



APPLICATION BRIEF

CHEMICAL DOSING FOR TREE FARM

September 11, 2025

PROJECT OVERVIEW

An established tree farm is utilizing a system to deliver chemicals for the purpose of feeding trees. To maintain the system, chemicals are also blended to flush or clean out the equipment. It is critical to accurately measure the amount of fertilizer in use during growing season for proper nutrient delivery and health of the trees. It is just as important to measure the amount of chlorine in use to keep the filter/drip nozzles clean from filamentous algae (this comes from pulling water from a pond).

The risk: There is the potential of harming or even killing the trees if too much chlorine, used in backwashing the system, is dispensed. Dosing the correct amount is crucial to keeping the system clean and operating, and in maintaining healthy trees.

Meter Requirements:

- Monitor flow rate
- Quick response time to change in flow rate
- Tolerant of algae growth without losing accuracy
- Minimal maintenance required
- Large flow rate operating range so system can be expanded upon

PRODUCT SPECIFICATIONS

- Turbine Flow Meter with display
- Minimum of 8V (dc) to power the flow meter
- Maximum of 36V (dc) of power to the flow meter
- $\pm 3\%$ accuracy
- Flow range 1 GPM ($\frac{1}{2}$ in.) to 660 GPM (4 in.)
- 4-20mA or Scalable pulse output (125100-10 Kit)
- Easy installation
- Low maintenance

PRODUCT SOLUTION

The FLOMEC® **TM Series Flow Meter** paired with our 4-20mA/ Scaled Pulse output module was designed for this dosing application. When you pair our TM Series and 4-20mA with a dosing controller, we can measure the amount of water moving through the main line so the controller can release the right amount of chemicals. Turbine flow meters will respond to the change in flow, which will keep the dosing controller dosing the correct amount of chemicals for application.

Benefits of adding the flow meter to this process included:

- Reduce the chance of over applying fertilizers or chlorine
- Extremely easy to install - gluing the tee in-between the pump and filtration system
- Helps to ensure proper dosing in the backwash system is maintained

