



# Water Quality Monitoring Network



## Aims & Objectives

Anglers are passionate about the places they fish and have long been working on the preservation and restoration of freshwater habitats. Whether it is club work parties, volunteering on Rivers Trust projects, undertaking riverfly monitoring, litter picks or bailiffing, anglers are a potent force for good and often unsung heroes. The Water Quality Monitoring Network (WQMN) harnesses the power of angling clubs and anglers to understand the quality of water across England and Wales, and to establish a solid foundation of data. This solid foundation of data is used to better understand the factors affecting water quality, aid in the development of effective solutions to improve water quality, and provide the Angling Trust with evidence to support its campaigning work.

## Methodology

The WQMN is formed from angling clubs, anglers and other volunteers who undertake regular monitoring activities on rivers across England and Wales. Angling clubs recruit and organise teams of local volunteers who are allocated monitoring sites. On a regular and consistent basis volunteers gather a range of data for each site, we ask for a minimum of one site, once per month for at least two years but clubs can monitor more sites / more frequently at their discretion.

This includes as a minimum:

- Phosphates
- Nitrates
- Electrical Conductivity
- Temperature

At a local level clubs may also choose to measure:

- pH
- Turbidity
- Ammonia

Monitors are also asked to note:

- Water levels
- Flow rates
- Presence of algal blooms
- Presence of pollution

Monitors record data in situ using the Epicollect5 data gathering platform on their mobile phone with the option to record data at home using a PC. Epicollect5 is a proven solution which is free and easy to use ([five.epicollect.net](http://five.epicollect.net)). Observations are measured against Statutory and Water Framework Directive standards for levels of chemicals. The methodology is based upon a proven approach developed by the Wye Salmon Association ([Water Quality - The Wye Salmon Association](#)) with the help and support of Cardiff University.

## Monitoring Equipment

Monitors use a range of affordable equipment to gather data on water quality:

- |   |   |
|---|---|
| • Nitrates NO <sub>3</sub> -N                 | Hach Nitrate Test Strips                    |
| • Phosphates (PO <sub>4</sub> <sup>3-</sup> ) | Hanna HI-713 Phosphate Handheld Colorimeter |
| • Electrical Conductivity and Temperature     | HM Digital EC-3 Handheld Tester             |
| • Ammonia (NH <sub>3</sub> -N)                | Hanna HI-715 Ammonia Colorimeter (optional) |

The Angling Trust supply monitoring kits and consumables at cost and some funding may be available to subsidise monitoring kits.

## Uses of Data

The data gathered is not to replace the statutory monitoring undertaken by the Environment Agency, Natural Resources Wales, or Water Companies or to directly challenge this data. Statutory monitoring is extremely limited both spatially and temporally meaning there are significant gaps in our understanding of water quality. The WQMN data will help to fill these gaps. The data is used by the local networks but is also made available to other organisations to help inform the wider understanding of water quality. In the future the data will be shared through the Catchment Monitoring Cooperative ([monitoring.catchmentbasedapproach.org](http://monitoring.catchmentbasedapproach.org)). The data helps to show us patterns in water quality across a wide area, trends in water quality over time and potential problem sites or regions.