



## Rain Master Irrigates Largest "Green" Roof in California

**Simi Valley, Calif., August 2007** – As part of its commitment to a healthier environment and its ongoing efforts to reduce carbon emissions, Rain Master is nearing completion of a Central Irrigation Control system for what has been hailed as the most complicated living roof ever constructed.

The Rain Master Control system will enable the California Academy of Sciences in San Francisco's Golden Gate Park, the greenest museum ever built, to forgo a traditional tar and asphalt roof in favor of a plant-covered "GREEN" canopy that will not only save energy, but will transform carbon dioxide into oxygen.

The Morrison Planetarium, Kimball Natural History Museum, and Steinhart Aquarium, along with eight scientific research departments and 20 million scientific specimens, will be housed in the single Academy building, expected to be the largest public LEED Platinum Certified structure in the world when it opens in October of 2008.



"We're certainly very proud to be part of this very important project," said Rain Master President/CEO Jim Sieminski, "As technological leaders in irrigation control systems, it's been a pleasure for us to work with industry leaders in architecture, landscape architecture, and irrigation design."

The new system utilizes Rain Master's Advanced **OASIS**<sup>™</sup> software to provide the correct amount of water necessary to maintain the 1.7 million native California plants and wildflowers blanketing the seven 'hills' spread out over the roof's 2.5 acres.

Beneath the soil lies a sophisticated, layered drainage system, and below the drainage system are seven concrete domes, as designed by celebrity lead architect Renzo Piano to reflect the city's undulating topography.

Piano, a Pritzker Prize winner was joined by landscape architect John Loomis of the

internationally renowned SWA Group of Sausalito. Marty Dickson, of industry leading Dickson and Associates, designed the irrigation.

"I chose Rain Master's **OASIS** system because their products and customer service are exceptional," said Dickson about contracting the company through its distributor, John Deere Landscapes - Green Tech Division. "Rain Master's commitment to the success of the project has been exemplary throughout the process."

### **Two separate systems on one site**

The Academy will utilize two separate **OASIS** Central Control Systems; the rooftop will be monitored by the Academy of Sciences irrigation management personnel, while the system for the surrounding grounds will be monitored by the Golden Gate Park personnel.

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The **OASIS** Central collects and disseminates information between several Rain Master DX2 satellite controllers and the **OASIS** on-site weather stations. The Central constantly monitors the DX2 controllers that communicate with 100 zones on the park grounds, and 38 zones on the roof. Each zone is designated to distribute water according to its programmed parameters. The **OASIS** program, in conjunction with flow sensors, continually monitors and records all irrigation water flow which can then be viewed on screen or in a report format selected by the operator.

"It's very important for the roof to have the proper irrigation management because the shallow soil profile has a very low holding capacity for water," Dickson said.

"In addition, the grade change on the roof adds to the difficulty of maintaining moisture in the soil because water gravitationally flows away from the top of the mounds and toward the lower areas."

"There were unique communication requirements between the weather stations and the Central computer," Dickson continued. "Rain Master has resolved those challenges in a very expedient manner."

In order to address these issues, the drainage system is shaped in the form of a massive egg crate, providing miniature reservoirs across the roof deck which guarantees a perpetual water supply directly under the soil.

"If there's a break in the irrigation system – if more flow is occurring than should occur when a particular zone is turned on - then the Central computer shuts down the master valve," explained Dickson.

### **Rain Master - Managing the Microclimate...**

Rain Master's sensitivity toward environmental issues related to irrigation dates back to 1986

with the introduction of its Evolution Irrigation Controller, capable of balancing and managing an irrigation system's water flow, and therefore significantly reducing water waste. The technology incorporated into the **OASIS** Central program also reduces overall consumption by accurately measuring weather conditions in order to determine the EvapoTranspiration (ETo) experienced



over a 24-hour period, enabling an automatic adjustment of the irrigation program to make certain that only the microclimate's depletion of moisture will be replenished.

**OASIS** can also balance the pump output-to-demand ratio, cutting down pumping energy costs by roughly a third, resulting in a 25 to 40 percent reduction in electricity, and a consequent reduction in greenhouse emissions.

"With the installation of the Academy of Sciences system, Rain Master is helping the planet move just a little bit closer to sustainability," said Sieminski. "We hope to be a part of many such projects in the future."

### **About Rain Master**

For over twenty-five years, Rain Master, based in Simi Valley, CA, has been the recognized innovative leader in the design and manufacture of irrigation controllers, handheld remote controls and central computerized control systems for the landscape and golf irrigation markets. Creator of **iCentral™**, the industry's first Web-based central control system, Rain Master sets the standard for technologically advanced, environmentally sensitive and cost effective irrigation control and water management systems. Rain Master consistently offers new and innovative technologies that exceed irrigation industry quality and performance standards for "SMART" ET- weather based irrigation controls. Visit our website at [www.rainmaster.com](http://www.rainmaster.com) or e-mail [info@rainmaster.com](mailto:info@rainmaster.com), to learn more about our visionary solutions to water management through technology.



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