



## Water Use Efficiency

Even in areas of high rainfall and cool climate, demand for water has risen steadily so it is important to demonstrate a responsible approach to water management, both in terms of quantities used and the quality of water leaving the site.

While working within water consumption and water quality legislation, regular monitoring and recording water consumption on the course and in the clubhouse will enable you to review your usage. Although you will always need to use a certain amount of water, there are things you can do to reduce the quantity you use. Becoming more water efficient could also save up to 30% of water costs through implementing simple and inexpensive water minimisation measures.

Many businesses are paying more for water and associated costs than they need to. As well as water supply costs, your total costs to be considered include:

- Disposal costs for wastewater, either as a percentage of the amount of water you use or by the strength of your effluent
- The energy you use to heat or cool water
- Staff time spent wasting water, for example excessive washing down
- Pumping, storing and additional treatment costs
- Materials or products lost in wastewater, for example turf products lost via rinsing and washing.
- Meter size charges. Your water supplier sizes your meter by estimating the amount of water you use. If you have a larger than necessary meter you will be charged more than you need to be.

You can claim Enhanced Capital Allowances (ECAs) for water efficient products that are contained on the Water Technology List. An Enhanced Capital Allowance is a tax break that allows businesses to claim 100% first year tax relief. See [www.eca.gov.uk](http://www.eca.gov.uk)

There are many consultancies that provide advice on water use efficiency; however we recommend the government funded **Zero Waste Scotland / Resource Efficient Scotland** programme of advice and training. See <http://www.resourceefficientscotland.com/>

We would advise clubs to initially have a good understanding of baseline figures for total annual water consumption expressed in m<sup>3</sup>; split into different management areas if possible (club house, golf course, maintenance facility etc.), and according to type of water used (e.g. public supply, ground water, surface water, treated waste water, desalinated water, saline water).

Clubs should check:

- Your meter readings and pipes regularly and carefully, particularly in cold weather, to ensure you detect a burst or a leak
- That your meter size is appropriate to the amount of water you use
- The location of your meter and the water uses it supplies. This is particularly relevant to industrial and business parks where a neighbouring business may be supplied through your meter.

## Clubhouse and other buildings

In the clubhouse and other buildings it may be possible to add water saving devices on taps, showers and toilets etc. These include flow regulators, cistern volume reducers, infrared sensors etc

**Resource Efficient Scotland** advice at: <http://www.resourceefficientscotland.com/content/save-water>

**Business Stream** advice for water saving and tips for businesses:

<http://www.business-stream.co.uk/water-efficiency>

**Water wise** have useful information on water saving device products at [www.waterwise.org.uk](http://www.waterwise.org.uk)

## Golf Course

On the golf course it is important that water use is optimised through the promotion of finer grasses, hand watering, hydro-jecting, wetting agents and aeration techniques for example. Irrigation systems should be designed to increase accuracy and efficiency with regular servicing to avoid

leakage. Linking irrigation systems into climate predictors and satellite technology will also improve efficiency.

To have a good understanding of irrigation efficiency we advise clubs to:

- Know irrigation coverage - total area irrigated expressed as a proportion of the total playing area.
- Be able to demonstrate reductions in area irrigated.
- Strive to improve irrigation efficiency: e.g. monitor soil moisture levels; sprinkler type and layout (spacing and direction) to ensure uniformity and accuracy of coverage; check timing and weather conditions when irrigating.
- Regularly check and repair leaks, faulty sprinkler heads and other system malfunctions.
- Ensure irrigation system is suitable for locality and soil type.
- Use drip irrigation for landscape areas.
- Drought tolerant plants and mulch in landscape areas.
- Manually water small, isolated dry areas.
- Maintain a record of rainfall and temperature noting annual and seasonal variation and averages.
- Use meteorological data and ET rates, preferably via on-site weather station.
- Have clearly stated aims for the conservation of water and objectives that will enable it to minimise water consumption.

Further advice can be sought from:

STRI [www.strigroup.com](http://www.strigroup.com) , BIGGA [www.bigga.org.uk](http://www.bigga.org.uk), and irrigation suppliers such as

<http://www.rainbird.com/golf/index.htm>

## Maintenance Facility

Water use in the maintenance facility shed area includes mixing turf products and machinery washing. Water can be saved through a variety of best practices and technologies such as closed loop recycling systems which are available for machinery washwater.

*Information in this article is intended to provide only a general outline of the subjects covered. It should neither be regarded as comprehensive nor sufficient for making decisions in place of professional advice for the specific needs of your club. Scottish Golf accepts no responsibility for any loss arising from any action taken or not taken by anyone using this guidance. September 2016*