimental use, or which frustrate fast, flexible

modifications to authorized antenna systems will preclude or seriously impair the effectiveness of research regularly carried on by amateurs, by definition, at their residences.

Finally, by imposing unreasonable limitations on either the existence or nature of the antennas permitted (i.e., those not necessary to insure the safety of a proposed antenna installation and which provably inhibit effective communications), the amateur's ability to communicate with foreign stations is eliminated or impaired. Without the ability to maintain an antenna at a reasonable height, amateur communications are effectively precluded or compromised to the point of effective uselessness most of the time; an antenna at the typical building height of 35 feet is simply ineffective. The vast majority of the radio signal travels in an upward direction, rather than toward the horizon, and all benefits of ionospheric propagation (or, for VHF and UHF operation, of line of sight transmission paths) are foreclosed.

Amateur radio has provided a relatively inexpensive, yet significant conduit for the exchange of ideas and information between United States citizens and citizens of foreign countries. The manner in which the Amateur Service has conducted its affairs in this respect has been recognized as a positive reflection upon the United States government. The United States has acknowledged this important contribution by the Amateur Radio Service and consistently fought to ensure that amateurs have sufficient frequencies for worldwide communications.<sup>2</sup> Recently, Congress passed Public Law 103-408, a Joint Resolution to recognize the achievements of radio amateurs, and to establish support for such amateurs as national policy:

Congress finds and declares that -

- (1) radio amateurs are hereby commended for their contributions to technical progress in electronics, and for their emergency radio communications in times of disaster;
- (2) the Federal Communications Commission is urged to continue and enhance the development of the Amateur Radio Service as a public benefit by adopting rules and regulations which encourage the use of new technologies within the amateur radio service; and
- (3) **reasonable accommodation should be made for the effective operation of amateur radio from residences, private vehicles and public areas, and that regulation at all levels of government should facilitate and encourage amateur radio operation as a public benefit.**

(emphasis added).

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2. See Schroeder, The Radio Amateur in International Legislation and Administration, 48 AMJ. Int'l L. 421, 421-24 (1954); Zegarac, Local Regulation of Amateur Radio Antennae and the Doctrine of Federal Pre-emption: The Reaches of Federalism, 9 Pacific L.J. 1041 *et seq.* (1978). See also Price, Brennan, Reasonable Accommodation of Amateur Radio Communications by Zoning Authorities: the FCC's PRB-1 Preemption, 37 Conn. L. Rev 321 (2004).

### C. The FCC has Preempted Unreasonable Local Regulation of Amateur Radio Antennas

The Federal Communications Commission, thirty years ago, declared a limited preemption policy over the regulation of amateur radio antennas. This addresses prohibitions or structural limitations imposed unreasonably by non-federal entities. Amateur Radio Preemption, 101 FCC 2d 952 (1985); codified at 47 C.F.R. Section 97.15(b). The declaratory ruling is often referred to as "PRB-1", the FCC file number for the notice and comment proceeding that led to the issuance of the ruling. The history of the FCC's preemption order is relevant to the instant proceeding.

Following a notice and comment proceeding, in September of 1985, the FCC issued Amateur Radio Preemption. In that declaratory ruling, the FCC stated, in relevant part:

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...we recognize here that there are certain general state and local interests which may, in their even-handed applications, legitimately affect amateur radio facilities. Nonetheless, there is also a strong federal interest in promoting amateur communications. Evidence of the interest may be found in the comprehensive set of rules that the Commission has adopted to regulate the amateur service. Those rules set forth procedures for the licensing of stations and operators, frequency allocations, technical standards which amateur radio equipment must meet and operating practices which amateur operators must follow. We recognize the Amateur radio service as a voluntary, noncommercial communication service, particularly with respect to providing emergency communications. Moreover, the amateur radio service provides a reservoir of trained operators, technicians and electronic experts who can be called on in times of national or local emergencies. By its nature, the Amateur Radio Service also provides the opportunity for individual operators to further international goodwill. Upon weighing these interests, we believe a limited preemption policy is warranted. State and local regulations that operate to preclude amateur communications in their communities are in direct conflict with federal objectives and must be preempted.

Because amateur station communications are only as effective as the antennas employed, antenna height restrictions directly affect the effectiveness of amateur communications. Some amateur antenna configurations require more substantial installations than others if they are to provide the amateur operators with the communications he/she desires to engage in. For example, an antenna array for international amateur communications will differ from an antenna used to contact other amateur operators at shorter distances...[L]ocal regulations which involve placement, screening, or height of antennas based on health, safety, or aesthetic considerations must be crafted to accommodate reasonably amateur



communications, and to represent the minimum practicable regulation to accomplish the local authority's legitimate purpose.

(Id., at 959-60)(citations omitted; emphasis added)

The Commission had noted the assumption in earlier court decisions of an apparent absence of intent, on the part of the Federal government to preempt amateur antenna regulation, and consequently clarified its position on the matter. The Commission preempted local regulation of amateur radio antennas, to the extent that any local regulations preclude, or do not reasonably accommodate amateur communications; or which do not represent the minimum practicable regulation to accomplish the local authority's legitimate purpose. It is apparent that effective amateur communications require antennas to be erected in clear space, at heights in excess of those normally required, due to the surrounding terrain.

Following the release of Amateur Radio Preemption, supra, the question which then faced the courts was whether such an action was within the FCC's authority, and whether it was reasonably exercised. A series of cases following Amateur Radio Preemption have uniformly held that the preemption order was a proper exercise of the Commission's authority.

The first of these cases is Thernes v. City of Lakeside Park, Kentucky, et al., 779 F. 2d 1187, 59 Pike and Fischer Radio Regulation 2nd Series 1306 (6th Circuit, 1986); on remand, 62 Pike and Fischer Radio Regulation 2nd Series 284 (E.D. Kentucky, 1986). In that case, an amateur was denied a building permit for an antenna support structure and associated antenna, although the city agreed to suffer the continuation of a twenty-foot-high wire antenna, erected as a temporary measure by the amateur, and which was clearly inadequate. The amateur had proposed a 73-foot support structure, atop which were to be located eight feet of rotatable, directional antennas. The District Court (E.D. KY) found (prior to issuance of the Amateur Radio Preemption order), no apparent federal preemption of local regulation of amateur radio antennas. Pending appeal in the Sixth Circuit, however, the FCC issued its preemption order. Upon consideration by the Sixth Circuit Court of Appeals of the FCC's legitimate "exercise of its... preemptive powers," the action by the city was declared unlawful, and the case was remanded to the District Court for action consistent with the FCC's order. On remand, the District Court ruled that:

...the defendants shall allow the plaintiff to erect, maintain and use an amateur radio antenna system (at 73 feet as proposed)...unaffected by any present or future ordinances of the city to the contrary, and shall issue to plaintiff all permits therefor.

Following Thernes, in Bodony v. Incorporated Village of Sands Point, et al., 681 F. Supp. 1009, 64 Pike and Fischer Radio Regulation 2nd Series 307 (E.D. NY, 1987), the United States District Court for the Eastern District of New York invalidated a 25-foot height limitation in a municipal ordinance, which interfered with the amateur's "right to the full use of his amateur extra class license and the license to use his property as an amateur radio station issued by the FCC." The Court based its ruling on Amateur Radio Preemption, supra.

and permitted an antenna 85 feet in height.

Immediately after Bodony, another Federal court issued a decision in Bulchis v. City of Edmonds, 671 F. Supp. 1270 (W.D. Wash, 1987), which held that although the City's zoning ordinance governing the height of radio antennas was not invalid on its face, (because it permitted in the ordinance greater antenna height through a conditional use permit process), the application of the ordinance to the amateur's communications needs (i.e., the denial of a conditional use permit) did frustrate federal goals in regulating amateur radio communications. In short, the Court found that, as the ordinance was applied, "it did not provide for the reasonable accommodation of amateur radio communication," as required by Amateur Radio Preemption, *supra*.

Another case supporting the Amateur Radio Preemption order is Izzo v. Borough of River Edge, et al., 843 F.2d 765 (3d Cir., 1988) which held that the FCC's preemption order "infuses into the proceeding a federal concern, a factor which distinguishes the case from a routine land use dispute having no such dimension." The Court recognized that "(b)ecause the effectiveness of radio communication depends on the height of antennas, local regulation of those structures could pose a direct conflict with federal objectives." The matter was remanded to the District Court, and subsequently the municipality issued the requested antenna permit.

There have been no cases declaring Amateur Radio Preemption, *supra* an unlawful exercise of FCC authority, or which even questioned the application of the ruling to limit municipal regulation of individual amateur radio stations through police power zoning authority. **Those most recent cases on the subject uniformly have held that local restrictions on amateur antennas that constitute effective prohibitions on communications, and which involve fixed maximum height limitations are facially void as preempted.** See, Evans v. Board of Commissioners, 752 F. Supp. 973, (D. Colo. 1990); MacMillan v. City of Rocky River, 748 F. Supp. 1241 (N.D. Ohio, 1990). The Eighth Circuit United States Court of Appeals has tracked the history and provided a reasonable interpretation of the FCC's preemption policy for amateur radio antennas in Pentel v. City of Mendota Heights, 13 F. 3d 1261 (8th Cir., 1994), in a case in which an amateur who had two small, ineffective amateur antennas was denied authority to install a proposed 68-foot antenna in her yard. The Court, in reversing a District Court summary judgment to the City, held, in part, as follows:

Courts applying PRB-1 have discerned two means by which PRB-1 may preempt a local ordinance. First, the local regulation may be preempted on its face. The city's zoning ordinance does not conflict on its face with PRB-1 because it neither bans nor imposes an unvarying height restriction on amateur radio antennas. (citations omitted).

Second, PRB-1 also preempts a zoning ordinance that a city has not applied in a manner that reasonably accommodates amateur communications. (citations omitted).

The FCC refused to specify a height below which local governments could not regulate, and instead declared that "local regulations which involve placement, screening or height of antennas based on health, safety or aesthetic considerations must be crafted to accommodate reasonably amateur communications, and to represent the minimum practicable regulation to accomplish the local authority's legitimate purpose." PRB-1, para. 25.

Some recent cases have held that, where a zoning conditional use permit process exists, local authorities may balance the communications needs of the radio amateur against whatever legitimate land use needs exist in considering a particular conditional use permit application. See, e.g. Howard v. City of Burlingame, 726 F. Supp. 770 (N.D. Cal. 1989), affirmed, 937 F. 2d 1376 (9th Cir., 1991); Williams v. City of Columbia, 707 F. Supp. 207 (D. SC 1989), affirmed, 906 F. 2d 994 (4th Cir., 1990). The more thorough analysis of the matter, however, provided by the Eighth Circuit in Pentel v. City of Mendota Heights, Minnesota, supra, held that the Commission did the balancing itself, and the courts merely must determine whether or not a municipality has made a reasonable accommodation for the amateur communications, which is the absolute obligation of the municipality. It is apparent that the essence of the FCC's preemptive intent as expressed in Amateur Radio Preemption was to insure at least a basic guarantee that each amateur radio operator could install functional antennas for all amateur frequency bands, at the licensee's residence. This was made clear in September of 1989, when FCC revised its amateur radio rules to codify the essential holding of Amateur Radio Preemption, as follows:

(b) Except as otherwise provided herein, a station antenna structure may be erected at heights and dimensions sufficient to accommodate amateur service communications. [State and local regulation of a station antenna structure must not preclude amateur service communications. Rather, it must reasonably accommodate such communications and must constitute the minimum practicable regulation to accomplish the state or local authority's legitimate purpose. See, PRB-1, 101 FCC 2d 952 (1985) for details.]

Though these general Federal guidelines have preemptive authority over conflicting State or local statutes or ordinances, as a practical matter, municipal governments look to the States, from whence police power jurisdiction is derived, for guidance in these cases. The need for the proposed legislation is therefore acute. That there is tension that must be addressed through State legislation is clear from the decision of the United States District Court for the Northern District of New York in Randall Palmer v. City of Saratoga Springs, et al., 180 F. Supp. 2d 379 (N.D.N.Y. 2001), where the court found that "undeniable tension exists between amateur radio operators' interests in erecting a radio antenna high enough to ensure successful communications, and local municipalities' interests in regulating the size and placement of amateur radio antennas. Choosing between the two, the federal government aligned its interests with those of the amateurs... Accordingly, 'federal interests are furthered when local regulations do not unduly restrict the erection of amateur radio antennas.'" A municipality should not have to test its legislatively enacted ordinances as a judicial matter

each time they are applied in an antenna case. Instead, State policy should provide some guidance, as would the bills now pending. This guidance would be of assistance to municipal officials and radio amateurs, and would decrease the burden on the judiciary at the same time.

The Federal Communications Commission has purposely placed few specific restrictions on the height of amateur radio antennas. See 47 C.F.R. §97.15. Only if the radio amateur is near an airport or requires an antenna higher than 200 feet in order to communicate effectively must he or she get special FCC approval. Because of the relationship between antenna height, terrain obstacles, and the susceptibility of home electronic equipment to interference from antennas in the same horizontal plane, the FCC has allowed amateur radio operators virtually unfettered discretion for ascertaining proper antenna height up to 200 feet.<sup>3</sup> The topography of the site, the presence of geographic obstacles such as hills or mountains, the frequency bands used, the eleven-year sunspot cycle, and many other technical factors must all be considered when a radio amateur decides how high to place his or her antenna. Arbitrarily fixed, unreasonably low maximum height limits contained in local restrictions on amateur antennas, preclude effective, reliable antenna systems and amateur communications, and take away this important discretion intentionally given by the FCC to the Amateur Radio Service. As Themes and Bodony each recognized, without specific and substantiated concerns for public health, safety or other compelling purposes (and except to the extent that amateur radio communications are "reasonably accommodated"), prohibitions on antennas, or preclusive limitations violate the Federal Communications Commission's preemption regulation.

#### D. Conclusion

The Amateur Radio Service is composed of individually licensed radio operators and stations. The FCC does not license a "network" of amateurs; each is regulated individually and separately. Land use regulators, be they in the form of zoning boards or city councils, in

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<sup>3</sup> FCC has, however, offered some guidelines for appropriate antenna height. It has, for example, determined that CB antennas, used for communications up to only 150 miles, may be erected at heights up to 60 feet:

"to enable licensees to erect antennas above nearby obstacles which may absorb radiated energy and thus decrease ability to communicate. The Commission believes that the 60-foot maximum proposal of this Notice represents a reasonable antenna height which will accomplish this purpose. Moreover, this increase in permissible height may tend to decrease television interference problems since it will allow increased height differential between (CB) antennas and television antennas."

Antenna Height Restrictions, 42 F.C.C. 2d  
511, at 513.

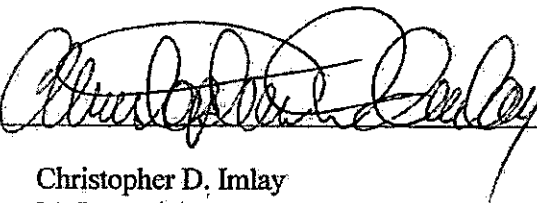
Because the Citizen's Radio Service operates on a frequency adjacent to the highest HF amateur frequency band, antennas for the Amateur Radio Service must, assuming many other favorable factors and ideal ionospheric conditions, be at least that high in order to be even minimally effective, even on that one band. Antennas for other bands must be higher. As stated in Bodony, supra, "Testimony of experts indicates that a height of 60 to 70 feet is necessary for good reception under ideal atmospheric conditions."

order to comply with the FCC's preemption order, must reasonably accommodate the communications needs of each individual amateur station, and enact the minimum practicable regulations relative thereto. Arbitrary action of municipalities which apply fixed limits on antenna configurations and heights typically preclude the federally-licensed amateur radio communications, and frustrate Federal Communications law and policy in the process. There are residual local concerns in the siting and maintenance of antenna support structures, but there is a need for State-level guidance in order to avoid arbitrary limitations of antenna height or dimensions.

We urge that you act to protect the valuable services offered on a voluntary basis by Amateur Radio operators consistent with the Federally-declared right to install and maintain amateur radio antennas at reasonable heights and configurations.

Respectfully submitted,

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