

This comment addresses your questions related to the impact of private land use restrictions on effectiveness of amateur radio utility in emergencies.

VHF and UHF radio links rely largely on near line of sight RF paths, and where the terrain is both remote from suitable repeater sites and in hilly or mountainous terrain, such links may not exist. For example, where one end of the link is located deep in a valley.

Radio communications into and out of such sites has been proven to be effective on HF frequencies below 10 MHz using Near Vertical Incidence Skywave (NVIS) propagation. However this mode also requires an antenna which exhibits a near-vertical radiation pattern. The most expedient antenna having this property is a 1/2 wave or longer horizontal dipole or wire loop less than 1/2 wavelength above ground. Such antennas, however, are necessarily at least 15m in length and preferably 30m or more. Fortunately, they can also be quite effective when constructed from single straight strands of wire as small as 1 mm diameter, and thus nearly invisible when observed against the sky. And they can be supported by natural "masts", such as trees, and by existing structures.

Unfortunately, such antennas are prohibited by most residential CC&R covenants. Now, these restrictions rarely impact temporary antennas erected at remote incident sites, but they must be used at both ends of the radio link. One of those ends is typically located at urban or suburban and often residential sites, unaffected by the ongoing disaster and having intact conventional communications with served agency headquarters.

Organizations which enforce those restrictive CC&R's should be encouraged to evaluate the sight-line impact of such antennas rather than banning them outright. It is quite simple to erect an NVIS antenna which has negligible visual impact.

Thank you for your consideration.

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