

## Private Water Supplies – 1. England & Wales

### Scope and context

Club huts that are not supplied with mains water will now be subject to new regulations relating to private water supplies for human consumption.

Private water supplies can pose a threat to health unless they are properly protected and treated. They may become contaminated with micro-organisms such as bacteria, viruses and protozoan parasites, or by other substances such as heavy metals. Many micro-organisms are harmless, but some may cause serious illness or even death in vulnerable people.

### The regulations

In England the Private Water Supplies Regulations 2009 came into force on 1 January 2010 and in Wales the Private Water Supplies (Wales) Regulations 2010 on 4 February 2010. Both these documents are almost identical and replace the regulations that are part of the Water Industry Act 1991 but do not revoke or replace the 1991 Act.

Under these regulations, Local Authorities must identify private water supplies by 30 June 2010 in England, 31 July 2010 in Wales, and carry out a risk assessment within five years of the implementation of these regulations and subsequently every five years.

The risk assessment may cost up to £500 each time and sampling may cost up to £100 on each occasion. A full list of fees is included in the regulations.

There are serious penalties for those who do not comply with the legal notices served on them by the Local Authority under these regulations.

The Drinking Water Inspectorate has issued an information leaflet that covers aspects of private water supplies (see reference section). These guidelines have been produced with reference to this leaflet.

### Private water supplies to huts

If your hut has a private water supply it is *essential* that it is maintained in good order and that suitable water treatment equipment is installed to ensure the supply is fit for human consumption. You may not be able to tell whether your water is safe as contamination may not be obvious by smell, taste or colour of the water; microbiological and possibly chemical tests are required.

The source of the supply may be a well, borehole, spring, stream, river, lake or pond. A typical installation should include a screened pickup at the source piped into a sealed collection chamber (settling tank) with an overflow. A useful overview can be found in section 3 of the technical manual listed in the reference section.

Water is then piped into the hut and all water for human consumption should be passed through at least a 10 micrometre (micron) filter and then a UV sterilization device.

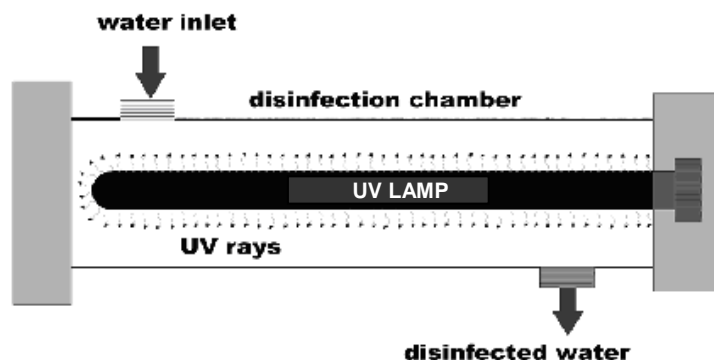
A note on uv water sterilizers >>

\* Re. the currency (version no.) of this guideline see the information panel on page 3.

# Private Water Supplies – England & Wales

## A note on uv water sterilizers\*

Water sterilization is normally carried out by irradiation with ultraviolet light of a specific wavelength that kills microbes exposed to it. The construction of a typical unit is shown below.



In order for the treatment to be effective it is *essential* that the unit is properly maintained and the manufacturer's instructions should be followed carefully. It is particularly important to note:

- The UV striplamp has a finite effective lifetime and should be changed at the interval recommended by the manufacturer. An inexpensive hours-elapsed meter can be fitted. In order to conserve the life of the lamp the UV unit should not be left switched on when the hut is unoccupied. **N.B.** UV lamps contain mercury and should be disposed of at an approved facility.
- The protective quartz glass sleeve surrounding the UV lamp should be cleaned regularly to remove deposits of organic and/or mineral material that may form on the sleeve and absorb UV light and so significantly reduce the effectiveness of the unit.
- It is recommended that at least one prefilter (ideally 10 microns) should be installed upstream of the water inlet to the unit in order to remove particulate material. Particles in the water supply absorb and scatter the UV light and shade the micro-organisms, so the unit cannot operate with 100% efficiency. The filter(s) should be cleaned or replaced regularly. It is also important that the flow rate through the UV unit should not exceed the manufacturer's specifications.

In cases where there is no mains electricity supply, power could be supplied by a small photovoltaic or wind microturbine system to charge storage batteries linked to a small DC/AC inverter. The power requirement of UV sterilizers is typically only a few tens of watts.

\* From Hut Guideline 10.2

## Points to be considered

- Read the DWI guidance leaflet on private water supplies (see references below).
- Check with the Local Authority (environmental services or appropriate department) concerning the requirements of the relevant private water supplies regulations.
- Make sure, if not already in place, that as a high priority you install an appropriate treatment system.
- Keep the entire system in good order by establishing routine procedures for frequent inspection and repair if necessary.

References >>

# Private Water Supplies – England & Wales

## References

*Keeping your private water supply safe*, a Drinking Water Inspectorate information leaflet – [www.dwi.gov.uk/consumers/advice-leaflets/pws.pdf](http://www.dwi.gov.uk/consumers/advice-leaflets/pws.pdf)

The Private Water Supply Regulations (both England and Wales) – <http://dwi.defra.gov.uk/private-water-supply/RHmenu/legislation.html>

Guidance for Private Water Supplies, follow the link 'Guidance' via the DEFRA URL above.

The EC Drinking Water Directive – [http://ec.europa.eu/environment/water/water-drink/index\\_en.html](http://ec.europa.eu/environment/water/water-drink/index_en.html)

Private Water Supplies -Technical Manual (click on the link 'Downloads') – [www.privatewatersupplies.gov.uk](http://www.privatewatersupplies.gov.uk)

The corresponding hut guideline 10.2 *Private Water Supplies - 2. Scotland* is available on the BMC website [www.thebmc.co.uk](http://www.thebmc.co.uk)

**Note:** If viewing this .pdf while online then clicking on any [URL](#) will take you to that website.

## About Hut Guidelines

These guidelines have been produced by the Huts Group of the British Mountaineering Council and the Huts Advisory Group of the Mountaineering Council of Scotland to assist those operating mountain huts in Britain.

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**URLs:** If any of the URLs (web addresses) given on the preceding pages are found to be 'dead links' please notify [huts@mcofs.org.uk](mailto:huts@mcofs.org.uk)

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**Version no. 2 – May 2016**

These guidelines are updated periodically; to check on the currency of this version go to one of the websites above where the latest version will always be displayed.