

Water Meter Upgrade Project

AMI Frequently Asked Questions

General FAQs

Q: Why do I need a new water meter?

A: The City will be initiating a proactive meter replacement program, to replace meters that have reached the end of their useful life. The majority of existing meters in the City of Davis were installed in 1997 and should be replaced.

Q: What is “AMI”?

A: AMI stands for Advanced Metering Infrastructure. AMI consists of a low-powered communication device that is added to your new water meter. The communication device will collect your meter reading each hour. The device transmits hourly water usage information over a secure network approximately four times per day. With this upgrade, you will have access to more frequent and detailed information about your water consumption, enabling you to have better control over your water usage and monthly bills.

Q: How is this AMI meter different from other meters?

A: The communication device is battery powered and is off most of the time. It only turns on for a fraction of a second per day (totaling approximately 2 ½ minutes per year) to securely transmit your water usage data. The AMI meters do not communicate with other meters, or with appliances in the home, and cannot turn on or turn off your water service.

Q: How will my water meter be replaced?

A: The current water meters will be replaced with new AMI meters in the existing meter boxes. The installation crew will assess the need for any repairs to the meter or surrounding infrastructure. A new meter box lid may be installed. The City and/or the City’s contractor may need to clear the area surrounding the meter box in order to allow access. Please trim plants and bushes and clear any obstructions from around the meter box prior to your meter install.

Q: What is the power source for the AMI meter and how often does it transmit my meter reading?

A: The AMI communication device is powered by two special AA batteries, similar in technology to those used in pacemakers. The communication device is off most of the time. It only turns on for a fraction of a second per day (totaling approximately 2 ½ minutes per year) to securely transmit your water usage data.

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Q: With this new technology will the City be able to shut off my water meter remotely for any reason, including a water leak or for non-payment?

A: No. The new AMI technology will not have remote shut-off capabilities. However, by having more frequent and detailed access to your own water usage information, you can identify sudden usage spikes or continuous water flow that could indicate a leak.

Q: How does this enhance customer service?

A: The AMI water meters provide daily and hourly water use information, along with your current monthly information. Each household, after their new water meter is installed, can monitor their usage by logging on to the City's water use portal, AquaHawk. By signing up for free access to AquaHawk, you can elect to receive text message, e-mail, or phone call alerts, if your water usage indicates a potential leak or abnormal usage.

Q: How is the project funded?

A: The Water Meter Upgrade Project is funded through the city's water utility enterprise funds. Because the water utility is self-supporting (the program operations are covered by fees) the enterprise funding cannot be used for non-water related projects. The project is financed by a State Revolving Fund Loan the city received for a number of water projects. The cost of the project is included in the current water rate structure.

Q: What do I do if I think I have a water leak?

A: If you believe you have a leak and have a new AMI meter, log onto AquaHawk, your water usage analyzer tool, to view hourly water usage history. Water use spikes indicate unusual water usage and continuous hourly water usage, particularly throughout the night, indicates a possible leak. If you need assistance, please contact Public Works at (530) 757-5686 or e-mail PWWeb@CityofDavis.org.

Billing and High Usage FAQs

Q: Why is my water bill higher than normal?

A: The new water meters will have a higher level of accuracy compared to the old meters that have reached the end of their useful life. Customers may see an increase in their water bill based on the new meter's higher level of accuracy.

However, an unusually high water bill is most often caused by a leak or change in water use. Other common causes of high water bills include:

- A leaking toilet or a toilet that continues to run after being flushed.
- A dripping faucet or shower.
- Filling or topping off a swimming pool or spa.
- Irrigation system issues.
- Guests or kids home for summer vacations or school holidays.

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- Water-cooled air conditioners.
- A broken water pipe or appliance/fixtures leak.
- Water softener problems where the unit cycles continuously.

Generally, water consumption is higher in our area during the summer due to irrigation usage. Approximately 65% of residential water use in the Sacramento region goes to outdoor irrigation.

Q: Will the timing of my water bills change?

A: The timing of your water bill will not change. However, hourly water use data will be available online by logging into AquaHawk.

Privacy, Security and Accuracy FAQs

Q: How does the City ensure the new meters are accurate?

A: The meters use electronic registers that are guaranteed by the manufacturer to be accurate. The meter technology has been rigorously tested by manufacturers and implemented in many large water utilities throughout the country. All meters are tested by the manufacturer prior to leaving the factory. The City will additionally randomly test a subset of meters prior to installation in accordance with the City's meter testing program. You can monitor your water usage and receive alerts by registering for the new customer water use portal, AquaHawk.

Q: Is AMI secure?

A: The City is, and always has been, committed to safeguarding customer privacy. Communications from the customer's meter to the Aclara data portal is transmitted over a RF channel licensed to the City, using technology that meets or exceeds current industry standards.

The meters do not transmit customer account numbers, names or other personal identifying information. In addition, customers no longer will need to provide access to their property for meter reading since the meters will be read remotely.

Q: How do I know that the billing data being sent is actually my data and does not belong to someone else?

A: Each communication device has a unique identification number, which is transmitted along with the meter reading. Before the data received is used for billing, the unique identification number which is associated with your water meter serial number and address are validated numerous times to ensure accuracy and privacy. This process helps ensure you are billed correctly for your water usage. Additionally, after the meter reading is downloaded into the billing software, City billing personal look for any anomalies that would indicate a problem such as unusually high or low consumption.

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Radio Frequency FAQs

Q: Are there any health hazards associated with the new technology?

A: No. The equipment operates at a low-power radio frequency, comparable to a cordless telephone. All equipment operates in compliance with state and federal communication standards. Water meters are typically installed away from the house so potential exposure is very limited; the communication device only turns on for a fraction of a second per day (totaling approximately 2 ½ minutes per year).

Health and Safety Impacts:

Like all commercially available telecommunication equipment, the AMI communication devices are required to meet Federal Communications Commission (FCC) Radio Frequency (RF) limits. Equipment manufacturers have vigorously tested and reviewed independent lab results demonstrating that the communication devices meet or exceed FCC limits. Common household items like cell phones, microwave ovens, baby monitors, cordless telephones and Wi-Fi routers emit much more radio frequency energy than AMI meters.

Radio Frequency Background:

The meter communication devices and the network communication system will operate in the 450 to 470 megahertz (MHz) bands. The technology products the City will use for its Advanced Metering Infrastructure project comply with U.S. Federal Communications Commission (FCC) guidelines for human exposure to RF energy (FCC OET bulletin 65).

What are the key factors that contribute to RF Exposure from a communication device?

There are three key factors that contribute to RF exposure:

Signal duration: The communication devices connected to the water meters will normally transmit a signal for a fraction of a second per day or for a total of less than two minutes per year.

RF energy: The RF energy emitted by the AMI meter is considerably less than that from common items used every day that emit RF, such as laptops, tablets, cell phones, and baby monitors.

Distance from source: The communication device will be located in the same location as the water meter. When the device is transmitting the exposure level is thousands of times lower than the general population exposure limits set by the FCC:

- At eight inches from the front of the meter, exposure is almost 10,000 times lower than the 450-470 MHz FCC exposure limits;
- At two feet away, exposure drops to 90,000 times below FCC exposure limits.



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