

Radiofrequency (RF) Radiation Awareness Guide

For staff working near areas where telecommunication antennas are present.

What is RF Radiation?

Radiofrequency (RF) radiation, a type of non-ionizing radiation, is the energy used to transmit wireless information. At low levels it is not considered a hazard. But at the levels produced by telecommunications equipment, including radio, television, and cellular antennas, RF radiation can pose a health risk for workers. As demand for cellular and wireless services grows, more of these antennas are being placed on rooftops and sides of buildings.

What to look for....

Antennas that generate RF radiation come in different shapes and sizes and emit RF radiation in different directions. **Rectangular panel antennas**

or **dishshaped transmitting antennas** generally send out RF radiation in one direction.

Cylindrical or rod-shaped antennas emit RF radiation in more than one direction up to 360 degrees. **Hidden antennas** are designed to blend into their surroundings. They can be stand-alone (e.g. a flag pole) or a panel that blends into the side of a building, chimney, rooftop, or sign. These antennas are harder to identify and make it difficult to determine the RF radiation emitting direction.



What are the risks?

>>**RF radiation is invisible.**

>>**Power levels vary.** The amount of RF radiation can be low when you start working and then spike to higher levels.

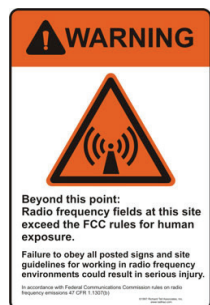
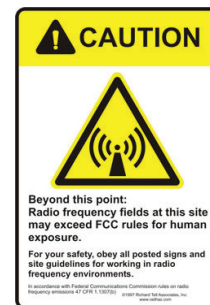
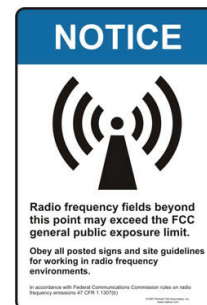
>>**Your risk increases** the closer you are to the antenna and the longer you work in the RF radiation field.

RF radiation may interfere with medical devices (e.g, pacemakers), and strong RF fields can cause thermal burns and possible nerve damage.

How to protect yourself...

Ask questions Ask your supervisor if cellular antennas or other RF radiation generating antennas are present. At a minimum, do your own visual assessment. For questions on specific building roof antenna hazards at UC Berkeley, contact EH&S at (510) 642-3073 or LSO@berkeley.edu.

Follow instructions When RF radiation is present, warning signs should be posted that include information on the hazard and a point of contact for information on the antenna. If you need to work within the RF field, the antenna owner should move or temporarily power down the device. Ask your supervisor to confirm it's been powered down before proceeding.



Keep your distance Avoid standing right in front of or close to antennas. If there are antennas where you are working or on buildings close by, make sure the antennas are not pointed directly toward your work area. At a minimum, **stay 6 feet away from a single antenna or 10 feet away from a group of antennas.**

Questions or Concerns?

Contact EH&S at (510) 642-3073 or email LSO@berkeley.edu.