

**PROGRAMMING TIP**

CB\_062606A

**How to Calculate Precipitation Rates for Drip Emitters**

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Products: All WeatherTRAK-enabled Controllers

Versions: All software versions

**Overview**

This customer bulletin provides helpful formulas to calculate precipitation rates for drip emitters for Drip products under "Automated by WeatherTRAK" mode.



**Note: The default precipitation rate for "Drip" sprinkler type in "Automated by WeatherTRAK" mode, is 1.5" per hour. This precip rate reflects 1 GPH, subsurface tubing with 12" on-center emitters with row spacing of 12". Single point emitters will have different precip rates and should be calculated based on Formula 2 shown in the document.**

**Formula 1 – Calculating Precip Rates for Subsurface Tubing**

When using subsurface tubing such as Toro Techline, Netafim subsurface tubing or Rain Bird Landscape Dripline products, use the following formula:

$$\text{Precip or Application Rate} = \frac{1.1 \times \text{Dripper Flow Rate (GPH)}}{\text{Dripperline Row Spacing (Inches)} \times \text{Dripper Spacing (inches)}}$$

Example: For 12" Emitter Spacing with 18" row spacing and a flow rate of 0.6 gallons per hour the precip rate would be =  $\frac{231.1 \times 0.6}{12" \times 18"}$

$$\frac{138.6}{216.0} = .64 \text{ inches per hour}$$

**Formula 2 – Calculating Precip Rates for Single Point Emission Drip Emitters**

When calculating a single point emission drip emitter, assume the area of coverage is 12" x 12" and use the following formula:

$$\text{Precip or Application Rate} = \frac{231.1 \times \text{Dripper Flow Rate (GPH)}}{12 \text{ (Inches)} \times 12 \text{ (inches)}}$$

Example: For a dripper emitter with a 6.0 gallon per hour (GPH) discharge rate the precip or application rate would be

$$\text{Precip or Application Rate} = \frac{231.1 \times 6.0 \text{ (GPH)}}{12'' \text{ (Inches)} \times 12'' \text{ (Inches)}}$$

$$\frac{1386.60}{144.0} = 9.63 \text{ inches per hour}$$



**Note: Using the default value may result in under or over-watering as demonstrated in these two examples above. Consider calculating the precip rate for the installed product for optimum plant health and maximum water savings.**

For additional technical assistance, please call WeatherTRAK's Customer Support toll-free number 1 (800) 362-8774.