



OUR FUTURE IN EVERY DRÖP

## **Meter Upgrade Project – Radio Frequency (RF) Factsheet**

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We are upgrading water meters across Santa Rosa to provide near real-time water usage data using proven wireless technology. Just like your old water meter, your upgraded water meter will record your water use for billing. Santa Rosa will provide the same reliable service with these new meters but with even more benefits. The upgraded meters will provide the information needed to enhance customer service with the ability to view and track your daily water usage, detect leaks faster, provide consistent billing dates, and expedite service starts. A future online customer portal will also help customers identify water saving opportunities with personalized recommendations, tracking, and alerts.

While there are many benefits, we do realize that there are concerns around radio frequency.

### **What is radio frequency (RF)?**

Radio frequency (RF) refers to the rate of oscillation of electromagnetic radio waves, as well as the alternating currents that carry radio signals. This is the frequency that is used for communications transmission and broadcasting. Although RF really stands for the rate of oscillation of the waves, it is synonymous to the term “radio,” or simply wireless communication.

### **How does my water meter use radio frequency (RF)?**

Radio frequency (RF) is the method of transferring data wirelessly to and from various devices. In the case of Santa Rosa’s meter upgrade project, the water meter unit transmits water use readings to antennas through RF. The water meter units read the meters once an hour. Once every 6 hours the data is transmitted to an antenna in the City through a secure connection. In addition to water use data, the device can send alerts such as no use, leak detection, high use, or tampering.

### **Should I be concerned about health hazards associated with radio frequency (RF) and my water meter?**

No. Your water meter and the advanced metering system the City uses to collect water usage data are compliant with the Federal Communications Commission’s (FCC’s) health and safety standards. In fact, the radio frequency (RF) exposure from your water meter is much lower than many common household devices including microwaves, baby monitors and Wi-Fi devices. RF studies and reports from the [American Cancer Society](#), [California Council on Science and Technology](#) and the [World Health Organization](#) each provide a professional assessment of potential RF concerns and all conclude there is no evidence that advanced metering RF emission poses a health risk.

### What do I need to know about radio frequency (RF)?

There are several factors that affect a person’s exposure to radio frequencies. Some of the key points include:

- **Energy Characteristics** - The meters that Santa Rosa is installing use a low-powered radio which operates in the 900 MHz licensed frequency with a peak output of 1 watt.
- **Duty Cycle** – The meter’s radio device will cycle through periods of transmissions. In fact, the radio only transmits for a millisecond at a time and is “on” far less than one minute every day.
- **Distance**- For every 1- 10 feet you are removed from the meter, your exposure decreases by 100-fold. Water meters are located on the frontage of properties, not directly near buildings or homes.
- **Shielding**- Any obstruction or “shield” between you and the radio will absorb energy and prevent it from being passed on. Santa Rosa’s meters are typically in cement boxes and covered. The location of the water meters and the placement inside the meter box significantly reduces exposure to RF.

