

# CHALKBOARD

## TIPS FROM THE PROS

### LOW-VOLUME SPRINKLERS MEET TEMPORARY WATER NEEDS

Clint Granath, director of maintenance at Santa Anita Race Track, used to shut down the famous horse race track's irrigation system after the last race in April. The 40 year-old quick coupler system did not apply a single drop of water to the 18 acres of turf from April through September. "We let the Kentucky bluegrass go dormant for the summer since we didn't race again until late December and we thought saving water was a good idea," says the civil engineer.

The savings in water however, were not equal to the cost or headaches of reviving the turf in the fall. "We ran into serious weed problems and had to use more and more perennial ryegrass to get the grounds into the condition expected of a historic park," he adds.

Atmosphere is very important to the managers of Santa Anita and landscaping is a major part of the atmosphere. The Los Angeles Turf Club, the primary tenant of the track, is very picky about the landscaping. Each year acres of annuals are planted in the infield and in numerous beds surrounding the grandstand. The turf is kept immaculate and weed-free for the thousands of betting customers and those who come just to experience horseracing.

After the final race in April 1983, Granath and his crew went to work on a massive renovation of the 12-acre turf track and the irrigation system for most of the grounds. Granath enlisted the expertise of O. A. Matkin of Soil & Plant Laboratory, Howard Troller & Associates-Landscape Architects, and John Provine, horticulturist at the Los Angeles Arboretum, located conveniently across the street from Santa Anita. A master plan for the turf track and the grounds was drafted, which included more than 600 pop-up heads to replace the quick couplers. A fertilizer injector was installed to feed the tall fescue/perennial ryegrass mixture growing in the new sand-based rootzone of the turf track. A drip irrigation system was added for the hanging baskets around the clubhouse.

Every square foot of turf and plant bed was evaluated for its water needs, except for a two-acre hillside on the northern edge of the property.

Although a significant distance from the track, the hill sits right in the middle of the view spectators have of the San Gabriel Mountains. Live Oak and magnolia trees dot the slope covered with native grasses. Without irrigation, the tall hillside turf was green only during the winter rainy season.



Emitters are barely visible in the tall native grass, especially when viewed from across the race track.

When the November Breeders' Cup was initiated, Granath had to figure out a way to turn the native grasses green months before the winter rains. He didn't want to spend thousands of dollars on a permanent irrigation system for the hillside which would be used only four months each year. He explored several options including renting a surface irrigation system from September through December.

Granath had three concerns—erosion of the fragile slope, the volume of water and pressure a surface system would require and the appearance of a temporary system to the spectators. He managed to solve all three problems at half the cost of a rented system.

Provine was familiar with low-volume sprinklers since he had special irrigation requirements for the vast assortment of plants at the Arboretum. Provine put Granath in touch with Efraim Donitz of Efco, an importer of low-volume systems from Israel. A network of 650 tiny spray heads, each applying approximately ten gallons per hour in a 30-foot-diameter area, elevated on two-foot high metal rods was recommended by Donitz for installation by Santa Anita crew on the two-acre slope. Small spaghetti tubes branching off two one-inch main lines supply the midi-sprinklers. Each main has a filter at the source.

"The crew installed the system, which for the most part just snaps together in less than a day," Granath stated. Each midi-sprinkler sprays a distance of more than 35 feet with drops larger than a mist but smaller than conventional sprinklers.

Television viewers and spectators at this year's Breeders' Cup could see the wild green hillside turf wave with each breeze



Clint Granath lifts one of the PVC mainlines hidden beneath the turf.

in the background. The small sprinklers were invisible to the television cameras as they panned the mountains.

The rainy season, during which Santa Anita receives virtually all of its 12 to 14 inches of annual rainfall, has begun. "The midi-sprinklers have performed to our expectations," says Granath. "We can easily remove the system and store it until this August."

Granath, a former city engineer for Pasadena, likes to solve each problem effectively, so he can concentrate on the many other physical plant concerns of the historic race track. "It took a variety of irrigation systems to meet our needs," he reflects. "We have come a long way since quick couplers and letting the turf go dormant all summer. Now we have a reliable, manageable irrigation system for the entire park."