

Venerable Beaver Stadium improves **irrigation** system



Photo by Steve Manuel

There are always good reasons why customers upgrade their irrigation systems. In the case of The Pennsylvania State University's football stadium, the reasons cover a lot of unique circumstances.

The Penn State Nittany Lions have a long, impressive history in college football, with a proud reputation and a huge fan base. PSU's

home games are played in front of 100,000+ people at Beaver Stadium – the fourth-largest stadium in America – and the games are televised for millions of other viewers. Given that high-profile level of exposure, you might assume that the school's turf-maintenance decisions are motivated by the field's appearance.

"The aesthetic value is important, but to us, that's only secondary," said Bob Hudzik, the sta-

dium and athletic field supervisor at Penn State. "The playability of the turf is far more important here. I always tell people that our top priority is for the field to play well. Sometimes when you make the turf greener and more lush, you can increase the potential for slippage."

That emphasis on performance doesn't mean appearance is sacrificed, because Beaver Stadium's field is beautiful. There's much more

to it than great looks, though. "Turf has to have a good root system for the rhizome system to withstand the punishment it gets from these big athletes," Hudzik said. "It has to have the sheer strength where a player with cleats on can push off without tearing it quite as easily."

Reasons to upgrade

Maintaining such a high-quality playing surface at Penn State often created additional challenges and demands, many of which directly influenced the staff's irrigation practices. Until the recent decision to install a new irrigation system, all the watering at Beaver Stadium was done by hand, using traveling hose wheels.

"They had to make three moves every time they used those traveling sprinklers," said Bob Capranica, Irrigation Sales Manager at E.H. Griffin, the company that installed Penn State's new Toro 640 system. "They had to wheel them out and then wind them back in, and somebody had to go out there and turn them on."

"That was a big headache," said Herb Combs, assistant groundskeeper at Penn



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State. "With the water wheel, you always had to have somebody out there just to make sure it's working."

In addition to the time-wasting inconvenience of all that manual watering, the process didn't allow for accurate distribution of irrigation.

"Our ability to syringe the turf is critical, but there was no such thing as a syringe cycle with those big traveling sprinklers," said Hudzik. "You ended up putting down too much water."

Another complicating factor for the irrigation was the shape of Beaver Stadium itself, because the structure would create long shadows across the field when the sun is lower.

"In the fall, in the shaded areas, you knew the turf wouldn't be drying out as much, so we wanted to be able to back the water off in those places," said Combs. "The shadowing also meant the frost stayed out longer in those areas."

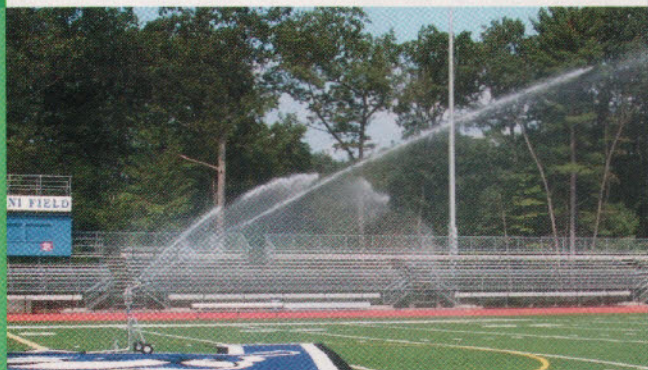
Preserving playability

Even though Hudzik and his team had a list of good reasons for needing more control and



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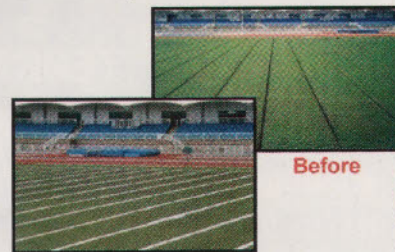
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flexibility with their watering, there was another issue to address. Since Penn State puts such high priority on the playability of its turf, there was some concern that in-ground sprinkler heads could be a problem for the athletes on the field.

However, it turns out that a Toro 640 system had actually been installed on one of Penn State's practice fields a few years earlier.

"They used that field all season and never even realized it had the irrigation system in it," said Hudzik. "And we never had any complaints."

Based on that success, the athletic department agreed to install in-ground irrigation at Beaver Stadium. After a careful bidding process, the Toro 640 was selected. The new system went into place last May with minimal disruption of the playing surface, using a narrow trenching tool and strips of replacement sod.

"You wouldn't even notice it had been installed," Hudzik said. "The heads are below grade, and you get grass blades growing over them. If you walk across the field, you'd have a tough time even seeing them."

In addition to the 32 heads placed in and around the playing field, Penn State's new system features an ET-based Sentinel central control system. By monitoring the site's ET (evapotranspiration) levels, the Sentinel controller automatically shuts itself off when enough moisture is present. Now the Beaver Stadium grounds crew has complete flexibility to fine-tune irrigation on an as-needed basis.

"The system works great," Combs said. "I mean it's phenomenal compared to the way things were done before. Now, if I just want to water across the south end of the field, or just water from 20 to 20 (yard lines), I can do it without watering the rest of the field."

"Overall, it's a tool that's going to help us perform a better job," said Hudzik. "We wanted the individual head control because we end up with a lot of hot spots from all the shade at different times of the year. With the 640 system, now we can just cool off those spots with a syringe cycle. I can go out Friday night before a game and put on like a tenth of an inch."

That ability to apply precise amounts of water also helps Hudzik promote the playability of the field. "The moisture level is really critical in a football game," he explained. "You can get very good footing with just the right amount of moisture."

"Now we can syringe it or water it deeply with just the touch of a button, even from a mile away," said Combs. "Then if we have rain, the rain sensor in the controller will shut the sprinkler off." ■

Canyon Communications in Mesa, AZ, supplied this article.



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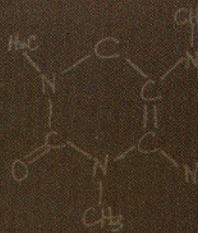
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