

# Westminster City Park Soccer Complex

## STMA Parks and Recreation Soccer Field of the Year

Sweeping up aeration plugs prior to topdressing. Courtesy: Westminster City Park

by Bob Tracinski

**F**oresight and funding turned an open field in the heart of the City of Westminster, CO, into a beautiful and heavily used public park. Hard work and dedication earned the park the 1998 STMA Soccer Field of the Year award in the Parks and Recreation Division.

### Facility history

The four-field, tournament-sized soccer complex is just one part of Westminster City Park, a 150-acre facility located near the geographic center of the city.

Former Crew Leader Jim Mueller explains, "The soccer complex was dedicated to the 80,000 residents of Westminster in October of 1994, with regular use beginning in 1995. Besides the 15 acres of the soccer 'circle,' there's approximately 85 acres of additional developed turfgrass areas within the park."

Mueller served as crew leader between 1996 and mid-July 1999. He left the City to do full-time consulting at his landscape design and construction company, Grass-Roots 2000.

Eric Pollock replaces Mueller in the crew leader position. He's committed to continuing the aggressive maintenance program that keeps the fields in top condition.

### The fields

The soccer complex fields all are native soil with a high-clay content," explains Mueller. "The top soil was scrapped away and stockpiled during the construction, then mixed with additional local native soil and used to top the fields.

"The fields were designed with a two-percent grade from east to west to channel excess surface water to the lake at the west of the fields. A hill on the east side of the complex is approximately 225 feet high, with about a 60-degree slope. It's excellent for spectator viewing, but did drain rain and melting snow onto the fields.

"During construction, subsurface drainage was installed on the perimeter of the fields, including at the base of this hill. This drainage system also channels water to the lake.

"The fields were seeded with a blend of A-34, Livingston, Freedom, and Rugby bluegrasses; and SR4200, Advent, and Prelude perennial ryegrasses."

The complex saves approximately \$50,000 annually by using a natural water source. Mueller says, "Water is pumped from nearby Big Dry Creek into an on-site holding pond. It's then filtered and disbursed to the soccer fields and surrounding turf areas via 1,876 sprinkler heads connected to a computerized management system.

"A 10-minute watering cycle uses 68,000 gallons of water. The system is

powerful enough to run 10 irrigation stations at one time."

### Field use

Soccer starts at the Westminster Complex in late February, as the Colorado Rapids professional men's team begins practice. Visiting professional teams also use the fields.

Mueller calls the Rapids ideal field users. They're always open to suggestions to avoid field damage and to maintain the best possible long-term conditions. The Crew Leader meets with the coaches each quarter to work out details of field use.

As the weather warms, high school teams and youth recreation leagues take to the fields. This raises the rate of play to nine or 10 games each Saturday on all four fields.

The facility also hosts nightly professional clinics, monthly soccer camps, and several three- to five-day tournaments; each with a minimum of 100 games.

Soccer play wraps up in mid-November. By that time, the combined 26 weeks of spring and fall soccer have brought at least 225 youth games to each field, in addition to all the professional-level games and the practices of all the groups.

The central location of the park and its nearly unlimited on-field seating and hill-side viewing also attract such events as concerts; the mayor's annual Easter egg

hunt, which draws 5,000 people; the Fourth of July celebration; school outings; recreational volleyball games and tournaments; city-sponsored 5-K and 10-K races; and high school cross country races.

#### Unscheduled events

Unscheduled, unauthorized events add to field use, since the facility is open and accessible. Generally, these users respect the property, but there are exceptions.

Mueller says, "Besides those playing pick-up games in conditions where no activity should take place on the fields, we've had people drive four-wheelers down the hill onto and around on the soccer fields. Others have created their own designs on the fields using regular solvent spray paint.

"Vandals hit hard one night in the spring of 1998. They broke into the first irrigation pumping station and the building in which it is housed. They damaged everything; dumped fuels, paints and fertilizers everywhere; and put the golf carts into the creek.

"During this incident, the well in that building was contaminated, and as a result, no water could be pumped from the creek to the lake for irrigation using our regular system. We had to use a portable pump and 400 feet of pipe to pump into the lake in order to bypass the series of contaminated siltation wells until the wells could be drained and cleaned."

The City responded to the vandalism by upgrading security measures at the building and adding night lighting. The new softball complex will be fenced, locked, and controlled.

The City is reluctant to fence the soccer complex, though. This could sacrifice the flexibility of that area and the natural beauty of the site.

The irrigation system also suffered damage during the initial construction phase of a new Colorado Rapids training facility. Seven main lines and 32 lateral lines were affected. While making these repairs, the City added parts of the irrigation system to the new Maxicom system.

In 1999, the City upgraded this Maxicom system to the Windows program which included detection of leaks or valve malfunctions. Plans are underway to connect this system to laptop computers to provide 24-hour irrigation monitoring seven days a week.

#### Soil

Soil samples are taken twice each year, once at the beginning and once at the end of the season. In spring 1998, results showed a heavily compacted clay with a

cation-exchange capacity of 33.5, much higher than the recommended level of 12 to 18 percent.

The pH level was 8.2, and there were high levels of sodium, sulfur, and lime; and low levels of nitrogen and organic material. The irrigation water had a pH of 8.2.

Mueller notes, "A surveying team assessed conditions and confirmed the soil on the playing surfaces was settling and compacting, changing the grade from

two percent to less than one percent and creating water-holding depressions. We hired a contractor to topdress the fields with a mixture of 80-percent sand and 20-percent organic material.

"We adopted an aggressive cultivation program, using a three-inch knife blade slicer once a week, and core aerating every three to four months, pulling plugs from both three- and six-inch depths. The

*Continued on pg. 13*



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cores were dragged back in, topdressing was applied, and additional topdressing spread on any remaining low spots.

"We also vertidraind the fields every four months. In the spring of 1999, the contractor used a soil conditioner machine on all the fields. This overall program improved drainage and raised the percolation rate, as well as reducing compaction.

"To help reduce the pH levels, Calrea (23-0-0-7Ca), a high-nitrogen, high-calcium concentrate, was applied using the fertilization injection system. We also used our 14-foot boom sprayers to put down a more concentrated application of Calrea running the width of the goal keepers' boxes from end line to end line on all four fields."

### Troubleshooting

Detecting a severe drainage problem on the east side of the fields, the crew removed sod and cut a swale approximately three inches deep, directing the water to a storm drain. They filled the depression with pea gravel and sand, and replaced the sod.

Mueller says, "To reduce excess wear in the goal areas during the



The multi-purpose facility hosts a concert series every year. Courtesy: Westminster City

first few years, the fields were rotated 90 degrees between the spring and fall soccer seasons, going from the north-south orientation to an east-

west orientation. We applied Crown III in all the goal boxes, and spread to a depth of 3/4 of an inch. In 1998, the field assessment at the end of spring

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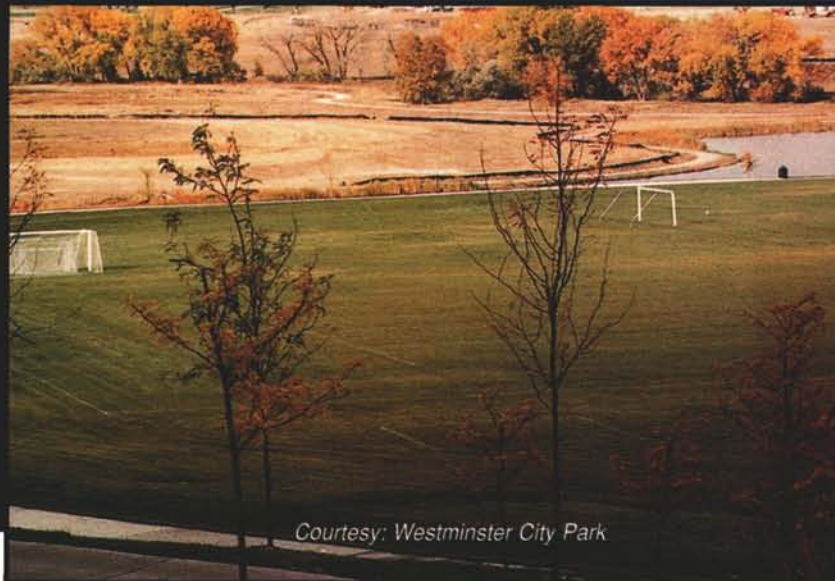


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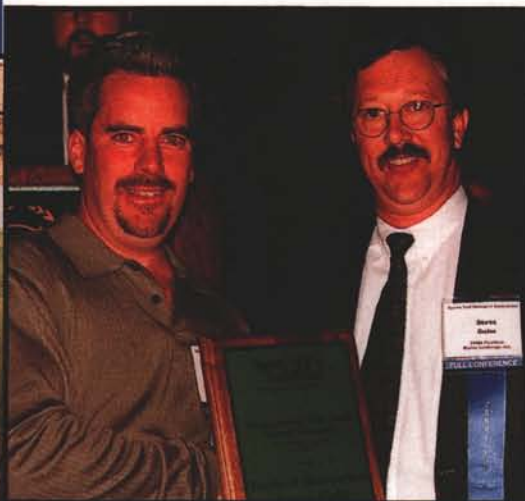


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Courtesy: Westminster City Park




STMA President Steve Guise (right) presents the Field of the Year award to Crew Leader Jim Mueller. Courtesy: STMA

play determined rotation wasn't required.

"Also in 1998, we began researching additional methods to alleviate the effects of the heavy soccer play, and to incorporate into the construction of the new baseball complex. We worked closely with suppliers to establish three plots

with different soil amendments and turf types near the soccer playing surfaces, maintaining each of the plots with our regular maintenance program.

"The intent is to have the Colorado Rapids' goalies practice on these plots throughout 1999, then survey the conditions and make comparisons. These plots

and the amended goal areas are open for viewing by those from other complexes, and questions are welcome." 

Bob Tracinski is business communications manager for John Deere in Raleigh, NC. He is public relations co-chair for the National STMA.

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