



UNI-GROUP U.S.A.

Rio Vista Water Treatment Plant

PROJECT:

Rio Vista
Water Treatment Plant
Castaic Lake Water Agency
Santa Clarita, California

LANDSCAPE ARCHITECT:

Cheryl Barton - EDAW, Inc.
San Francisco, California

ARCHITECTURE & ENGINEERING:

Kennedy/Jenks Consultants
Ventura, California
Doug Henderson
Project Manager
Marcellino Sanchez
Civil Engineer

GENERAL CONTRACTOR:

Advanco Constructors
Upland, California

PAVER CONTRACTOR:

European Paving Designs
San Jose, California

CONCRETE PAVER MANUFACTURER:

Hokanson Building Block Co.
Sacramento, California

PAVERS:

UNI Eco-Stone®
3 1/8 in. (80mm)
Natural Gray - 27,000 sq ft

Case Study



UNI Eco-Stone® pavers were selected for the Rio Vista Water Treatment Plant parking lot

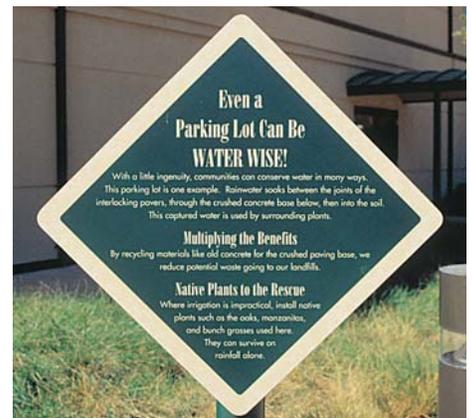
When building their new water treatment plant in 1994, the Castaic Lake Water Agency wanted a state-of-the-art facility that would serve the needs of the Santa Clarita Valley in southern California for many years to come. Located in a rapidly growing area that is subject to droughts and other emergencies that affect the water supply, the agency decided to build with the future in mind.

The Castaic Lake Water Agency imports half of Santa Clarita Valley's water supply, supplementing the groundwater supplied by the valley's four water retailers. Using the latest treatment technology, they produce water that is cleaner and purer than standards required by state and federal mandates. In addition, they store millions of gallons of water in case of drought or disaster to ensure a consistent supply to the valley.

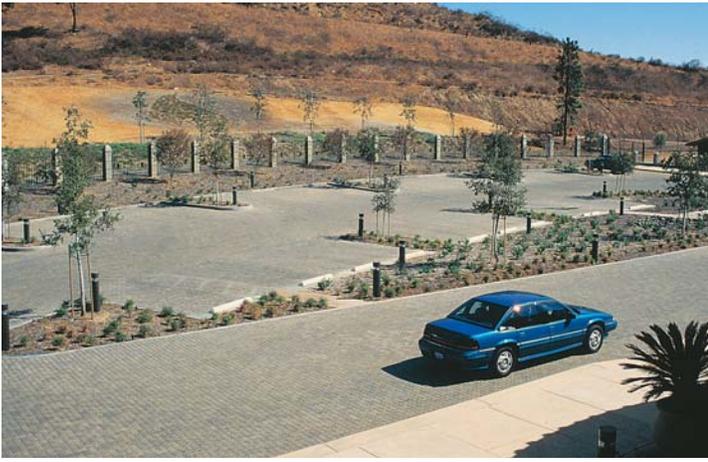
The Castaic Lake Water Agency's commitment to the community and the future is evident in their Water Conservatory Garden and Learning Center located adjacent to the Rio Vista plant. The project, an effort to increase water education and awareness in the Santa Clarita Valley, provides a place for residents and business owners to study landscaping solutions and practices geared to their local ecology.

Dedicated in the spring of 1996, the conservatory was designed to help consumers become responsible water users. The Santa Clarita Valley is a "climate of extremes" with too much sun and too much, or too little water. Information on soils, plants, zoning, slope stabilization and hardscape paving is provided through displays and hands-on demonstrations.

In keeping with the project's commitment to water and resource conservation, landscape architect Cheryl Barton, formerly with EDAW, Inc., of San Francisco and now in private practice, suggested replacing the originally specified recycled asphalt parking areas with UNI Eco-Stone®, an innovative, permeable pavement system.



Signs throughout the project inform consumers about ways to conserve water and materials



UNI Eco-Stone® pavers function as part of a drought-tolerant landscape

The unique, patented design of UNI Eco-Stone® utilizes infiltration as a natural way to reduce stormwater runoff, recharge groundwater storage, improve water quality, and mitigate pollution impact on surface waters. Available nationwide through UNI-GROUP U.S.A., one of the country's leading interlocking concrete paver producer organizations, UNI Eco-Stone® is manufactured to meet or exceed ASTM C-936 specifications.

"It's a good-looking product that's also permeable," said Barton. "The Castaic Lake Water Agency wanted to educate visitors from the moment they step out of their cars about water and the landscape and how infiltration is as important in a drought-tolerant landscape as drought-tolerant plants."

Completed in the spring of 1995, the natural gray UNI Eco-Stone® parking lot also offers more textural interest than asphalt. "These pavers were probably more expensive than other alternatives, but that is in terms of materials. To use concrete intelligently, in terms of

longevity and maintenance, it makes sense over time," adds Barton.

Over 27,000 square feet of pavers produced by UNI® paver manufacturer Hokanson Building Block of Sacramento, CA, were used for the light-duty

vehicular parking area. The pavement was designed by civil engineer Marcellino Sanchez of Kennedy/Jenks Consultants of Ventura, CA, and the concrete paver contractor was European Paving Designs, Inc., of San Jose, CA.

Project specifications called for the 3 1/8" (80 mm) thick UNI Eco-Stone® pavers to be installed on a 1" deep bed of washed concrete sand conforming to ASTM C33, which was also combined with 2-5 mm aggregate to fill the drainage voids and joints. Existing concrete from the site was crushed and recycled for use as the base material and installed



Divided into four quadrants, the garden is built around historical Greek principals of the elements - water, earth, sun and wind

to a 7" depth. The existing subgrade of silty-sandy top soils over clayey-sandy soils was compacted to 95% modified Proctor.

The pavement was designed to allow infiltration into the existing soils and to drain towards a landscaped center island. Annual rainfall estimates for the area average only 10" per year, however, rain storms are often intense, resulting in flash flooding. The permeable UNI Eco-Stone® pavement at Rio Vista not only reduces or eliminates the potential for stormwater runoff at the site, but also serves as a valuable educational tool for water resource conservation.

References:

Water Treatment Pavement Goes with the Flow, Engineering News Record, Concrete Today, 1995 Publications by the Castaic Lake Water Agency

Note: A variety of materials may be used for the bedding, drainage void and base materials of a UNI Eco-Stone® pavement system and are dependent on project design objectives, design storm requirements, available construction materials, existing soils, and local environmental conditions. For detailed information on formulating design procedures and specifications, please contact your local UNI® Manufacturer for design guidelines. A qualified engineer or other design professional should be consulted for applications utilizing the UNI Eco-Stone® Paving System.

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