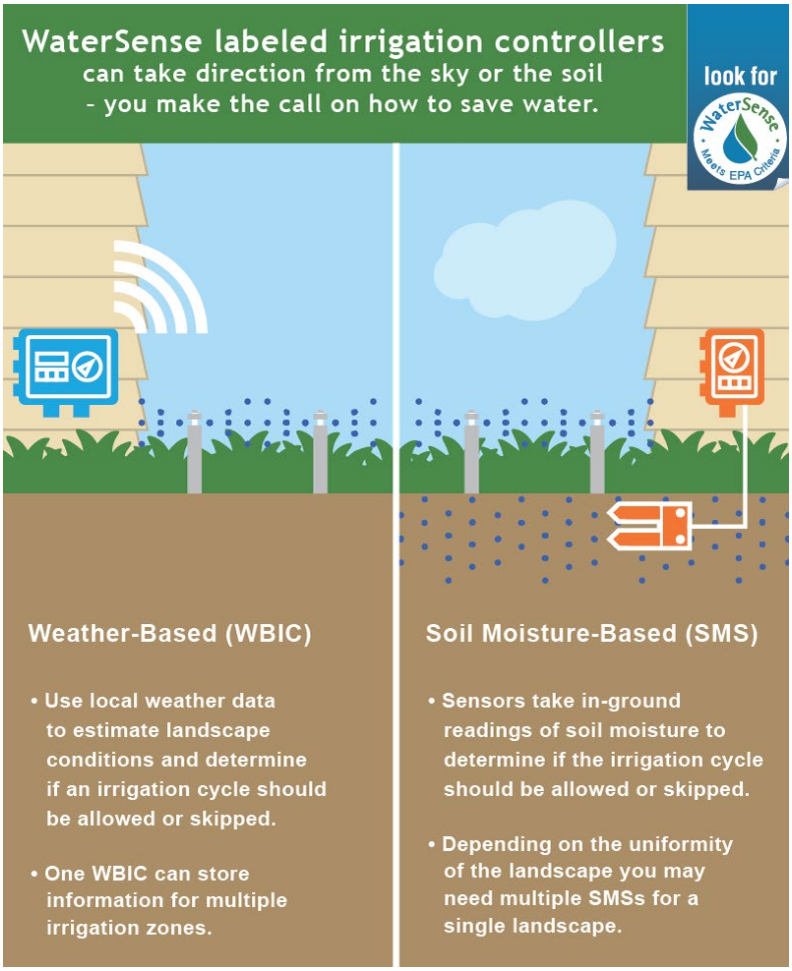
OUTDOOR FEATURES

Irrigation Controllers

Optional Water Efficiency Measure: May contribute to the 30 percent water efficiency requirement, depending on the chosen WaterSense® Approved Certification Method (WACM).

UNDERSTAND

- WaterSense labels two types of irrigation controllers:
  - **Weather-based irrigation controllers (WBICs)** use local weather and landscape conditions to tailor watering schedules. WBICs can obtain weather data from onsite weather sensors and/or signals from local weather stations.
  - **Soil moisture-based irrigation controllers (also known as soil moisture sensors or SMSs)** monitor moisture levels in the soil to prevent irrigation when water is not needed. An SMS is comprised of a sensor mechanism (which stays in contact with the soil and measures the amount of moisture) and an interface device (which communicates the reading from the sensor mechanism to the controller).
- Both types of WaterSense labeled controllers can be purchased as stand-alone controllers. They can also be purchased as an "add-on" or "plug-in" device that can upgrade a clock-based controller.
- The diagram at right illustrates the difference between the two irrigation controllers.



BUILD

- **SPECIFY** and **INSTALL** a WaterSense labeled WBIC or SMS. Use the WaterSense Product Search Tool at www.epa.gov/watersense/product-search for reference.

Real-World Results

Read WaterSense's reports on weather-based irrigation controllers (www.epa.gov/sites/default/files/2020-05/documents/ws-products-irrigation-outdoor-wbic-mini-report.pdf) and soil moisture-based irrigation controllers (www.epa.gov/sites/default/files/2021-04/documents/ws-outdoor-products-sms_mini-report.pdf) to learn more about how the products function, guidelines for programming, and how to help homeowners maintain long-term water savings. They can also help a builder, irrigation professional, or homeowner decide which type of WaterSense labeled irrigation controller is best for the landscape.

- **WORK** with an irrigation professional certified by a WaterSense labeled program to install the irrigation controller. These individuals are trained to install these devices and program them to work properly. Use WaterSense's Find a Pro tool at www.epa.gov/watersense/find-pro to find a certified professional in your area.
- If installing an irrigation controller yourself, use the following guidelines:
  - **FOLLOW** the manufacturer's installation instructions found in product packaging or online. Manufacturers may also provide training on installation and operation through irrigation distributors or retailers.
  - **PROGRAM** the controller as described in the instructions. Note that that the initial period of landscape establishment may require more water, but the device should be reprogrammed for water efficiency once plants are established.
  - **MONITOR** the landscape after initial installation for several weeks to look for dry or overly wet areas. Adjust the controller accordingly.

Image courtesy of Rachio

  - **ENSURE** that the sprinklers are working properly and there is no overspray onto adjacent areas. The irrigation controller will not provide expected savings if sprinklers are malfunctioning.
  - **PROVIDE** information to the resident on properly programming the irrigation controller from the manufacturer or from WaterSense's Watering Tips web page at www.epa.gov/watersense/watering-tips.
- There are additional installation considerations for soil moisture sensors:
  - **INSTALL** the sensor in the area of the landscape that requires the most frequent irrigation (e.g., turf with minimal shade). Place the sensor mechanism in the root zone of the plants.
  - **USE** more than one sensor mechanism for large landscapes. Place each sensor in a separate irrigation zone.
  - **CALIBRATE** the sensor mechanism according to the manufacturer's recommendations.
  - **ENSURE** that the SMS and rain sensor are wired in series (as opposed to in parallel), if a rain-sensing device is also installed. See the WaterSense report on SMSs at www.epa.gov/sites/default/files/2021-04/documents/ws-outdoor-products-sms_mini-report.pdf for more details on installation.

VERIFY

- **CONFIRM** that the irrigation controller is WaterSense labeled. Use the WaterSense Product Search Tool at www.epa.gov/watersense/product-search to confirm that the irrigation controller installed has earned the WaterSense label.
- **CHECK** for signs the landscape is being over- or under-watered by looking for soggy areas, brown spots, or wilted plants. Work with the builder or irrigation professional to adjust the irrigation controller.

Learn More

Go to the WaterSense Labeled Controllers web page at www.epa.gov/watersense/watersense-labeled-controllers to learn more.

**NOTE: Consult with the Home Certification Organization for specific verification protocols.*