

## RAWLINS H2O RF EXPOSURE GUIDE

### Definitions:

**-UMTS** – Universal Mobile Telecommunications Systems is a third-generation (3G) broadband, packet-based transmission of text, digitized voice, video, and multimedia at data rates up to 2 megabits per second.

**-dBm** – A unit of level used to indicate that a power level is expressed in decibels (dB) with reference to one milliwatt (mW). This is actual power output.

**-mW** – A unit of measurement that stands for milliwatt.

**-dBi** – Used as the gain of all WiFi aerials. The power isn't increased, but it is concentrated in a narrower pattern.

**-dB** – The decibel (dB) is a relative unit of measurement corresponding to one tenth of a bel (B). It is used to express the ratio of one value of a power or root-power quantity to another, on a logarithmic scale. A logarithmic quantity in decibels is called a level.

**-cm** – A unit of measurement to measure distance. (Centimeter)

**-MHz** – A unit of frequency, equal to one million cycles per second.

**-mW/cm<sup>2</sup>** – Milliwatts per square centimeter. Total radiant power of (all) wavelengths passing from all incident directions onto an infinitesimally small area (cm<sup>2</sup>).

Enclosed you will find a RF Study depicting the exposure levels of RF from the proposed cell tower at Rawlins Water Tank North. The first tab depicts the levels of RF if a person was standing directly outside of the fence that houses the antenna structure. As you will be able to see, the green highlighted percentage of Total Allowable Power Density S is 38.12% for all technologies that will be on this tower. This proves that the RF exposure is 61.88% below the General Public Exposure Limits set by the FCC.

On the second tab, you will see the Total Allowable Power Density depicted from 800' away. 800' was chosen, as this appears to be the closest residence to the tower based on an evaluation from Google Earth. The Total Allowable Power Density S is 0.34% for all technologies that will be on the tower. This proves that the RF exposure is 99.66% below the General Public Exposure Limits set by the FCC.

As you can see, there is a decrease in General Public Exposure of 37.78% as you move from the fence to the residences below the tower. This is comparable to the RF exposure you receive by standing 2 feet away from your microwave oven while it is in use.