

Radio Frequency Waves and Smart Meters

Seven thousand six hundred (7,600) water meters in the City of Jenks are obsolete and will be replaced with “smart” meters over the next six months to modernize the system. By installing smart meters, the city is transitioning from a manual to an automated process that reads meters electronically by radio frequency waves.

What are radio frequency waves?

RF waves are a form of electromagnetic energy, which can be man-made or occur naturally. People use multiple devices every day that emit RF waves (i.e., microwave ovens, cell phones, computers, AM/FM radios, etc.), and the FCC sets limits and requires all RF communicating devices to be tested to ensure that they meet federal standards before authorizing their use in the public domain.

Addressing health concerns

The World Health Organization concluded that no adverse health effects have been demonstrated by exposure to low-level RF energy like those produced by smart meters. Smart meters emit a low level of radio frequency energy that is both FCC-approved and lower than the level of RF energy emitted by many devices used each day by millions of people (*please see the graph below*).

Radio Frequency Power Density Levels of Common Devices (in microWatts/cm²)

<u>Cell Phone – at ear</u>	Maximum.....5000
	Minimum..... 1000
<u>Microwave Oven – 2 feet</u>	Maximum...200
	Minimum...50
<u>WiFi Router / Computer</u>	Maximum...20
	Minimum...10
<u>FM Radio / TV Broadcast</u>	Maximum...1.0
	Minimum... 0.005
<u>Smart Meter – 10 feet</u>	Maximum... 0.100
	Minimum... 0.100

About this figure: This figure depicts the radio frequency waves emitted by various common wireless devices. Source for starting measurements: Electric Power Research Institute (EPRI), Radio-Frequency Exposure Levels from Smart Meters: A Case Study of One Model (February 2011).