Improving baseball field drainage

MATT JOHNSON, ASSISTANT HEAD GROUNDSKEEPER, Toronto Blue Jays/Florida Operations

I work on five fields at our complex here in Dunedin and to the best of my knowledge originally there was no drainage at all on any of them. Field 1 is used mostly by high schoolers and younger teams and it drains well. Our main field for the Blue Jays, #2, had poor drainage, especially in the outfield; any rain at all and it would be so soaked we couldn’t mow it.

Fields 3 and 4 have some spots that stay wet for awhile but mostly have average drainage, depending on the weather. Field 5 remains a problem but I hope in the future we will get the same system for drainage on it as we now have on #2.

My boss, Pat Skunda, and I knew that we had to get drainage into Field 2. We tried aerifying and slicing more; we tried drilling holes into the outfield and putting pea stone at the bottom filled with sand to try and get water to percolate better. Nothing worked.

When we attended the STMA Conference in Orlando in January 2010 my goal was to first learn as much as I could and second, to find a good drainage system. I knew all about drainage tile and had heard that after a period of time those drains stop working. In Orlando I met Jim Surrell of Hydraway who said he would give me a lifetime guarantee on his product. I did my research and came to the conclusion that it was the best product for me to use.

Munie Greencare came to install half of the outfield and the day they finished that it rained pretty hard, a few inches. Normally, I wouldn’t be able to mow that part of the field for days. I mowed the next morning.

At the end of the season Munie came to finish the field. We had a little bit left over and we had Dave Laub from landscaping put

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the drainage into one of our infields and what a difference that made for us.

The price is a little bit more than the traditional drainage. However, I believe it is well worth it. Once they are done it does take some time for the grass to grow back over the lines. The problem that I am having right now is trying to get my overseed to pop. What we did was get some dormant 419 and put it into the lines so that the seed had a base to grow out of and the dormant sod allowed some water to stay for the seed. I would highly recommend it to any sports turf professional.

THOMAS MARKS, HEAD GROUNDSKEEPER, New Orleans Zephyrs

Zephyr Field was built in 1997 by a general contractor who installed round, perforated pipe with 4-inch collector lines and 6 and 8-inch mains to carry the water off as the main drainage collection system. Our staff had to physically move water around in the grass areas to try and play games after our traditional afternoon thunderstorms.

When a total field renovation was necessary 10 seasons later, sections of that pipe were found to have been absolutely crushed. The manufacturer's specs had not been followed and not enough fill had been put on top of the pipe; you tell what kind of vehicles had been over it because the tire tracks were on the old pipe!

I researched drainage products and called my fellow groundskeepers for advice, and eventually decided on flat pipe. Rich Moffitt from St. Louis rebuilt the field and he also recommended the flat pipe system.

To me the biggest key to this choice was the infiltration rate since it rains somewhere in New Orleans nearly every day. I often get 3-4 inches of rain in an hour on the field. For example, one August day at 3:00 pm an afternoon thunderstorm moved over the ballpark. By 3:30 pm the only things visible on the field were the infield and bullpen tarp. By 3:45 pm the stadium had received 3.17 inches of rain. With help of our front office staff to dump the tarp, we were playing by 7:30 pm.

The 12-inch lines on 15-foot centers are able to dewater the surface fast enough for our team to play. They removed 17,000 feet of 4-inch drain and installed 12-inch flat pipe due to the liner that was 12 inches below the playing surface.

The field began being ripped up in January, new sod was laid the first week of March, and after fertilizing and aerifying, the turf was ready for play by March 30.