

Recommendations for Safer Cell Tower Installations in the County Code

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We thank the County Commissioners for their diligence in encouraging public input and democratic processes about proposed changes to the Sustainable Land Development Code (SLDC). We value telecommunications in our community and that telecom equipment is installed safely.

In the U.S., approximately 12 cell towers collapse every year because of structural problems or because they are unable to withstand sustained winds or wind gusts. Approximately four cell towers catch fire each year.

Even with thorough review, cell towers that are designed to withstand 130 mile per hour winds have snapped in winds less than 55 mph.

To prevent such disasters and possible injuries, a tower needs a thorough engineering review before it is installed and each time it is extended in height or in width. For towers that are taller than 30 feet, regulations are already in place in the SLDC, but towers shorter than 30 feet do not require an application.

However, according to the Middle Class Tax Relief Act of 2012 and Federal Communications Commission (FCC) guidelines, once a radio or cell tower under 30' tall is erected, it can be extended to 130 feet (or more) in height and 40 feet in width without a permit by adding 5 (or more) antennas.

To safeguard our County, we therefore need to have a permit process that includes an engineering review on new radio and cell towers that are shorter than 30 ft.

If we grant anyone the right to install new short towers without a permit, then (for example) they could install a 29' tower without proper setbacks or structural support at a gas station, on a flood plain, in a historic district., or at or near a school, residential area or busy intersection.

Once erected, because of federal law, this 29' tower could then be extended 20' at a time without an engineer's review by adding additional antennas.

In other words: if your neighbor builds a 29' ham radio antenna, cellular providers could extend it to 130' or more. The tower could fall on your property and start a fire.

Who would be liable for such fire? A recent article in the *Wall Street Journal* illuminates that wireless technologies are not insured.

The Wall Street Journal also reported that one in ten cell towers in the U.S. emits more microwave radiation than federal regulations allow for occupational exposure. The occupational exposure limit is five times greater than the FCC's limit for the general public. This means, according to the *Wall Street Journal*, that more than 30,000 U.S. cell towers emit more microwave radiation than FCC regulations permit. The FCC does not monitor the radiation emissions from cell or radio towers.

Therefore, we propose that our County adopt a Sustainable Land Development Code with provisions such as those recommended by Andrew J. Campanelli, a legal expert in cell tower litigation from Garden City, NJ. His recommendations have been adopted by Calabasas, California (Ordinance No. 2012-295):

* Regardless of their height, all radio towers must apply for a permit and meet the requirements for

- (1) setbacks from property boundaries described in section **10.17.4.2.**, and
- (2) **engineering** specifications in section **10.17.4.3.** and the Submittal requirements in Table 10-4.

* The tower owner must pay for periodic, random testing by a third-party engineer selected by the County to measure radiation from the tower.

* If the tower's emissions are found to exceed the FCC limit, the tower owner must pay to have the tower removed.

Biographies

Dr. David Stupin, PhD, is an experimental physicist, retired from Los Alamos National Lab. His views here are his own and do not necessarily reflect those of the Lab.

Katie Singer consults to the EMR Policy Institute on educational programs, and is the author of the book *An Electronic Silent Spring*. See electronicsilentspring.com

Supporting information

For a formula for establishing safe setbacks, please see:
reach.net/~scherer/p/twrmath.htm

For a list of cell towers that have recently caught fire or collapsed in the U.S., please visit www.electronicsilentspring.com; go to Intro Packet on Cell Phones and Towers, then go to Cell Towers Collapsing and Catching Fire.

The *Wall Street Journal* article that we reference: "Cellphone Boom Spurs Antenna-Safety Worries," by Ianthe Jeanne Dugan and Ryan Knutson, October 2, 2014.