



## LAWN WATERING HOW-TO: CONVERTING INCHES TO MINUTES



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*to stay healthy. But just how long does your sprinkler need to run to dispense that amount? Use our simple formula to find out!*

If you're a regular reader of the weekly e-newsletter or Garden Style San Antonio, then you know I provide weekly irrigation recommendations in 1/2-inch, 3/4-inch and 1-inch increments. Many readers ask how that translates into minutes. That's an excellent question. Welcome to the wonderful world of irrigation!

The application or precipitation rate of a sprinkler or in-ground irrigation system is a unit of measurement for the amount (inches) of water applied to the ground per hour. This one unit determines all run times.

The application rate is determined by many factors including age of the system, head type, nozzle type, spacing and pressure. The actual run time derived from the application rate is further modified by the five S's (soil, shade, slope, species, and season). It is, therefore, impossible to provide individual run times for individual homes, let alone an entire city. To provide the answer, we make assumptions.

For a typical San Antonio in-ground irrigation system, we assume that a typical application rate for a typical zone is:

Pop-up spray heads = 1.65 inches/hour  $1/2'' = 18 \text{ min}$   
Rotor heads = .75 inches/hour  $3/4'' = 40 \text{ min}$   
Multi-stream heads = .45 inches/hour

The application rates above are calculated using the following formula:

**Run Time = Amount of water desired x 60 (minutes) / Application (Precipitation) Rate**

So let's plug in the variables we know using the pop-up spray head application rate (1.65) from above to get the run time:

**1/2-inch of water multiplied by 60 minutes divided by 1.65 equals about 18 minutes.**

Again, that run time is based on typical situations. If that same spray head is in the shade or in beds, it should only run about 11 minutes because those plants require only 60 percent of the 18 minutes.

You can use the formula for any amount we recommend and for any irrigation head. You may see different calculations and



# There Is No Standard Setting for Irrigation Systems

*By Mark Peterson*

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**No two landscapes are alike and neither are the in-ground sprinklers that serve them. Before you just turn yours on and forget it, consider what it's watering and where.**

Every summer, as soon as the hot, dry weather settles in I start getting questions about irrigation systems and how long they should run. Unfortunately, the answer to that question is far from simple.

You see, no two landscapes are alike and neither are the irrigation systems that serve them. I would have to determine a multitude of unique variables for each landscape to calculate how long each system should run.

Instead, I can make a general recommendation for run times using the experience and expertise of our conservation consultants. They base their recommendations on broad assumptions of a typical irrigation system and landscape. These include spray head type, soil, plants and precipitation rate.

Using these assumptions, I can confidently recommend the following:

***In full sun turf***

<b>Pop-up sprays</b>	20 minutes per week
<b>Pop-up rotors</b>	35 minutes per week
<b>Multi-stream rotors</b>	60 minutes per week

***In partial shade turf***

<b>Pop-up sprays</b>	15 minutes per week
<b>Pop-up rotors</b>	25 minutes per week
<b>Multi-stream rotors</b>	40 minutes per week

***In full sun beds***

<b>Pop-up sprays</b>	18 minutes per week
<b>Multi-stream rotors</b>	45 minutes per week

***In partial shade beds***

<b>Pop-up sprays</b>	12 minutes per week
<b>Multi-stream rotors</b>	35 minutes per week