IRRIGATION ASSOCIATION

6540 Arlington Boulevard
Falls Church, VA 22042

Tel: 703-536-7080
www.irrigation.org

Smart Water Application Technologies (SWAT) Performance Report

Testing Agency: Center for Irrigation Technology **www.californiawater.org**

Product: Cyber-Rain XCI Controller System

Product Type: Climatologically Based Controller

Product Description: The Cyber-Rain XCI Controller uses system software to wirelessly network to the owner's PC. With the PC on, a Weather Watch feature checks broadcast information hourly from the CIMIS network (CA residents), or an internet source like weather.com to allow or prevent irrigation. The system defaults to historical data.

SWAT Protocol*: Turf and Landscape Equipment Climatologically Based Controllers 7th Draft Testing Protocol (Nov. 2006)

The concept of climatologically controlling irrigation systems has an extensive history of scientific study and documentation. The objective of this protocol is to evaluate how well current commercial technology has integrated the scientific data into a practical system that meets the agronomic needs of turf and landscape plants. The evaluation is accomplished by creating a virtual landscape subjected to a representative climate to evaluate the ability of individual controllers to adequately and efficiently irrigate that landscape. After initial programming and calibration the controller is expected to perform without further intervention during the test period. Performance results indicate to what degree the controller maintained root zone moistures within an acceptable range. If moisture levels are maintained without deficit, it can be assumed the crop growth and quality will be adequate. If moisture levels are maintained without excess it can be assumed that scheduling is efficient.

***All SWAT protocol may be viewed at www.irrigation.org**

Cyber-Rain XCI Controller SWAT Performance Summary

Irrigation Adequacy	Irrigation Excess
Minimum of 6 test zones: 100% **Maximum of 6 test zones: 100%** **Mean/Average of 6 test zones: 100%** **Irrigation Adequacy** represents how well irrigation met the needs of the plant material. This reflects the percentage of required water for turf or plant material supplied by rainfall and controller-scheduled irrigations. Research suggests that if this value is between 80% and 100%, the acceptable quality of vegetation will be maintained.	**Minimum of 6 test zones: 0%** **Maximum of 6 test zones: 20.5%** **Mean/Average of 6 test zones: 11.6%** **Irrigation Excess** represents how much irrigation water was applied beyond the needs of the plant material. This reflects the percentage of water applied in excess of 100% of required water according to data from CIMIS station #8 Gerber, Tehama County during the test period.

Product Detail Supplied by Manufacturer

Cyber-Rain XCI **www.cyber-rain.com**

Installation	Data Source	Data Link	Initial Purchase	Additional Hardware	Additional Fees
Replaces existing controller or is installed on a new system.	SWAT tested with wireless Internet link to CIMIS weather station #8.	2-way wireless using ZigBee technology	Purchase price includes system to control up to 8 zones	❑ Add controllers to manage more than 8 zones (use same access point for all controllers)	None. Internet connection is required.

Additional Features

Zones	Time of Day	Day of Week	Other	If Data Link is Discontinued
Available in unlimited number of stations	Capable of restricting the time of day for watering.	Capable of restricting watering days by selection or interval.	❑ Tracks water use and savings ❑ Manage multiple zones and multiple controllers and watering schedule for each from one PC screen ❑ Cycle and Soak settings can be set independently for each zone	Defaults to historical ET database if communication is interrupted, and can operate as standard controller with full cycle and soak capabilities. Manual schedule changes can be made anytime.