

Water, Water Everywhere

By Chuck Molinari

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1993 has already brought a few surprises our way. This summer many of the Midwestern states have seen an excessive amount of rain. Many areas have been devastated with the resulting flooding. Most would agree, situations could always be worse than the present circumstances we may encounter. For instance, the flooding and heavy rains have severely affected some of our golf courses, but most have not experienced the tremendous burden of losing homes and property. As turfgrass managers, flooding of any magnitude is going to present frustrations and challenges while we try to restore the damaged areas as soon as possible.

Fox Hollow has experienced minor flooding in the past, but nothing can be compared to the summer of 1993. Fox Hollow is located along the Crow River, which borders seven of the courses 18 holes. The river, which originates in western Minnesota, passes by Hutchinson, Delano and Rockford before emptying into the Mississippi at Dayton. High waters are usually expected in the spring from snow melt and run-off. However, heavy rainfall on top of saturated soils can lead to rising water levels throughout the golfing season.

The Crow River has already crested well above flood stage on three separate occasions in 1993. The annual spring rise in March/April was followed by extremely high water beginning May 15. The course was flooded a third time June 15 following the heavy rains in the southwestern corner of the state. As of this date (July 18) five holes are still 75% submerged (approx. 8 to 10 acres). Receding has begun and we anticipate flood free turf in 7 to 10 days.

Every golf course has its own plan of action according to its location. Any noticeable rise in water levels initially threatens access to #16 green. To help keep all 18 holes playable for as long as possible, we have purchased an 80 foot portable dock bridge. The structure is stationed over the land bridge

that leads to the right of #16 green. It is tightly tied to nearby supports for stability, as the conditions worsen. Eighteen-foot planks are placed together which are wide enough to allow safe access for golfers and a walking greensmower.

The par three third hole has an island green that is only reachable by a permanent bridge. Once the water starts flowing over the low end of the bridge, the water level has reached holes #5, #7, #11 and #17, making them unplayable.

One solution to keeping the water off the lowest portion of the course, thus saving as much turf as possible, was to install a temporary pump with the capacity to discharge up to 5,000 gal. of water per minute (approx. 7,200,000 gal. per 24-hour period). At that rate, we are able to shut off the pump after several hours and restart it when necessary. We've been very fortunate to have access to this pump on short notice. Without it, flooding would linger on much longer in low lying areas.

The layout of the course has allowed us to keep nine holes open through the highest water conditions. Mapping out a playable nine holes, with minimum walking distance between each was important to keep golfers interested and challenged. Through one stretch of time, we went to the extreme of closing the driving range and cutting a fairway down the left side that leads to #17 green. A short, but very playable, par four.

All the greens have been built above the 100-year flood plain. They are dry with the exception of a small portion of #5 green. With high water lasting for an extended period of time, there was a need to get to greens #3, #5 and #16, which had become accessible only by boat. With mowing and other programs hindered for nearly three weeks, it was necessary to reach these greens. The one-half inch plus turf needed to be cut to a manageable height. It was also a good time for a fungicide application. Being in need of

a boat, we sought out the fishermen and hunters of the crew. A ten-foot duck boat was quickly provided. The boat adequately carried a walking greensmower, a hand sprayer and two staff members.

In past high water periods we were fortunate enough to see the water recede anywhere from five to 14 days after the turf had been covered. Within this time frame, both the bentgrass fairway landing areas and existing bluegrass held up remarkably well. But the restoration and clean up of the fairways was still of great concern.

As soon as possible, we connected hoses to nearby sprinkler heads and power washed the silt layer that had accumulated on the surface. The excess water was then squeegeed off and hand-raked to stand turf up and improve the drying out process. When conditions dried out enough, a two-directional aerifying took place to improve air circulation. The biggest concern with this type of clean-up is the time-consuming task of washing the turf. It was slow going but very effective.

The current flooding has lingered into its fourth week, and, as stated earlier, seven to 10 more days are expected before all water has completely receded. This time reseeding is a certain, with turf being submerged for at least five weeks. Our current plan of action is to slit seed wherever possible. If that is not effective, a seedbed will be prepared by verticutting heavily and broadcasting the seed which will then be dragged in. For safe measure, an application to prevent pythium from developing will be done due to the heat and humidity expected in late July and August. Lower humidity would be welcomed.

It is our hope the unusual flooding of '93 will not be a regular occurrence. At times, the condition of the course can be overwhelming. But it is good to know that this will soon pass and the flooding of 1993 will only be a memory of new experiences and challenges.