

§95.49 Considerations near large urban areas.

(a) A fixed station at a point near a large urban area must have:

- (1) A directional antenna (at least 15 decibel front-to-back ratio); and
- (2) No more than 15 watts transmitter power output.

(b) Where these rules use the term *near a large urban area*, it means the region within a circular band around a large urban area. The band is 40 kilometers (25 miles) wide. It begins at the rim of the large urban area, and extends out 161 kilometers (100 miles) around the geographic center of the city.

(c) Fixed stations authorized before October 16, 1983 located beyond 161 kilometers (100 miles) of the geographic center of urbanized areas of 200,000 or more population as defined in the U.S. Census of Population, 1960, Vol. 1, table 23, page 50, are not subject to the restrictions of this rule section.

§95.51 Antenna height.

(a) A land station *antenna* (the land station's radiating structure (for transmitting, receiving or both), including the tower, mast or pole supporting it and everything attached to the structure) must not be a hazard to aircraft. The licensee of a GMRS system must get FCC permission (see §95.83) before the uppermost tip of an antenna may be higher than normally allowed in paragraphs (b), (c) and (d) of this section.

(b) Regardless of any other requirement of this section, an antenna may always be at least:

- (1) 6.1 meters (20 feet) above the ground or above the building or tree upon which the antenna is mounted; or
- (2) Equal to the height of an existing antenna to which the land station antenna is attached.

(c) The antenna may be as high as 61 meters (200 feet) above the ground, unless it will be within 6.1 kilometers (20,000 feet) of an airport or heliport.

(d) If the antenna is near an airport or heliport listed in the FAA's (Federal Aviation Administration's) Airport Facilities Directory, or near an airport or heliport operated by the Department of Defense, it must not be higher than:

(1) One meter higher than the airport elevation for every 100 meters from the nearest runway if the runway is longer than one kilometer (3,281 feet), and is within 6.1 kilometers (20,000 feet) of the antenna; or

(2) Two meters higher than the airport elevation for every 100 meters from the nearest runway if the runway is no longer than one kilometer (3,281 feet), and is within 3.1 kilometers (10,000 feet) of the antenna; or

(3) Four meters higher than the heliport elevation for every 100 meters from the nearest landing pad if the pad is within 1.5 kilometers (5,000 feet) of the antenna.

(e) If the FCC grants permission to put an antenna higher than normally allowed in paragraphs (b), (c) and (d) of this section, the licensee may have to mark the antenna with bright paint and light it up at night (see part 17 of the FCC Rules).

(f) The antenna for a small base stations or for a small control station must not be more than 6.1 meters (20 feet) above the ground or above the building or tree on which it is mounted.

[48 FR 35237, Aug. 3, 1983, as amended at 53 FR 47715, Nov. 25, 1988]

§95.53 Mobile station communication points.

(a) A mobile station unit may transmit communications directly to:

- (1) Other mobile station units in the same GMRS system;
- (2) Mobile station units in any other GMRS system;
- (3) A base station in the same GMRS system; and
- (4) A base station in any other GMRS system;

(b) A mobile station unit may transmit communications through a mobile relay station in the same GMRS system to:

- (1) Other mobile station units in the same GMRS system;
- (2) Control stations in the same GMRS system; and
- (3) Mobile station units in any other GMRS system.

(c) A mobile station unit authorized to transmit on a channel assigned to a mobile relay station in another GMRS