



## Center for Irrigation Technology

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This is a report on the laboratory measurements made on the NMG (No More Geysers) units. Reference is also made to the attached file that shows hydrozone layout on which the hydraulic measurements were made.

Step #1 - Setup the hydrozone configured as shown on the attached sketch. Adjust the inlet pressure so as to provide 30 psi at location P2.

Step #2 - Measure the flow rate thru the system first w/o the NMG units, 8.8 gpm. Measure the flow rate w/ NMG units installed, 8.6 gpm. Using the catalog values for the individual sprayers a value of 9.24 gpm is suggested. The presence of the NMG units in the system causes a small, 2.3% reduction in flow rate. These were full length NMG units.

Step #3 - Measure the pressure loss in the system resulting from the installation of the NMG units. The pressure loss w/o NMG units installed was 0.77 psi. The pressure loss w/ NMG installed was 0.80 psi. The number of NMG segments in place during the pressure loss determination had no effect on the pressure loss measurement. The presence of the NMG units in the hydro zone caused a minor 0.1% increase in pressure loss.

Step #4- Measure the hydro zone flow rate w/ and w/o the NMG units in place for different location in the hydro zone.

<u>Sprinkler location</u>	<u>w/o NMG</u>	<u>w/ NMG</u>
Lat 2, sprinkler 3	15.6 gpm	7.3 gpm
Lat 2, sprinkler 2	16.8 gpm	7.3 gpm
Lat 2, sprinkler 1	17.9 gpm	8.1 gpm
Lat 1, sprinkler 3	19.1 gpm	8.1 gpm
Lat 1, sprinkler 2	17.2 gpm	7.4 gpm
Lat 1, sprinkler 1	16.1 gpm	7.4 gpm
	Average 17.1 gpm	Average 7.6 gpm

Using the average flow rates of 17.1 gpm and 7.6 gpm, if any sprinkler in the hydro zone is removed and the outlet is not fitted with a NMG unit, 95 gallons of water will be wasted during a 10-minute irrigation run time.

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