Figuring out a way to produce lush landscapes while using the least amount of water is Hunter Industries' core goal when designing products.

The Water Pollution Control Lab had an irrigation system comprised of over 30 zones, which all utilized traditional spray nozzles. For test purposes, one zone was chosen to be retrofitted with MP Rotator nozzles. The test was set to compare the uniformity and water usage of both types of nozzles.

The Challenge

[1]

The existing system, equipped with traditional spray nozzles was audited for uniformity and precipitation rate using catch cans that were spaced evenly throughout the area of the zone. The nozzles were then replaced with High Efficiency MP Rotator nozzles and the zone was re-audited.

The Solution

[2]

The precipitation rate of traditional spray nozzles was 7.20 cm/hr, well above the normal soil absorption rate of 1.3 cm/hr, which can lead to flooding conditions and runoff. The MP Rotator's precipitation rate of .55 was much closer to the soil absorption rate reducing runoff and misting conditions.

The Result

[3]

The traditional nozzles provided a lower quarter distribution uniformity of 53% while the MP Rotator's lower quarter distribution uniformity was much higher at 71%. The increased performance of the MP Rotator resulted in immediate water saving of 34%. Based on a 35-week watering year, using MP Rotators would result in an annual water savings of 15,840 liters for the one zone alone.

MP Rotator System vs. Spray System

MP Rotator System		Spray System	
ET Demand:	1.3 cm/wk	ET Demand:	1.3 cm/wk
DU:	71%	DU:	53%
Irrigated Area:	75 sq m	Irrigated Area:	75 sq m
Volume Demand:	945 lit/wk	Volume Demand:	945 lit/wk
Irrigation	1,330 lit/wk	Irrigation	1,786 lit/wk

Water Savings/Week: 454 liters
Irrigation Weeks/Year: 35 weeks
Annual Water Savings: 15,840 liters

Source URL (retrieved on *22/12/2014 - 16:37*): http://www.hunterindustries.com/en-metric/site-study/mp-rotator-efficiency-goes-unmatched-usage-test?source=lang&from=en&to=en-gb

Links:
[1] http://www.hunterindustries.com/sites/default/files/styles/width_640px/public/portland-cup-test.png?itok=0wU0iA4X
[2] http://www.hunterindustries.com/sites/default/files/styles/width_640px/public/hunter_window.jpg?itok=6c6IYZ3Z
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