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WATER-STARVED COURSE

There are many predictions about the look of future courses when increased water rationing kicks in. Many remind me of the nightly news, which often presumes we have memories shorter than a fruit fly's lifespan. Despite the recent and recurring gnashing of teeth and wringing of hands, we don't have to look past the droughts in California or recently in Georgia to see the future of golf courses, but more importantly, to know most of them will survive in some form we'll recognize.

The reality since the start of course building in America 120 years ago is that most would have never been built had they waited for adequate water resources to irrigate to "full ET loss" that many courses view as necessary today. The baby boomers can recall the variations of turf quality from greens to fairways to rough that occurred every summer, although it seems a distant memory for most. But again, even in today's modern irrigation climate, the "nightly news" (golf division) still seems to focus on those top-level courses. Across America, the vast majority of courses have never had enough irrigation.

Even as irrigation systems got better, most courses still experience times when water is short, and superintendents must accept some tinges of brown, sometimes far more than they would like. Those who have irrigations systems everywhere but now have reduced water availability can learn from those who never did.

An example I'm familiar with is one of my designs – Colbert Hills in Manhattan, Kan. Built at the height of the building boom, it has the length of a college championship course and the environmental sensitivity to be Audubon Certified. But, according to ET charts, those 150 acres of turf require about 72-million gallons an average year, and more in recent droughts.

Manhattan, Kan., has no ground water and insufficient rain harvesting capability to sustain a golf course, so Colbert Hills relies on city water for most of its irrigation. Favorable rates in its early years changed with the city's water rate policy, increasing its irrigation water costs to about $3,000 per million gallons. In 2010, they used only 27-million gallons, equating to about 25 percent ET replacement of the dry year demand, which textbooks tell us is the critical minimum water amount for most turf before dormancy or death. Their plan was actually to irrigate at 25 percent, and when that critical level resulted due to lack of rain, then water a few minutes a night to keep moisture in plant tissues. It helped reduce irrigation (and disease) that the course had never irrigated greens more than once every four days since opening a dozen years ago.

The self-imposed water restrictions showed on many days, with zoyzia fairways going dormant last year on three occasions. They lost some play to better-irrigated courses. Ironically, many players, including the Web.com mini tour players, preferred the greater challenge of their fast fairways.

After having gone to the precipice last year, they have doubled their water budget, but it is still far less than full ET, with much better results. They are still extremely water conscious. Superintendent Matt Gourlay tweets his followers about every rain event.

They have also implemented other common sense, necessity-is-the-mother-of-invention type water-reduction techniques. They use a moisture sensor to supplement Matt's "old school" gut feel. They maxed out water reduction through their sophisticated irrigation system, which features a weather station, smaller sprinklers and tight spacing, and part to part circles between greens to surrounds, and fairways to rough. They turned off 500 sprinklers to reduce irrigated turf by about 40 acres. They converted to drought tolerant rough varieties. Fortunately, in a prairie setting, the browning and natives look right at home, which might not be the case at all courses.

I am not under the impression that water reduction will be easy, and without consequences to golf's business model. But, I am under the impression that golf will find a way to adapt, much as it has adapted from the original Scottish game to locales all over the world. Water reduction is hard work, and perhaps the hardest part is mentally adjusting to the conditions before realistically attacking the problem. We may be short of water in many places at some point in the future, but my guess is superintendents will have no shortage of good, old-fashioned "Yankee ingenuity" which will go a long way to mitigating any problems they face. **GCI**

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