

TOOLS OF THE TRADE

Rink tests effluent waters at Hickory Stick Golf Club

By ANDREW OVERBECK

GREENWOOD, Ind. — While many courses across the country are using effluent water, superintendent Ben Rink is breaking new ground here at Hickory Stick Golf Club by using treated wastewater from the local water utility as an irrigation source.

When Rink arrived on site in April 2000, the Tim Liddy course was just being flagged for irrigation. The only problem was finding enough water to irrigate with. Groundwater, usually abundant in the Midwest, was scarce because the property sits on top of a rock formation that sucks all the water too deep. With well drilling out of the question financially, the developers and Rink turned to Bargsville Utilities to see if they could tap into its treatment plant.

This proved a chore since state officials had no regulations on the books regarding the use of effluent on golf courses. Connecting a pipe directly to the treatment plant was forbidden because state officials said the effluent would be considered sludge when it got to the course. Eventually, Rink and Bargsville officials worked out a compromise with the Department of Natural Resources that allowed the effluent

to run downstream into a lagoon and then be pumped to the golf course.

"Hickory Stick paid to have five miles of six-inch pipe put in, and the utility paid for the pump and the lagoon," said Rink of the compromise solution. "We pay \$.40 per 1,000 gallons, which covers the electrical and maintenance costs. While a well would be ideal, this is far cheaper than a well or being on city water."

As it stands, the current water delivery method is rather crude, said Rink.

"I have to call them and tell them to turn the pump on and they run it for eight hours to fill the lagoon backup," he said. "Eventually we'll put a switch in my pumphouse that will have floats to turn the pumps on and off automatically."

While Rink learned about effluent delivery methods on the fly, he also faced a steep learning curve when it came to using the wastewater for irrigation.

"I have not become an expert yet," he said. "I know the quality of the stuff in my ponds is not that great and the effluent is not a whole lot different. I have terrible soil here and that is compounded by high bicarbonate levels, pH and salts in the effluent. Agro-

nomic, there is salt buildup. The greens get flushed in the summer, but when you have tight clay fairways and tees it is tough to flush those."

Rink's biggest challenge has been delivering nutrients to the turfgrass.

"Disease is not such a big deal, nutrient availability is the problem," Rink said. "Fertilizer is not lasting as long as it should."

Budget problems have further compounded the agronomic issues.

"We started out bad and we are making it worse," said Rink. "Because of money issues, we were not able to fertilize like we should, which started everything in a downward cycle last year."

However, with new owners coming in this season, Rink is optimistic that things will turn around and the agronomic problems will be solved.

"We were using this water for a couple of years and getting away with it, and then all of a sudden we were using twice the fertilizer and we were in trouble," he said. "With the new owners in place, I hope we can get an acid injection system so we can lower the pH and get rid of the bicarbonates."

Rink would also like to work with the state in standardizing regulations for the use of effluent water on golf courses.

"We use effluent because it is

GREENS MOWERS:

5 Toro Greensmaster 1000

TEE MOWERS:

2 Toro 3100 3WD

FAIRWAY MOWERS:

2 Toro 5200 D

ROUGH MOWERS:

1 Progressive Pro-Flex 120

RIDING BUNKER RAKE:

1 Toro Sand Pro 3020

FLAGSTICKS:

Par Aide

COMPUTER & ACCESSORIES:

1 Toro CPU

PRIMARY HERBICIDE:

Millennium

PRIMARY INSECTICIDE:

Dursban

PRIMARY FUNGICIDE:

Daconil



Effluent is pumped into a lagoon before being piped to the course.

TURF UTILITY VEHICLES:

5 Yamaha's, 2 Toro Workman

TOPDRESSERS:

1 Toro pull-behind

IRRIGATION PUMP STATION:

Flowtronex, 1,200 gpm

IRRIGATION SYSTEM:

Toro 750 heads, LTL Plus controllers, Site Pro software

GOLF CAR FLEET:

65 Yamaha gas

PRIMARY SLOW-RELEASE FERTILIZER:

Nutralene

OLDEST PIECE OF EQUIPMENT:

1981 Jacobsen Greensking

TOTAL SQUARE FOOTAGE OF MAINTENANCE BUILDING:

5,000 sq. ft.

ANNUAL ROUNDS OF GOLF:

18,000

NORMAL GREEN SPEED:

10.5'

convenient, but it is better for the environment," he said. "There are plenty of courses that have had quality wells so it is an option to

consider. I also think it is a matter of time before courses are required to use alternate water sources and treatment plants seem to be a good fit."

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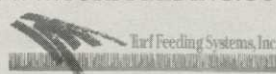
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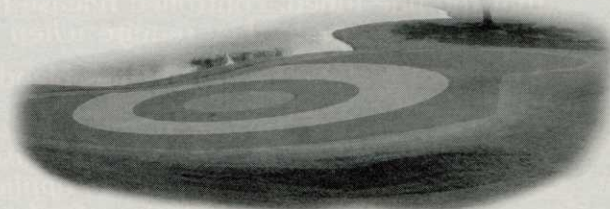
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