



# Water: A Threat and an Opportunity

*This is the first in a two-part series that will examine the issue of water use in the golf course management industry and the threats and opportunities that exist for superintendents.*

## Introduction

Water is a top-of-mind issue in every part of the world. Some challenges are small, such as various municipal water restrictions that limit how much water can be used to irrigate home lawns or wash a car. Some issues are much more critical, such as widespread drought leading to food scarcity, poverty among small-farm holders and rising global food prices.

The notion that the golf industry is an irresponsible user of water creates a negative image impacting the entire industry and all those associated with it, including its customers. This perception leads to a lack of trust in golf courses which could limit the freedom to operate. Communities can restrict the amount of water that a golf course is permitted to use. Communities can put substantial water surcharges in place. Both responses can dramatically impact playing conditions or the economic viability of an operation, both of which are substantial threats to the golf industry.

On the other hand, opportunities exist to demonstrate the reality of the situation and to gain trust and credibility within a community, which is at the heart of a "social license" to operate.

Is water a threat to the golf course industry or an opportunity to illustrate the role of golf from environmental, economic, stewardship and other perspectives? It is a challenge for golf course superintendents to answer this question, but they must have answers at the ready, since the question is already presently being asked in local communities and beyond.

This two-part series examines both sides of the coin: the threat and opportunities for golf courses prompted by changing water availability around the world. These articles do not tackle all issues, but hopefully enough to provoke reactions, thoughts and new perspectives.

## The Facts: Water

Turf requires water as part of the physiological process by which it produces food for growth. Water requirements for turf vary significantly depending on the local climate, but a certain amount of water is necessary to maintain a healthy stand of turf. Most of this water is required during periods when rainfall is lowest and the need for water in the overall community is at its highest.

Unlike trees and shrubs, turf grasses have very little capacity to store water and withstand periods of drought. This requires a more constant application of water in order for turf to be healthy. Even more water is required if the intention is to keep the turf in a lush, green, 'spring-like' state throughout periods of drought. While required volume and management practices vary among regions and across facilities, the bottom line is that consumption of water is necessary to produce a healthy and reliable playing surface. Turf is at the core of a golf course's offering.

## The Threat

The case against golf courses focuses on what might appear to be the inordinate use of a scarce resource -- water. Some perspectives on this issue, both globally and locally, can be summed up in these headlines and reports:

*"Are 1.5 billion jobs at risk of drying up?" - World Economic Forum website*

*"Almost half of the world's workforce, 1.5 billion people, are in water-related sectors in today's economy. With water ranked as the number one global risk of highest concern in the next ten years, perhaps the most*

*pressing question to explore is this – is the world at risk of losing those 1.5 billion jobs?"*

*"Baseflows in streams are either predicted to decline or already showing declines in some Ontario subwatersheds due to a combination of pressures, including the paving over of natural landscapes and the increasing water demands of a growing population. Climate change will add further uncertainty. For example, the Credit Valley Conservation Authority forecasts that baseflows for certain cold-water streams within its watershed may be reduced by 15 to 50 per cent by 2031, when planned population growth is factored in." - Environmental Commissioner of Ontario 2015 Report, p.88*

*"Water and its allocation become a question of the political choices and trade-offs that a society and economy must make. With impacts of climate change already making the availability of water more unpredictable, these decisions are even more critical." - World Economic Forum, Global Water Initiative website*

*"For many water utilities, golf courses are their biggest customers with the highest water usage, especially during the peak season when utilities are struggling to meet water demands." - Alliance for Water Efficiency, May 28, 2016*

Golf courses are routinely made out to be a part of the problem as opposed to a piece of the solution. Golf can be portrayed by its opponents and the uninformed as an irresponsible user of water in the face of global shortages and crises, and local concerns over the quantity of water available and its quality.

### The Arguments Against

Typical arguments leveled at golf courses involve a combination of poor stewardship and class division. This isolates golf from the overall community and makes it a challenge for a golf course to establish itself as a responsible steward and valuable piece of the natural environment of a community, which is the essence of social license. The arguments are as follows.

#### • Golf is an Elitist Sport

The "1% phenomenon" has been a widely-held image applied to golf. Golf is used as an example of the rich 1 per cent being over-paid and using an inordinate amount of the world's resources for their own benefit while resources are depleted for the rest.

Participation rates could be viewed as substantiating this claim. In Canada, the majority of rounds played are being played by less than 26 per cent of golfers (equating

to 1.5 million people) which is just 4 per cent of the population (Canadian Golf Consumer Behaviour Study, NAGA, September 12, 2012). In this same report, the findings indicate that the characteristics most likely associated with golfers are as follows, "well educated/higher income/male dominated/attracts executives, professionals, sales & service, trades and those retired/little ethnic diversity."

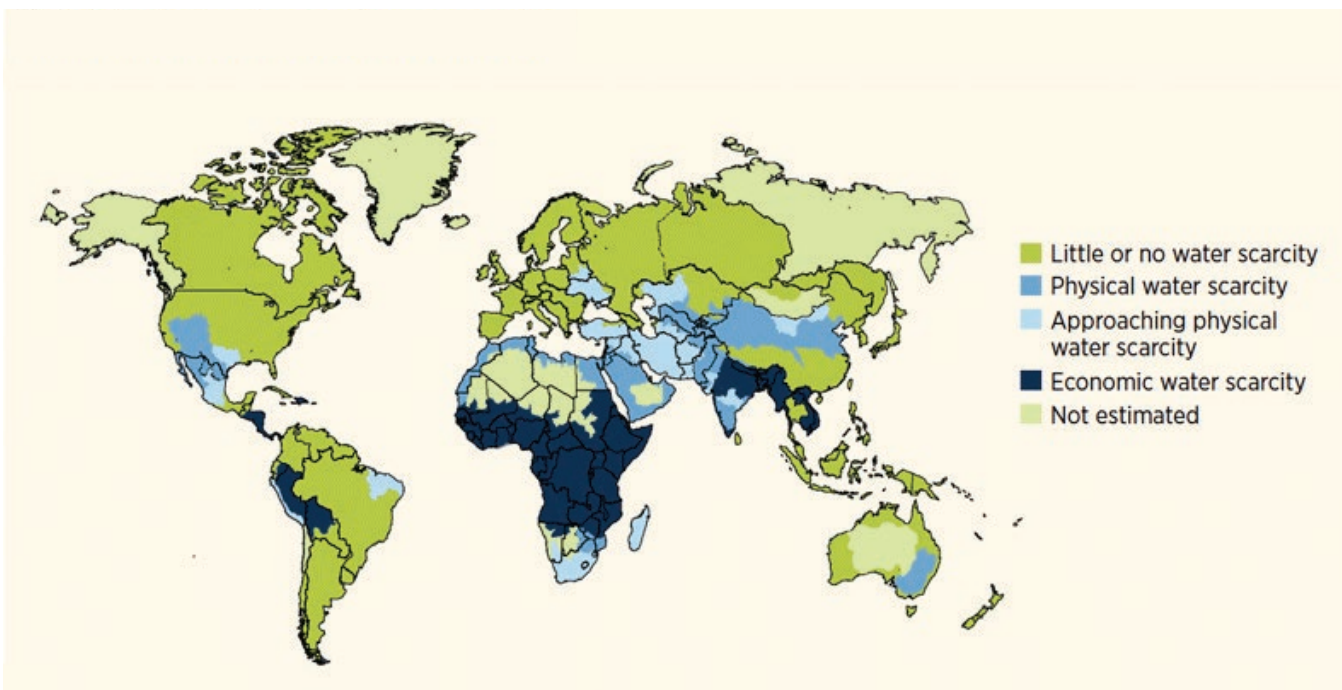
Golf can be portrayed as using a great deal of land for a small percentage of the population and consuming a large portion of a valuable resource, such as water, for an "unnecessary" recreational activity.

#### • Golf Courses do not Pull Their Weight When it comes to Paying for Water

Currently, the government estimates that it recovers only 1.2 per cent of the \$16.2 million it spends on water quantity management programs.

"Not only do most industries get a total free ride," said Ontario's acting Environmental Commissioner, Ellen Schwartzel in a press release by the environmental Commissioner of Ontario in November of 2015, "but the few industries that do pay are charged only \$3.71 for every million litres of water they take. This small charge works out

**A chart from the World Economic Forum shows the growing problem of water scarcity across the globe**



to less than \$10 for enough water to fill an Olympic-size swimming pool."

During news conferences, golf courses have been profiled as falling into this camp. If regulatory agencies project that they can reduce water consumption and create a new source of revenue through water levies, the economic landscape that golf courses operate in could dramatically change. In jurisdictions that charge for water, golf courses can routinely pay \$100,000 or more annually. A significant increase in this expense will impact how much water a course can afford and eventually the viability of the operation.

### • Golf is a Small Industry with no Great Economic Impact

This perspective often comes from uninformed people who see a few people walking around great land areas. They have not been shown the economic impact of a golf club on local full-time employment, the hiring of summer students, the provision of dining and banquet facilities in a community, support of charities through hosting tournaments, equipment and turf input purchases through locally-owned retailers, etc. Again, why allocate water to an industry with little impact?

The economic impact and overall benefits of a healthy and prosperous golf course in the community is often under-appreciated. A vibrant small business in the community is typically a "good news" story. However, golf is rarely regarded as a "small business," partly due to its image and its stereotypical clientele. Courses could have access to water curtailed in favour of other businesses that are presumed to provide greater returns and benefits to the community.

### • Golfers Should Change their Expectations

Why should golfers in North America expect lush green fairways during the entire season when this is not the case in other parts of the golfing world? These expectations come from the TV experience showing superb conditioning week-in and week-out and from that to which they have become accustomed.

It could be argued that the industry should put forth a different model where fairways are more like those found in the UK and Ireland. Brown is fine, weeds are

tolerated, and skills must be developed to deal with these different conditions. Bad bounces are the "rub of the green." This approach results in a reduction in water consumption.

The challenge to the North American industry is to decide whether to invest in moving expectations in a different direction versus trying as best as the industry can to deliver against members' current expectations. Business-minded people would argue that meeting or exceeding expectations is hard and expensive enough, never mind changing expectations and behaviours.

### • Golf Courses Impact Food Security

*"As a result of the drought in California, it was estimated to cost the state – the world's fifth largest supplier of food – an estimated \$2.2 billion in 2014, and the loss of 17,100, or 3.8%, of the state's farm jobs." From 'Are 1.5 Billion Jobs at Risk of Drying Up?', World Economic Forum website.*

Contrast this lack of water with the fact that there are 1,151 golf courses in California with all of them probably using water for irrigation. Although it is more difficult to track parallel examples in Canada, those who question water usage on golf courses will be sure to use examples such as California to bolster their argument that golf courses are taking food out of people's

mouths. If golf is portrayed as a potential barrier to a healthy and plentiful supply of food for the world, then golf will struggle to gain a social license to continue.

There are probably several other arguments that can be developed around golf and inordinate water usage, but the intent here is simply to have superintendents think about the perceptions related to this issue. Some hold more merit than others.

### What Next?

The discussion of the threat to the golf industry posed by global and local water shortages has hopefully created a sense of urgency in superintendents to develop a set of responses to these arguments and perceptions. The companion piece in the next edition of GreenMaster will look at the opportunity that exists for superintendents to tell their story about efficient water usage trends, what some course are doing to better use water, and how golf courses fit into the bigger environmental, social and economic picture. **GM**

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