

FUNDAMENTAL IRRIGATION STEWARDSHIP

# Managing Golfer Expectations To Help Conserve Water



Raising awareness and building support among golfers is a critical part of any successful water conservation strategy.

## SNAPSHOT

*This strategy deals with the general relationship between golfer expectations and water use, with emphasis on building understanding and acceptance of the strategies needed to save water. It is a low-cost, potentially high-impact strategy that can be employed at any golf course.*

Expected cost	< \$25K per acre
Ease of implementation	Additional resources needed
Highest potential impact areas	Nationwide

## OVERVIEW

Golfer expectations often dictate how turfgrass is irrigated or otherwise managed. Many golf courses irrigate more than agronomically necessary to meet golfer expectations for aesthetics and presentation. Simply put, the approach to irrigation at many golf courses errs on the side of caution to minimize turf stress and keep playing surfaces dense and green – especially during warm or dry weather. This approach helps ensure aesthetics that engender high levels of golfer satisfaction at the expense of efficient water use. Conversely, deficit irrigation can deliver healthy turf and an enjoyable golf experience at the expense of certain aesthetics.

Golfer expectations also come into play as courses try to manage drought or water restrictions, or implement water conservation strategies like the ones detailed in this playbook. Acute issues like drought can significantly impair aesthetics, and strategies for managing water shortages need to account for golfer expectations and preferences to be successful. Implementing water saving measures like turf reduction or turf conversion can also affect how a course looks and plays. Accounting for expectations and taking steps to encourage “buy-in” from golfers is critical to successfully conserve water.

***Golfer expectations are built around established norms, but expectations can be changed.***

The USGA has invested considerable time and resources into learning more about what drives golfer satisfaction and has developed a set of metrics to measure it. Through this research, we have unsurprisingly concluded that turfgrass visual quality plays a fundamental role in golfers’ experiences. The relationship between turfgrass aesthetics and golfer satisfaction makes periods of drought and significant changes in course maintenance and presentation to conserve water particularly challenging. Yet, there are ways to mitigate these challenges. Understanding what really matters to golfers and what the acceptable thresholds are for playing conditions and aesthetics is an important place to start. Communication is essential. Golfer expectations are built around established norms, but expectations can be changed. There are many examples of golf courses that have dramatically changed water use and course presentation in ways that established a new set of expectations among their customers. This chapter will detail the key drivers of golfer satisfaction, along with strategies for successfully managing expectations to build support for reduced water use.

## SCENARIOS FOR USE

### Managing Drought and Water Restrictions

Managing golfer expectations is part of any successful effort to conserve water. In cases of drought or short-term water restrictions, a simple and important message might be that changes are necessary temporarily. Golfer experience may not even be affected in the early stages, but proactive communication will be imperative if drought or restrictions endure, and choices need to be made about where limited water resources should be applied. Often, the need for water conservation is not debatable in these situations and the discussion will have to focus on how to achieve goals or mandates. There usually will be a light at the end of the tunnel, regardless of the severity of the short-term disruption, so it can be easier for golfers to adjust their expectations temporarily.

Longer-lasting periods of water shortage will force courses to make increasingly difficult choices. This is where a good understanding of expectations and how golfers view various tradeoffs is critical. For example, most golfers would agree that putting greens should be the top priority for irrigation, with tees and fairways next on the list. Conversely, there's likely not a consensus among golfers about where irrigation should first be reduced. Do you start with clubhouse grounds, the practice range or areas of rough that are out of play? What happens once the "low-hanging fruit" doesn't yield the needed savings?

Along with making choices in where to reduce irrigation, it is also important to explain the overall water conservation plan and its short- and long-term implications. Golfers will want to know how playability and aesthetics will change at various stages in the process. They will want to know how long the changes will last, as well as the plan for recovery after drought or restrictions pass. Depending on the severity of the impact to course conditions, it may be important to emphasize the need for patience in recovery. The course will not return to normal immediately after normal irrigation or rainfall resumes, and it may take months if large areas need to be repaired or reestablished.

Sometimes, the impact of drought or water restrictions varies widely among golf courses in a relatively small area depending on unique site conditions and different local regulations. These differences should be clearly explained.



Mandated water restrictions can have a profound effect on course presentation and playability. It's important to explain to golfers the likely impacts, how long they will last and what will be required for recovery.

## Making Fundamental Changes To Reduce Water Use

A separate issue from dealing with transient water scarcity is making fundamental changes to use less irrigation water. These long-term changes will also affect playing conditions and course presentation and golfers may need to be convinced that the changes are necessary. It will be helpful to explain costs and benefits, including with objective demonstrations. Sometimes, these changes involve what golfers would view as a decline in quality. In other cases, there are improvements. However, a golf course may simply be “different” than it was before, without clear positive or negative effects from changes to conserve water.

Regardless of where that balance falls, an effective program of communication to understand and manage expectations is critical to successful water conservation. For example, moving away from a lush, green aesthetic to firmer and drier conditions can save a significant amount of water, and may actually improve playing conditions, but will likely alter aesthetics. Golfers need to understand what to expect to support proposed changes. Many courses have tried maintaining firmer and drier conditions only to have their efforts fail in the face of golfer complaints that could have potentially been reduced with more effective communication. The same applies to bigger changes like large-scale turf reduction or converting playing surfaces to grasses that use less water. These changes can lead to many improvements in the golfer experience, but they can also struggle or fail if golfers are not supportive. In many cases, golfers must approve the spending for something like a new irrigation system or a turf conversion project, so without their support water conservation simply cannot happen.



Converting to drought-tolerant grasses can help courses improve playing conditions and save water, but making fundamental changes to water use can only be successful with golfer support.

## CONSIDERATIONS

### Understanding What Golfers Want

Through survey research, the USGA has identified five stages of a round of golf that affect golfers' experiences at any facility (Brey & Schoonover, 2020). These stages extend from engagement before golfers arrive, through arrival, during their round specifically, as they prepare to leave and after leaving the facility. Engaging and communicating with golfers before they arrive affords the opportunity to set expectations – especially if drought, recently implemented water conservation strategies or capital improvement projects designed to conserve water may affect their experience. The two stages after the round can be used to further explain important issues that may have affected their round.

Across the five stages, there are over 1,000 touch points that represent a category of golfer experience, including everything from the friendliness of the ranger to the condition of the putting greens. When limiting the focus to the golf stage, the number of touch points is reduced significantly. Turfgrass quality, both aesthetically and functionally, is important to the golfer experience and may be impaired during drought or during construction projects to implement water conservation measures. Water conservation measures may also change what golfers have come to expect from turf conditions, even if the adjustment is not necessarily negative.

The presentation of the golf course is one of the biggest differentiators of golfer satisfaction, exceeded only by pace of play and ranger behavior. Given this, facilities should work to understand how their course conditioning is perceived by golfers, establish a detailed plan to synchronize desired course conditions with water resources and look for opportunities to offset any potential reductions in golfer satisfaction that may come with changes in water use (Pierce 2021, 2022).

### Expected Changes In Playing Conditions

The target reduction and duration of a water conservation effort can affect a golf course and the associated golfer experience in myriad ways. Sudden mandates for significant reductions are very likely to impair playing conditions, turf health and course aesthetics. However, even a seemingly small mandated reduction can have the same effects when protracted over a long period of time. It may be more difficult for golfers to conceptualize the slower, but equally detrimental decline in playing conditions and aesthetics that can come from a small but extended water deficit. Well-planned conversions to drought-tolerant grasses can lead to better playing conditions in the long term when courses are faced with extended water shortages, but the new conditions might be quite different than what players have been accustomed to. Reducing the acreage of irrigated turf to make more water available might not change course conditions in the primary playing areas, but it will change how the course looks and plays along the margins of the golf holes.

Because turf conditions and aesthetics are such an important part of golfer satisfaction, it's important to honestly evaluate the expected impact of any water saving program and effectively explain the tradeoffs to the golfers who play the course. Even if improvements in playability are expected eventually, it may take time for changes to mature

or for golfers to grow accustomed to the change. This is a common challenge when replacing turf with slow-growing native plants. Some courses may have to reduce water in ways that will unavoidably change or even impair playing conditions and presentation, but there are likely good reasons why that is happening and it is important to tell that story and explain how the facility is working to achieve the best experience possible under the new reality.



It's important for golfers to understand the tradeoffs and potential impacts of various water conservation strategies. (USGA/Logan Smith)

## IMPLEMENTATION

### Create and Share a Water Use Master Plan

Maintain accurate maps of the golf course and irrigation system that detail your irrigated footprint and expected water use. Confirm expected water use regularly and compare actual use to benchmarks such as the annual evapotranspirative demand and effective precipitation for the property. Don't be afraid to identify areas of the golf course where expected water use could be less, and what would be required to make this a reality. For example, if full-circle irrigation heads or irrigation blocks span areas with disparate water requirements, estimate how much less water could be used with more control over the irrigation system.

Document your water source(s) and any established or expected drought provisions and detail the times of year when playing conditions or aesthetics are likely to be affected by water supply challenges. If you find yourself in a situation of recurring droughts and associated irrigation restrictions, consider implementing permanent water conservation strategies. Make this information available to decision-makers and interested golfers. Whether responding to a mandated reduction or initiating a planning process to fundamentally change irrigation requirements, communicating with key stakeholders is more effective when you are not starting from scratch.

## Create and Share a Drought-Emergency Plan

Responding to mandated water conservation is much different than planning to use less water over the long term. A detailed [drought-emergency plan](#) for a phased and clear approach to meeting different restrictions – e.g., 10%, 20% or 40% reductions – will ensure that golfers aren't surprised by the impacts. The plan should be flexible and easy to quickly execute when restrictions are imposed to ensure that the course can continue to operate efficiently without compromising critical areas. There are many tradeoffs and choices to be made when it comes to meeting set targets for water reduction. Giving golfers and facility leadership an opportunity to weigh-in on those choices before a drought emergency hits can help to build support for the drought-emergency plan if it ever needs to be implemented.



A drought-emergency plan helps golfers understand which areas of the course will be targeted for water conservation in the event of a drought or varying levels of water restrictions.

## Identify and Explain Target Water Savings

Notify golfers of water conservation goals. Define clear, achievable targets and distinguish between short- and long-term needs. Be specific about how much water the course intends to save and why reducing water consumption is important. For some courses it is a matter of cost savings. For others, changes are designed to prepare for future droughts and restrictions. Some courses want to reduce water use purely for playability reasons and not because of any particular shortage. Explaining the rationale for water reduction will help guide decisions on how to achieve it and will build support for the steps taken. Clearly explain the options available for achieving the reductions, as well as how potential strategies will affect aesthetics and playing conditions. For long-term changes, outline how programs like turf reduction or turf conversion will contribute to savings over time.

## Take Steps to Minimize Effects on Golfer Experience

Similar to a drought-emergency plan, categorize opportunities to save water and prioritize the strategies and areas that will least affect golfer experience. Initially, the best opportunities will be away from primary playing surfaces and corridors. When identifying “out-of-play” areas for reducing irrigation, use objective tools like the USGA GPS service to map golfer utilization of the course. When water conservation goals dictate that irrigation must be reduced in areas like fairways, using turf colorants can be a good strategy to temporarily maintain the expected aesthetic. When considering permanent changes like turf reduction or conversion, ensure that changes are viewed from a playing experience standpoint and look for opportunities to simultaneously save water and enhance playing conditions.

## Demonstrate Water Saving Strategies

Select some test areas to demonstrate potential water conservation strategies and allow golfers to evaluate their performance. This can help adjust expectations and engage people in the process before large-scale changes are made. These demonstrations will also help the superintendent learn about the best way to approach different strategies to ensure a smooth process if it is applied to larger areas. Host workshops or informational sessions to discuss the strategies or technologies being tested and explain what worked and what did not. Provide ongoing updates to ensure that stakeholders feel informed. You can also visit nearby courses that have implemented similar changes to see how they perform on a larger scale and learn from their experience.



This course set up a test area to show how warm-season and cool-season grasses performed under reduced irrigation. Demonstration projects like this one can be a compelling education tool for golfers.



## TIPS FOR SUCCESS

### Communicate early, often and in different ways.

Keep golfers informed about water use, water conservation efforts, water restrictions and any related changes in course conditions and presentation. Proactively setting expectations and minimizing surprises is essential. Strategically place signs that can educate golfers on measures being implemented and why certain areas of the course may look different. Regular emails, social media posts and newsletters can provide updates, offer insights into any challenges, and outline how changes in water use are achieving the necessary goals.

### Be proactive.

Anticipating potential water restrictions and taking early actions to mitigate them is crucial. Many water saving strategies require time and resources to be fully implemented. By implementing measures before they become a necessity, educating golfers about the reasons behind any changes in course conditions, and setting realistic expectations, golf courses can reduce the potential for drastic changes in golfer satisfaction. By communicating transparently and involving golfers in the conservation effort, courses can maintain a positive experience even when conditions are different than what golfers might be used to.

### Show golfers the impact of different strategies.

Golfers are more likely to accept changes when they can see and test first-hand how different approaches affect course conditions, playability, and aesthetics. To implement this, a golf course should consider designating specific areas where various water saving strategies can be tested. For example, one hole (or a portion of a hole) might feature a new drought-tolerant turf species, while another could showcase turf reduction or a non-overseeded area. Demonstration areas allow golfers to compare the strategies and gain a better understanding of tradeoffs. It is also an opportunity to showcase improvements in turf health or playability that might not be immediately apparent. Additionally, hosting field days or tours where golfers can walk the course with the superintendent and learn about water saving strategies provides a platform for explaining the reasoning and answering any concerns.



The restoration of Pinehurst No. 2 included a large reduction in irrigated footprint and significant changes in playability and presentation. These changes saved water and also led to positive results from a golfer satisfaction and business standpoint.

## Don't be afraid to change expectations.

One of the most important aspects of water conservation on a golf course is recognizing that golfer expectations can evolve, and courses should not be afraid to drive that change. Historically, golfers have been accustomed to lush, green turf, but with water scarcity becoming a more pressing issue, expectations around course aesthetics and playability may need to shift. Successful courses around the country have already redefined their presentation and playability with positive results from a business and water conservation standpoint. When courses communicate effectively, golfers are more likely to accept and even embrace changes. Saving water doesn't have to be negative and could even improve golfer satisfaction and a course's bottom line.

## Establish a water use benchmark and goals for improvement.

By first assessing current water usage, turf conditions and golfer satisfaction levels, courses can create a baseline from which to measure the impact of water conservation efforts. Once this benchmark is established, set specific goals related to water consumption and golfer experience. Monitor progress toward these goals to ensure that the chosen strategies are working.

## Highlight long-term sustainability benefits.

By framing water saving initiatives as part of a broader, long-term strategy, golf courses can gradually shift the focus from short-term solutions to fundamental changes. Courses should explain how present and future water saving measures help ensure that the course remains viable and enjoyable for years to come, even in the face of future droughts and potential water restrictions. This narrative should include not just environmental impacts, but also financial benefits like lower water bills and reduced maintenance costs that can be reinvested into improving other aspects of the course. Additionally, highlighting how sustainable practices align with industry trends and golfer expectations for environmentally responsible management can elevate the course's reputation. Many golfers, particularly those in younger demographics, increasingly value sustainability. Framing water conservation efforts as part of a forward-thinking, environmentally friendly golf experience may improve golfer satisfaction and loyalty.

## BMP CASE STUDIES

### “Blogs Provide Effective Communication”

*USGA Green Section Record, 2017.*

The superintendent at a golf course in Florida uses a blog to keep golfers informed about course conditions and course improvement projects. This has created a direct channel to provide golfers with accurate and timely information so they are not surprised by what they encounter during their round. Some posts are short and focused on timely matters, while others go into greater detail on more complex topics.

## **“The Benefits of Wetting Agents and Effective Communication”**

*USGA Green Section Record, 2017.*

A golf course in Canada was struggling with wet and dry areas on fairways during the dry summer months. The course had accumulated a deep layer of fairway topdressing that was creating challenges with localized dry spots. The superintendent began a wetting agent program and created an untreated check plot to demonstrate the effectiveness of wetting agents and other applications to golfers. The poor condition of the check plot in comparison to treated areas of the course was a clear demonstration of the effectiveness of wetting agents, fungicides and other treatments. The wetting agent program decreased total water use by 10% during its first year and improved playing conditions and aesthetics.

## **REFERENCES**

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