

Moorhead Country Club Cuts A 'Sweet Deal' With Crystal Sugar For Irrigation Water



Moorhead Country Club, in the foreground, is receiving irrigation water from the holding lagoons at the neighboring American Crystal Sugar factory.

Irrigation at Moorhead Country Club had a sour future until the club found a way to use recycled water from the nearby American Crystal Sugar Company factory.

Now environmentalists, the club, the sugar company and city officials in Moorhead and neighboring Fargo, N.D., agree the arrangement is a sweet deal for all concerned.

Moorhead Country Club had recently installed a Toro Network 8000 irrigation system, and the system's efficiency already has created dramatic changes for the club and golf course. But no matter how efficient the new system is, its value would be far less without a reliable long-term source of water.

Low river levels, due to a three-year drought, were reducing the club's ability to draw water from the Red River of the North, which borders the club. To make matters more ominous, both Moorhead and Fargo are planning to build new water treatment plants upstream of the club, which will further reduce river levels.

At the same time, American Crystal faced the opposite problem. Because sugarbeets are more than 70 percent water, sugar processing results in a huge surplus of water in need of treatment. The company has installed a water treatment facility and holding ponds to store

the water, but the treated water can only be discharged to the river during periods of relatively high flow.

In a casual conversation between Larry Murphy, golf director at MCC, and Ron Hayes, then president of American Crystal, the contrasting problems came up. "Why," the two men asked, "couldn't the club use some of the surplus water from the factory?"

After extensive water testing it became apparent that the recycled water from the factory would cause no significant problems for irrigation. According to Mike Kasprowicz, turf grass manager at MCC, only minor fertility and maintenance adjustments were needed for the club to use the water as its primary irrigation supply.

Two years were required to gather all the necessary permits and approvals to make the plan a reality. And currently, the Minnesota Pollution Control Agency club limits the amount of water the club can draw from American Crystal. With accurate testing and record-keeping, plus the Toro system to deliver precise amounts of water, Kasprowicz is hopeful the MCPA will allow increased use of the recycled water.

Moorhead Country Club installed a 6-inch line from its irrigation holding pond to the edge of the American Crystal property. American Crystal ran a

matching pipe from its lagoon to the MCC line. Electric valves, float sensors and a manual back-up system regulate the water level in the MCC pond.

Before this system was complete, the club filled its pond with a 4-inch line, so fluctuations in the pond's level were quite obvious. With the new system, fluctuations are limited to about four or five inches; it's a big aesthetic improvement to see the pond nearly full at all times.

With this system, everybody wins! The club has a reliable supply of water without worrying about river levels. American Crystal Sugar Company has a very low-cost alternative to storing water until it can be discharged to the river. The Fargo-Moorhead community and downstream cities will see less impact on the Red River.

These days, it's rare when a major industry (or golf course, for that matter) is recognized for its positive impact on the environment. For this new use of discharge water for irrigation, however, American Crystal recently received an environmental project award from the International Coalition for Land and Water Stewardship in the Red River Basin. Members of Moorhead Country Club are receiving their reward in the form of a healthier, more beautiful golf course.