
INTRODUCTION TO WATER MANAGEMENT

At Travelife we ask our hotels to consider the following:

- Where they **source** their water
- What they are **using** their water for
- How much water they **consume**
- How they **dispose** of their waste water

We look at each of these later in this document but you might find it helpful to first learn about why good water management is so important.

WATER AS A RESOURCE AND A HAZARD

Although water is a natural and renewable resource, there are many reasons why it is considered precious as well as a potential environmental hazard. These are some of the main reasons why water management is such an important part of sustainability:

Population growth: In many parts of the world, water supply cannot keep up with rapid population growth.

Urban expansion: Population growth over the years has led to millions of people living in areas that have always experienced low rainfall such as deserts and other arid zones. There is a considerable environmental cost to bringing water to these cities and towns.

Climate events: Drought can affect most areas of the planet, sometimes for extremely prolonged periods and sometimes in regions that usually have enough rainfall. Flooding can result in contamination of drinking water.

Energy use: There is almost always an energy cost associated with delivering water to people because it involves things like pumps and water purification systems. Sometimes this energy cost can be very high.

Pollution: Waste water containing things like chemicals and sewerage can contaminate water supplies. This can reduce access to safe water for humans, livestock and wildlife, as well as cause damage to ecosystems.

Biodiversity and erosion: Water sourcing and waste water can interrupt natural environmental flows, often with lasting impacts on things like soil erosion and biodiversity.

HOW CAN THE ACCOMMODATION SECTOR HELP?

Travelife Certification helps your business improve your water management by focusing on three areas:

1. Reducing the amount of water your business consumes
2. Reducing the amount of harmful substances in your waste water (this is covered under Hazardous Substances)
3. Responsibly managing your waste water

We have provided tools and resources to help you. We encourage you to use them and to share them with your staff. The best news is that by reducing your water consumption you will be reducing your operating costs from both water and energy use.

THE SOURCES OF WATER YOU CONSUME

You should record where **all** the water you use is sourced from, how you track consumption and what type of measurement is used. For example, mains water might come from a local water company, you track consumption from your monthly water bill and it is measured in cubic metres or litres. Or you might source your water from a well on your property, track usage by a meter and it is measured in cubic feet or gallons. These are some of the more common ways that accommodation providers source water:

Mains water: This normally comes from a public or private company in the destination and is piped into the property. There is almost always an on-site meter that staff can use to record usage at any time, otherwise it will be provided on monthly bills.

Water wells: These are often on site and generally pipe water directly into the property, although in many cases it is filtered or treated first to make it safe for drinking. A business is responsible for maintaining its well, for ensuring it is complying with all relevant laws, holds and uses the well within the terms of any necessary licences or permits, and ensures that it is not interfering with natural water flows or water availability at its destination.

Water boreholes: These are similar to wells except that the hole that is usually drilled directly into an underground reservoir, and the access point, is generally smaller.

Recycled grey water: This is waste water from things like hand basins, showers and laundries that is collected, treated and then reused for things like irrigation or toilet flushing. Usually a business invests in its own grey water system as the investment pays off over time.

Recycled storm water: This involves diverting storm water drains or roof gutters to a place where the water can be reused. Solutions for this can be very simple, such as diverting a roof drain to a large barrel that is connected to a hose for watering a garden or cleaning cars. Or they can be very complex by diverting water to a treatment area then piping it back into the property for more general use. In some places a permit is required for redirecting rain water.

Desalination: This involves removing salt and other impurities from seawater to make it suitable for general use and/or drinking. Most desalination systems use a reverse osmosis process, which allows water molecules to pass through a very fine membrane, but which prevents larger salt molecules from passing through. This system can use a lot of energy. The waste water from the desalination process has a lot of salt that must be safely disposed of to prevent environmental damage. Licences and/or permits are often required to operate a desalination system.

Complying with water sourcing laws and regulations

You will need to demonstrate that you know about, and are complying with, any local, national and international regulations that apply to the water you are sourcing and that your water consumption is not interfering with natural flows or restricting access to water in your community.

MEASURING AND RECORDING YOUR WATER CONSUMPTION

Travelife requires that you record the total amount of water you have used in either cubic metres (m³) or litres (l). You will need to do this on a regular basis and over the same period of time, such as once per week or once per month. How often you record this will depend on things like the size and complexity of your property. However, in order to be Travelife Certified you will need to update your records at least once per month. We have created a template with formulas that is available in the Member Zone.

If some or all of your water is measured in another unit, such as cubic feet or gallons, you will need to convert it into cubic metres or litres before you record the total amount used. You can find conversion calculators online or use the conversion table that Travelife has provided in our water report template.

You need to record the total water consumed as well as the amount per actual guest night. You can calculate this by dividing the total water used by the total actual guest nights (the actual number of guests that stayed, not the total possible guest occupancy). For example, if you consumed 3,000 m³ in August and your total August guest nights was 300 the calculation would be:

Total water used in August is 3,000m³ ÷ 300 guest nights = 10m³ average water consumption per guest night

We have put formulas in the water report template that calculate this automatically for you, but please be aware that if you insert columns or rows into this template, it could cause the formulas to stop working.

YOUR WASTE WATER

You should record the sources of **all** waste water that your business produces, how it is disposed of and/or treated and the final destination. These are the main types of waste water that accommodation providers produce:

Black water: This comes from toilets (sewerage), kitchen sinks and dishwashers. This water usually ends up in the public sewer or a septic tank managed by the property. Restaurant kitchens normally use grease traps to filter out fats and oils from waste water before it reaches the public sewer or septic tank.

Grey water: This is used water that does not contain sewerage. It comes from places like hand basins, showers and the laundry. It can be treated and reused for things like irrigation and toilet flushing. If not, it normally goes either into the sewerage system or is treated on site.

Storm water: This is from rainfall or snowmelt that runs off your roof and over outside surfaces such as pathways and roads. It is normally collected in gutters and pipes that lead to a storm water drain. Usually, storm water drains lead back to the nearest body of water (river, stream, lake etc.) and sometimes this system is referred to as a storm sewer. Some businesses collect storm water and use it for things like irrigation.

Complying with waste water laws and regulations

You will need to demonstrate that you know about, and are complying with, any local, national and international regulations that apply to how you manage your waste water and that it is not polluting the environment, interfering with natural flows or disrupting your community.

SETTING TARGETS AND GOALS

Once you have records of how much water you are consuming, you should set targets and goals to reduce your consumption.

Targets are usually numbers and they will need to be measured against a starting point and have a measurable deadline. Ideally, you should have at least one short-term and one long-term target. Here are some examples:

Reduce your water consumption from 0.7m³ per guest night to 0.55m³ per guest night by the end of 2020.

Halve your current water consumption to 0.35m³ per guest night by the end of 2030.

Goals can still include numbers, but they are usually about projects or actions. You still need to know your starting point, have a deadline and be specific so it is easy to see if you succeeded. This should also include a mixture of short and long-term plans. Here are some examples:

Install soil moisture sensors on all irrigation systems by the end of 2020.

Have 60% of our water provided by recycled grey water by 2030.

Your targets and goals should be:

- ✓ **Specific** and easy for anybody to understand.
- ✓ **Easy to measure** so that you can clearly see if they have been achieved.
- ✓ **Relevant and achievable.** For example, there is no point in setting a goal that you cannot afford to implement or spending time on an area where you cannot have a lot of impact.
- ✓ **Have a deadline.** This will help keep everyone on track.

MAKE IMPROVEMENTS

The three main things that you can do to improve the environmental impacts of your water management:

1. Reducing the amount of water your business consumes
2. Reducing the amount of harmful substances in your waste water (this is covered under Hazardous Substances)
3. Responsibly managing your waste water

There are many things you can do that are no or low cost, yet very effective. We have provided some ideas below to get you started.

QUICK FIXES

These are all either low cost, no cost or low effort.

Guest rooms

- Implement a towel and linen reuse programme and regularly check that housekeeping are following it.
- Consider only changing towels and sheets every four days during a guest's stay. If you are concerned about guest complaints you can simply inform them that they can request fresh towels or a linen change whenever they wish.
- Consider whether you are putting more towels in guest rooms than are needed. If the maximum room occupancy is two, then put only that number of towels out and either let guests know that they can request more or put extra towels in a different place such as a wardrobe, so it is easy for housekeeping to see they are unused and therefore do not need replacing.
- Add regular checks for leaking toilets to the housekeeping checklist and implement a system to ensure these are promptly reported to maintenance.
- Put communications in guest rooms reminding them of how to save water.

Warning!

Towel & Linen Reuse Programmes



One of the most common issues we find is that hotels are not following their own reuse programme. Washing items unnecessarily is not only a waste of money and staff time, it also has a significant environmental impact from the consumption of energy, water and chemicals used in laundries. Sometimes senior management do not know that the policy has not been followed until a Travelife auditor alerts them.

We encourage all Travelife Members to implement and regularly check procedures that ensure that a guest's wishes to have their items reused is respected, and that clean items are not being washed.

Central guest areas

- Are guests using more towels than necessary in the spa, gym or the pool? If these areas are staffed it might be possible to issue individual towels or to remind guests via signage about the environmental impacts.
- If you provide a hose to rinse salt off scuba diving equipment or other items used in marine activities, consider instead providing a tank to dip the items into that is refilled as required. This will still remove salt from equipment and save a significant amount of water.
- If you provide a sauna or steam room, assess when it is being used. You might be able to turn it off more often or reduce the temperature.

- Are you leaving a jacuzzi running when nobody is using it? You could turn it off during off-peak times or simply ensure guests can turn it on themselves.
- Frequently check pools for leaks, especially in drainage channels that can become blocked with debris and overflow.
- Assess the swimming pool water level. If it is too low then the water cannot be cleaned properly, if it is too high you may be losing water over the edges.

Irrigation

- Turn off irrigation when it rains and only turn it back on when the plants need water again.
- Make sure any irrigation is going directly on to plants and not on to concrete or paving.
- Irrigate when it is dark.
- Bury irrigation pipes under a few centimetres of soil, mulch or similar, then have a schedule for regularly checking them for leaks and blockages.
- Regularly check hoses and irrigation pipes for leaks. Poorly fitted hose connectors and corroded washers can also waste a lot of water.
- Spend some time researching exactly how much water your plants need. You can do this with internet searches and many people find that plants need a lot less water than they think.
- Train ground staff on how to identify signs of overwatering and how to take corrective action.

General

- Ensure all equipment and machinery (fridges, air-conditioning units and so on) is regularly and properly serviced to ensure they are running optimally and when replacing equipment, always buy the most modern and efficient alternative.
- Train your staff to use equipment in the most efficient way possible. Consider things like the optimal load in a washing machine or dishwasher.
- If your destination has more than one water supplier, check to see if you can switch to one that takes water conservation seriously.
- Remind staff to always turn off taps if they will not be in use for more than a few seconds. Common examples are leaving hoses running while cleaning vehicles, leaving a tap running when cleaning a kitchen area or whilst washing hands.
- Put signs or stickers in kitchens and staff bathrooms reminding them to save water and asking them to report any leaks they find.
- Display a clear backwash procedure for cleaning swimming pool filters and make sure all relevant staff members are trained to ensure that filters are cleaned only when required and in an efficient manner. Ensuring that the backwash process is correct is a Travelife requirement.
- Our auditors regularly find leaks in areas that go unnoticed for extended periods due to the difficult or hidden location of pipes. Consider adding a regular check of places such as underneath bathroom sinks, inside service ducts and cupboards. Leaks not only waste water but can create more serious damage if left unchecked that leads to costly repairs and guest complaints.

Audit Story



A Travelife hotel in Dominican Republic was having a serious long-term issue with mosquitos in guest rooms. They tried various measures to control it with no success and guests were frequently complaining. During a Travelife audit, an auditor discovered a leak inside a small service duct in the ceiling of one guest room. The water had pooled to create a breeding area for mosquitos that were travelling through ducts into other guest rooms. As soon as the leak was fixed the mosquitos disappeared for good!

MODERATE COST AND EFFORT

- Consider using a liquid pool cover that not only reduces the loss of heat and water, but can also reduce the depletion of pool cleaning chemicals.
- Install aerators and flow restrictors in all bathrooms to reduce water flow. It is important that you have both a procedure and budget for regularly checking and replacing these as they do corrode over time. Remember that from your second audit onwards, the Travelife Standard requires that your water flow is less than 10 litres per minute in showers, 5 litres per minute in basins, 6.5 litres per toilet flush and 2 litres per urinal flush.
- Installing water meters on things like irrigation systems and swimming pools is a reliable and cost-effective way to check for leaks. If you regularly record the readings and suddenly notice an increase, it is highly likely that you have a leak and can fix it quickly, thus preventing water waste and potentially a more costly repair.

HIGHER INVESTMENT WITH LONG TERM REWARDS

- Install technology such as motion sensors and/or timers in guest rooms, central areas, outdoors and in your grounds to ensure that water-consuming equipment is only used when needed. Do thorough research when sourcing the best solutions for your property to ensure you are using the most efficient technology that will have the highest impact for the longest amount of time.
- Replace older equipment with the latest most water-efficient technology and develop a plan and budget to continue doing this indefinitely.
- Research options for reusing waste water, including any relevant legislation and permits you might require. This could include simple solutions like collecting rainwater in tanks and using it to wash vehicles or to water plants, or complex solutions that will pay off over time such as installing a permanent grey water recycling system.
- Spend time with architects and engineers fully assessing resource efficiency in new builds and refurbishments so that you can reap significant environmental and cost savings. For example, it will take longer for hot water to reach bathrooms that are a long way from a water heating source. This wastes water as guests run the tap or shower whilst waiting for hot water to come through.

ASSESSING AND REPORTING PROGRESS

Travelife expects Certified Members to have a continuous improvement cycle. That means that you will need to complete the following steps at least once every year:

- Reassess your operations each year to look for ways to improve your water consumption.
- Use your consumption records to compare your performance to previous years.
- Review how well you are doing with reaching your targets and achieving your goals.
- Recommend improvements to make over the next year.
- Set new short-term goals and targets.
- Include your findings in an annual report that is reviewed and discussed by senior management.
- Include the appropriate parts of your findings in your annual public sustainability report. This normally includes progress against current goals and targets along with any new goals and targets.

The water assessment

This should assess all areas of water consumption that are relevant to your property. They are likely to include:

Guest rooms | Swimming pools and other water features | Laundry | Kitchen | Irrigation | Staff areas

As you assess each area you should ask the following questions:

- ✓ **Have you reduced water consumption since your last report?**
You will need to compare your records and show what (if any) savings you have made. You should try to identify what worked well and what did not, and use this to make recommendations of the steps you should take in the next year.
- ✓ **What contribution is the area of consumption making to your overall water use?**
Try to be as accurate as you can in terms of calculating the litres or cubic metres (m³) and cost each area. Sometimes you will have to use estimates. The purpose of this is to show you what areas you should focus on to achieve reductions.
- ✓ **What is currently being done to reduce water consumption?**
You should list the things you are currently doing to control use in each area and try to assess how well they are working. For example, flow restrictors or regular checks for leaking pipes.
- ✓ **Are there ways to further reduce water consumption?**
For example, are you using the latest technology? Are guests and staff being told about ways to reduce use? Is equipment being properly maintained?
- ✓ **What short and long-term improvements could you make?**
This will help you plan for making further reductions in your water consumption. You should group these into short-term and long-term initiatives, along with ones that are low cost and ones requiring a bigger investment. For example, a short-term/low-cost improvement could be irrigating at night. A long-term/higher investment improvement could be installing a grey water recycling system.

MORE INFORMATION & RESOURCES

Travelife Water Consumption Report template

Travelife Quick Guides: Environmental Policy, Recording Water Consumption, Internal Sustainability Reports