



How Much Water Is My Sprinkler Using

Hi. I'm Kevin McCaleb. In the last video, we learned to calculate how much water we need to put on an area of our yard each week to equal one inch of water. While that number by itself is informative, it can't do us much good unless we can compare it to how much water our sprinklers are actually putting down. If we don't know how much water we are currently using, then we have nothing to help us decide if we are putting on too little or too much water. In this video, I will show you how to calculate the amount of water your sprinklers put onto your yard in one minute, and how to use that number to figure out how long the sprinklers need to run every week to equal that one inch of water that we learned about in the last video.

For this exercise, you'll need the sketch of your yard that we made previously, the step number 3 page from worksheet number one, a pencil and a calculator. You'll also need a watch with a second hand or a stop watch. Are you ready? Let's get started.

Our first step is to locate the water meter. Every city or town is different, but typically the meter will be located in a small concrete box on one of the corners of your property near the street. If you have trouble finding it, call your water provider and they can give you its relative location. On top of the box will be a reader's access door or lid that you will need to open to see the meter inside. You may want to put some gloves on to clear out any debris or dirt until the face is easily read. On the face of the meter will be numbers zero through nine in a circular array, much like a clock, and you'll see a large sweep hand. One complete circle of the sweep hand equals one cubic foot or 7.48 gallons. For this exercise, we will round up to 7.5 gallons to make the calculations easier. Each of the numbers around the face represents tenths of a cubic foot, or 0.75 gallons. Most meters in our region measure water in cubic feet. There are some numbers that look like the odometer of a car. On most newer meters, you'll see a small star or triangle shaped indicator to one side of the point where the base of the sweep hand is attached. In some cases, this indicator may actually be on top of the base of the sweep hand. This is called the low flow indicator. For our calculations, we will only be using the sweep hand. However, it is important to be aware of any movement by the low flow indicator when everything is off.

Before you start, be sure that no water inside or outside your home is being used. No toilets, sinks, dishwashers, laundry, sprinklers, any water that flows through the meter while you are observing the meter will throw all of the numbers off. So it's a good idea to turn off all water to your home before starting this exercise. Once you are sure there is no water being used by anyone or any appliances in the household, observe the low flow indicator on the meter for a few moments. Look for any movement in the little star or triangle. Movement of any kind indicates that water is moving through the meter. This could mean an appliance is not shut off tight, or you may have a leak somewhere. You'll want to get this repaired quickly to avoid costly water waste. If no water is moving through the meter, we can start the process.

Go to the sprinkler system controller, otherwise known as the timer, and use the manual switch to turn on station number 1. As the sprinklers begin to operate, write down on the worksheet number 2, under step 3, the station number and your name for the area of the yard that is operating. While the sprinklers are continuing to operate, go back to the meter. Watch the face of the meter, and as the sweep hand crosses zero, begin timing for one minute. When one minute is up, notice whichever number that the sweep hand just crossed. Write that number in the space marked "end number." As you are observing

the meter during the one minute interval, count how many times, if any, that the sweep hand makes a complete circle. Write that number down on the space marked "how many completed circles." If it does not travel one complete circle, write down zero. Now use your calculator to complete the math. This number will equal the amount of water in cubic feet that this station uses in one minute.

Because all of our calculations will use gallons as a unit of measurement, we'll need to change cubic feet of water into gallons of water. To do this, go to step 4, converting cubic feet to gallons on the worksheet, and fill in the appropriate spaces. Then use your calculator to multiply cubic feet per minute by 7.5. Write the number you get in the space marked GPM, gallons per minute. That is the amount of water the sprinklers on this station put down in one minute. We now know how much water our sprinklers are using in one minute. We also know from the previous video how much water we need to give the various areas of our yard to equal one inch. Using both of those amounts in step 5, how long to run sprinkler system to get one inch of water, we can now figure out how many minutes each station needs to run to achieve that goal of one inch of water.

On worksheet number one, under step 3, is a space entitled "gallons per week to equal one inch." Write that amount down on the space provided in worksheet number 2, step 5. Write down the gallons per minute that you just calculated. Use your calculator to do the math. The answer, minutes per week, will be how many minutes the sprinklers need to run each week on that station to equal one inch of water. You'll need to do these steps for all of your sprinklers. When you're done, you'll have the baseline numbers for your entire sprinkler system that you'll need to begin to build an efficient watering schedule. As you go through this process, you may find that more than one station will be used to water a section of lawn. Maybe there are zones that water both grass and shrubs. One sprinkler line may water more than one area. Maybe the landscaping was changed and the irrigation system no longer covers areas correctly. There are no typical yards. But there are things you can do to compensate for many of the more common problems.

In the next video, I will show you how to make some quick, easy alterations to your current system to give you better control of your water usage. If you'd like more information on using water efficiently, check out the other videos on ConserveH2O.org.