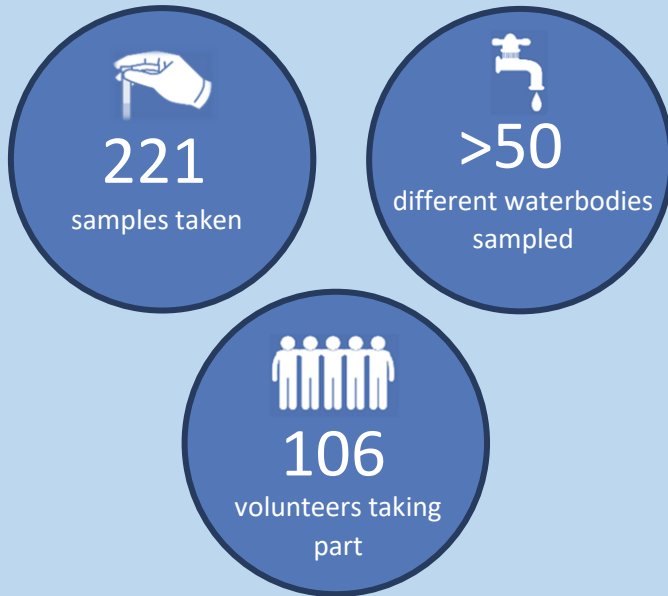


THANK YOU!

Thank you to everyone who participated in this Autumn's Thames WaterBlitz. We hope you enjoyed sampling in the unseasonably warm weather.



This WaterBlitz was the seventh such event in the Thames Valley. The first Thames WaterBlitz was in autumn 2015. Over the last three years, over 700 volunteers have collected more than 2400 water quality samples contributing to freshwater research. It would take over a year for a professional scientist to collect the same number of samples that volunteers have collected during 8 days of the Thames WaterBlitzes. You can read more about the growth of citizen science projects (such as FreshWater Watch) around the world in this article: [‘No PhDs needed’](#) from the journal, *Nature*.

Sharing the experience

On Friday 19th October, 20 MSc students from the University of Oxford set out to the Cherwell River at University parks to take part in the WaterBlitz, led by Dr Jocelyne Hughes. The group was joined by Dr Luigi Ceccaroni, a scientist from Earthwatch, to discuss the pros and cons of citizen science datasets.

“Unless students can engage in a project like the WaterBlitz, it’s hard to appreciate the impact a citizen science project can have. For some of the overseas MSc students it made them think about how citizen science projects could be initiated in their own country, especially those in Low Income Countries, or those with severe water quality issues... Count us in for the next Blitz!”



MSc students in Water Science, Policy and Management, Oxford University at Cherwell river
©Earthwatch Europe

The data you have collected

In this WaterBlitz, high levels of nitrate were recorded throughout the Thames Valley. Less than a quarter of samples had a nitrate concentration below 0.5 mg/L and half of phosphate values were below 0.05 mg/L which reflects low levels of pollution in the water. About 15% of the collected records indicated overall healthy water conditions. You can analyse the data further on our [interactive map](#). This data supports the most recent government report on the Water Framework Directive, which found that in 2014 only 21% of waterbodies in England were classified as being of ‘good’ status.



You spotted litter in over 10% of the WaterBlitz sites

Ponds

Most of the ponds sampled in this Thames WaterBlitz had low concentrations of both nitrate and phosphate.

Small Streams

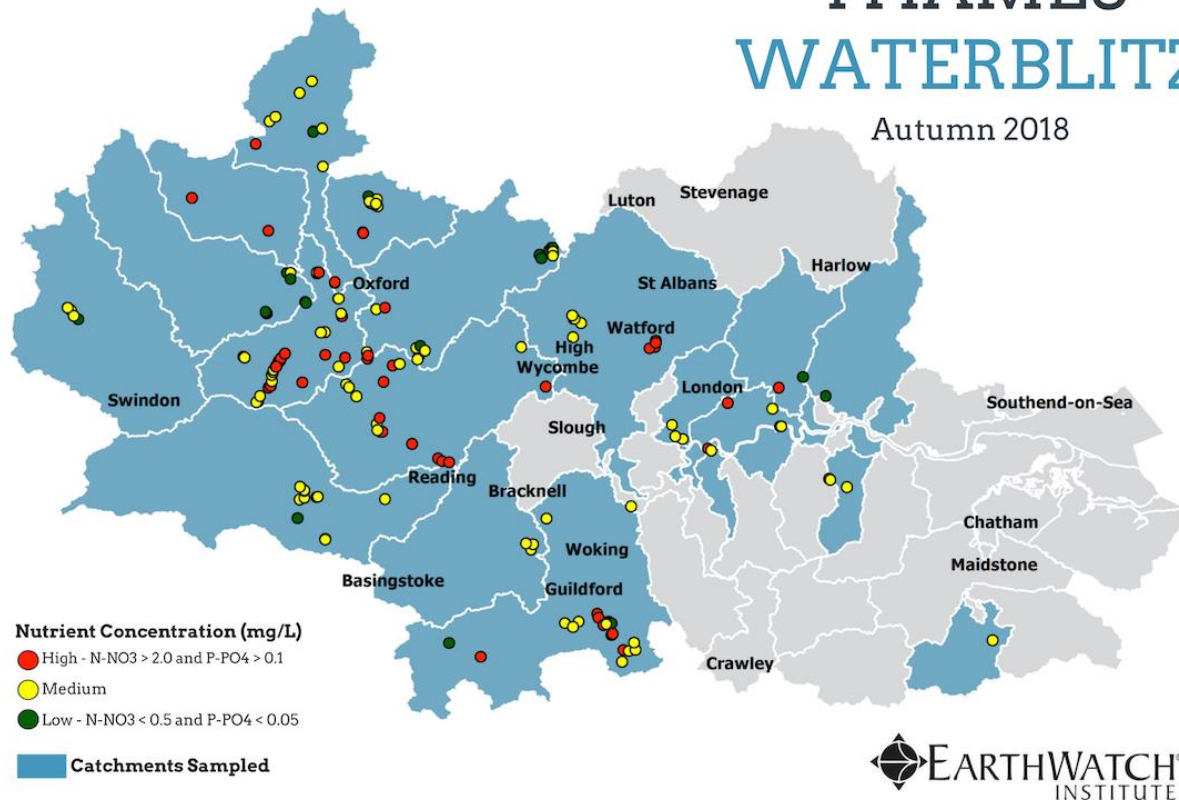
The small streams sampled in this WaterBlitz had high concentrations of nitrate, but low levels of phosphate.

Rivers

Most rivers sampled in the Thames Catchment had high concentrations of nitrate and moderate levels of phosphate.

THAMES WATERBLITZ

Autumn 2018



Why do nutrients matter?

Nitrates and Phosphates are essential for healthy plant growth. However, excess nutrients can actually reduce freshwater biodiversity. This is because the nutrients help a few tolerant, fast-growing species of algae and water plants grow rapidly and smother or crowd-out other wildlife, especially delicate and rare species. As the algae and plants die, their decay reduces the oxygen dissolved in the water which, in extreme cases, can lead to fish kill.

Low

Water bodies with low nutrient concentrations often support rich and interesting ecological communities. These sites need to be monitored and conserved as they are amongst the few remaining clean and undamaged freshwater bodies in England.

Medium

These waterbodies usually still have plenty of plants and wildlife, but rarer and more delicate species might not be found. Even at moderate nutrient concentrations, up to half of the freshwater animal and plant diversity that is present might be lost.

High

High concentrations of nutrients have serious impacts on the health of freshwater species, especially if the nutrient concentrations remain high for a long period of time. These sites need to be monitored further to understand the pollution issue.

Actions you can take

Besides collecting water quality data, you can also take further steps to improve water quality in your area by:

- Volunteering with a local rivers trust or conservation group: most UK [Rivers Trusts](#) carry out some form of river restoration and are in need of more volunteers.
- Checking the [household products](#) you use: some cleaning and cosmetic products can contain phosphates
- Reducing the amount of fertilizer you use on your lawn and garden.

Community action in Cumnor Pond: Managing water quality in village ponds can often be challenging. Following the results from a previous Thames WaterBlitz, Lorraine, from the Cumnor Conservation Group was inspired to take action for Cumnor Pond. In July 2017, after speaking with Freshwater Habitats and the Environment Agency, it was felt that the best way to enhance the biodiversity of the pond was to improve the water quality. New planting was introduced as a natural filter to nutrients entering the pond. Planting was left to establish and since April 2018 water quality has been monitored. Some challenges remain in managing the pond but it's brilliant to see communities working to improve their local water quality.



The [Monocle project](#) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776480