

# Private Water Supplies

## Background

Water is essential to sustain life and an adequate supply of good-quality drinking water should be available to consumers. International guidelines on drinking water quality are published by the World Health Organization<sup>1</sup>. Within the European Union drinking water is subject to specific quality standards set out in the EC Directive on the Quality of Water Intended for Human Consumption (98/83/EC<sup>2</sup>, the 'Drinking Water Directive') which takes into account the WHO guidelines.

The water quality standards laid down in the drinking water Directive apply to all public and private water supplies intended for drinking, cooking, food preparation and other domestic purposes. Member States had to introduce legislation implementing the requirements of the Directive by the end of 2000 and have to comply with most of the standards in the Directive by the end of 2003.

## Private Supplies

A private water supply may be defined as any water supply that is not provided by a statutory water undertaker and where the responsibility for its maintenance and repair lies with the owner or person who uses it. A private water supply can serve a single household and provide less than one cubic meter of water per day or it can serve many properties or commercial or industrial premises and provide 1000 m<sup>3</sup>/d or more. The water source could be a borehole, well, spring, lake, stream or river.

The monitoring requirements of the Drinking Water Directive vary according to the size of the supply. In addition to the volume of water produced (or population served), private water supplies should also be classified according to the nature of the supply taking account of whether the supply serves:

- single dwelling domestic use.
- is for domestic use for persons normally residing on the premises; or
- is supplying premises used for commercial food production or with changing populations.

## Properties & Contaminates of Water

Methods used for the treatment of a raw water will depend on the properties of the water and the presence and concentrations of any contaminants. Groundwaters usually have low levels of colour and turbidity and consistent microbiological quality, although water from shallow wells and some springs may be more variable. Particular problems may include high or low pH value and alkalinity and high concentrations of iron, manganese, nitrate, chlorinated solvents or pesticides. Surface waters may have high levels of colour and turbidity and exhibit poor microbiological quality. Quality may be variable and deteriorate following periods of heavy rainfall. Other problems may include low pH value and alkalinity and high concentrations of aluminum, iron, manganese, nitrate or pesticides.

## Microbiological Parameters

Water used as a source for a small supply of drinking water may be of unknown origin and come from a catchment prone to consistent or intermittent contamination by fecal material from domestic and farm animals, wildlife or sanitation systems such as septic tanks. As a consequence, there is a high probability of pathogenic micro-organisms being present in the source water, and adequate treatment must be applied before the water is used for domestic purposes. Because no single treatment can be expected to remove all types of pathogenic agents, a multiple barrier approach in the form of two or more sequential treatment processes is recommended.

## How can I maintain my private water supply?

- 6 - 12 monthly maintenance of water filters and Ultraviolet bulbs. This is dependent on the quality of your water supply; some properties may even need to change filters every month.
- UV bulbs are located within a glass sleeve incorporated within your UV unit, glass sleeves can get contaminated and stained with peat thus preventing the UV light from killing bacteria affectively. Ensure glass sleeves are also cleaned during routine servicing.
- Factor in deep cleaning and disinfection of your external (in fields) water supply tanks.
- Factor in deep cleaning and disinfection of internal (in your house attic space) water tanks.
- Ensure your water tank is fenced off to livestock as this can be the number one cause for contaminated drinking water.
- If you are concerned about the quality of your drinking water, then consider a routine water quality to confirm it's safe to drink.

For any further advice or help cleaning/disinfecting water tanks, UV and filter servicing or drinking water quality testing contact supplier plus members Solway Water Management:

[www.solwaywatermanagement.co.uk](http://www.solwaywatermanagement.co.uk)

For further reading refer to:- - <https://dwqr.scot/private-supply/regulatory-information/pwsshapefiles/swzones/>

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