

Become a Friend for Freshwater

We hope that you've enjoyed taking part in the Clean Water for Wildlife survey. We are hugely grateful for your time and support for the project. **There is no need for you to fill in any information below to take part in Testing the Water.** However, we would be delighted if you would like to support our wider work to protect freshwater wildlife, and ensure people have opportunities to enjoy these wonderful places. We have achieved a lot so far and your support will make a significant difference to what we can achieve in the next few years

I wish to pay: monthly (suggested donation is £5) yearly one off gift

Title: Name:

Address: Postcode:

Tel. number: E-mail:



Instruction to your Bank or Building Society to pay by Direct Debit



To the Manager (name of Bank/Building society)

Address

Postcode

Name of Account holder

Branch Sort Code Bank/Building Society Account Number

Please pay Freshwater Habitats Trust Direct Debits from the account detailed in this Instruction subject to the safeguards assured by the Direct Debit Guarantee.

Signed Date

Banks and Building Societies may not accept Direct Debit instructions from some types of account.

Originator No.: 249358 For office use only, DD reference: -----

The Direct Debit Guarantee: This Guarantee is offered by all Banks and Building Societies that take part in the Direct Debit Scheme. The efficiency and security of the Scheme is monitored and protected by your own Bank or Building Society. If the amounts to be paid or the payment dates change, Freshwater Habitats Trust will notify you 14 working days in advance of your account being debited or as otherwise agreed. If an error is made by Freshwater Habitats Trust or your Bank or Building Society, you are guaranteed to a full and immediate refund from your branch of the amount paid. You can cancel a Direct Debit at any time by writing to your Bank or Building Society. Please also send a copy of your letter to us.

Gift Aid - If you are a UK tax payer, we can reclaim the tax on donations increasing the amount by 25%.

I am a UK taxpayer and I wish the Freshwater Habitats Trust to reclaim tax on my donation.

By ticking the gift aid box and signing this form you are confirming you pay an amount of UK income or capital gains tax at least equal to the tax Freshwater Habitats Trust will claim and that they should treat all gifts of money that I have made in the past 4 years and all future gifts of money that I make from the date of this declaration as Gift Aid donations. You must notify the charity if your tax status changes or you are no longer a UK taxpayer.

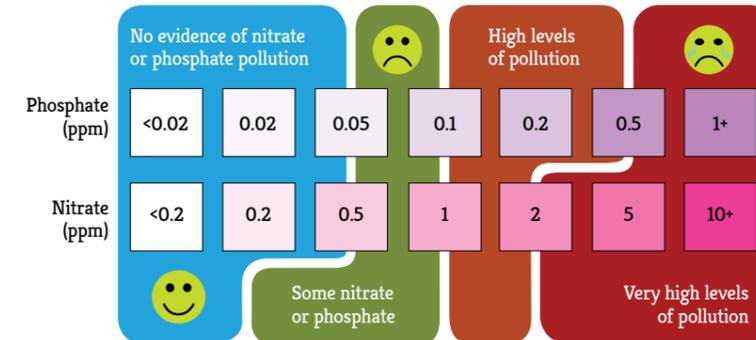
Signed Date

Please return to: Freshwater Habitats Trust, First Floor, Bury Knowle House, North Place, Headington, Oxford, OX3 9HY

Understanding your Testing the Water results

Use the diagram and information on this page to help interpret the results from your kits. Whatever you've found, please tell us about it. Your information is really important to help build a national picture of the levels of nutrient pollution in freshwaters.

See: freshwaterhabitats.org.uk/bfer-lps-citizen-science-testing-the-water/



No evidence of nutrient pollution.

Congratulations! You are likely to have found a fantastic clean water habitat.

Water that's not polluted by nutrients will show little or no colour change in either test. This is great news as many animals and plants, especially rare and endangered species, need to live in water that is naturally very low in nutrients.

We really want to find out about these sites as they could be amongst the very few remaining sites, the best of the best undamaged freshwaters in England and Wales.

This information will be valuable for monitoring site condition and making decisions about site management. The next step could be to undertake a biological survey to find out which species are present. Clean water sites often support rich and interesting wildlife communities.

Evidence of some nutrient pollution.

Unfortunately you have found a site where the water is polluted by nutrients at levels that will be damaging to wildlife.

Polluted waters will still have some wildlife - but they won't have the wonderful richness of life, or rare species that live in clean water. At even these moderate levels of nutrient pollution more than half the animals and plants that should be present can be lost.

If this was your garden pond, make sure you're topping it up with rain water, rather than water from the tap (see next page).

If this is a pond in your neighbourhood, find out whether anyone is working with local farmers or the local councils to make the environment as good as it can be. It's very difficult to remove nutrients from polluted habitats, but knowing the limitations can help to guide the way sites are managed.

High or very high levels of nutrient pollution.

Oh dear, this site has high levels of nutrient pollution. Even tougher species sometimes find it hard to make a home in a site like this.

Don't give up! There may be clean unpolluted sites in your neighbourhood waiting to be found. Take another kit and look somewhere else. What about trying a different habitat like a pond or stream? Look at the website to find out if anyone has recorded a clean water site near you - worth a visit if you want to see freshwater habitats thriving with wildlife.

AND FINALLY: Some places with very low nutrient levels, may still be affected by other issues which the kits do not detect.

There's more information in our technical guide on the use and reliability of the kits - available on our website.



Explaining your findings in different types of habitat

Rivers, streams and ditches. Running waters like these collect water from huge areas of land. In the lowlands, there are so many nutrients draining from farmland and urban areas, that it is very rare to find any rivers or even large streams which aren't polluted by nutrients. The cleanest sites, with the least nutrients, tend to be small streams or ditches that start their life in woodland or unfertilised grassland, because they haven't yet had an opportunity to become polluted.

Countryside ponds. Some ponds have very clean water and thriving wildlife. A pond on top of a hill or in a woodland or heathland, draining land which is not developed or farmed, may have few pollutants. Similarly, new ponds or recently dredged ponds may also have few nutrients in them, because polluted silts haven't had time to accumulate. On the other hand, many ponds in heavily farmed areas, or with lots of ducks, or with a stream (or ditch) running in to them, will usually have high levels of nutrient pollutants.

Garden ponds. When garden ponds are well designed and fed by rain water, they can be great habitats for wildlife. Those filled by tap water can be high in nutrients and may show signs of pollution. Ponds with fish can also have high nutrients from added fish food and fish poo.

Water butts. Usually low in nutrients. Water butts are usually fed by rain water draining from roofs. Rain water is naturally low in nutrients, so water butts should have very low levels of nitrate and phosphate. If not, there must be something else adding nutrients; either from the roof or elsewhere.

Tap water: Tap water is often surprisingly high in nutrients. They aren't damaging to human health, so it is not necessary to remove them completely from the water supply. The amount of nitrate in drinking water is regulated by law. In some areas small quantities of phosphate are actually added to tap water to protect us from the risk posed by lead contamination from old pipes. If you want to make a pond that is good for wildlife in your garden, fill it with water from a water butt, not from the tap.

GET ACTIVE:

We can all do something to help reduce the impact of nutrients on the freshwater environment.

- Shout about the best sites you find - get them included in local wildlife plans
- Reduce the nutrients in your home and garden - use low phosphate products and fill your garden pond with rainwater
- Make your own clean water habitats - bring wildlife back to your neighbourhood by creating new clean water ponds
- Get hands on and join a local wildlife volunteer group



Citizen Science: Testing the Water

Use simple test kits to find out how good your local habitats are for freshwater wildlife in the Brecks!

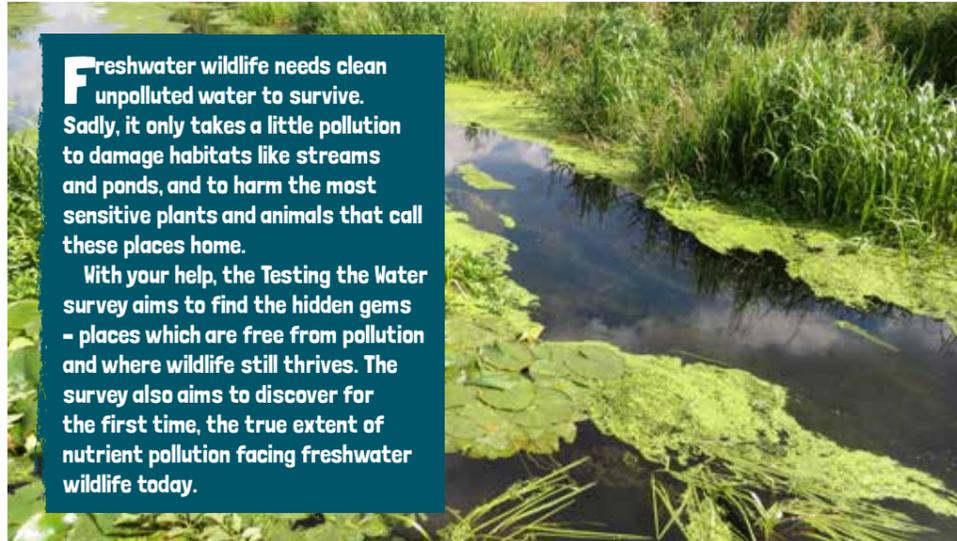


Are the ponds, streams and rivers in your neighbourhood good enough for wildlife?

Join in with a community survey and find out

bit.ly/BFERTestingTheWater

Testing the Water



Freshwater wildlife needs clean unpolluted water to survive. Sadly, it only takes a little pollution to damage habitats like streams and ponds, and to harm the most sensitive plants and animals that call these places home.

With your help, the Testing the Water survey aims to find the hidden gems – places which are free from pollution and where wildlife still thrives. The survey also aims to discover for the first time, the true extent of nutrient pollution facing freshwater wildlife today.

Sign up and get involved

Anyone and everyone can take part in the Testing the Water survey – professionals or beginners. It's easy. With two quick tests you record the amount of nutrient pollution in your local ponds, streams, rivers, ditches and canals – and maybe discover new clean water sites. Together, we can find and protect the best sites, and build up a picture of the state of water quality and its impact on wildlife in the Brecks Fen Edge and Rivers Landscape Partnership Scheme Area.



To find out more contact:
Anne Carter, Project Officer, E: acarter@freshwaterhabitats.org.uk
freshwaterhabitats.org.uk/bfer-lps-citizen-science-testing-the-water/

What's so bad about nutrients?

Most freshwater plants and animals have evolved over millions of years in a world where the natural level of nutrients in ponds, lakes, streams and rivers was very low. When we add more nutrients we cause profound changes to the freshwater environment and the wildlife can't cope.

Excess nutrients cause algae, fungi, bacteria and some water plants to grow more rapidly than they naturally would. Much of our wildlife, especially delicate and rare species, are smothered or crowded-out by a few tolerant, fast growing species.

Ponds may become covered in a surface sheet of duckweed and in the dark, oxygen-less water below, animals die. In rivers and streams excessive algal growth causes levels of dissolved oxygen to fluctuate and in extreme cases, even the fish will disappear.

Too many nutrients are bad news for wildlife.



Testing the Water is a regional water quality survey that aims to discover places, in the Brecks area, that are free from pollution where wildlife still thrives.



Just to the north of the bustling city of Oxford, clean water ponds like this one are teeming with freshwater wildlife. The ponds on Otmoor are home to a huge number of common and rare plants and animals, including pollution sensitive plants like Water-violet. Unfortunately this isn't the case everywhere. Nutrient pollution is widespread, leaving many places much poorer for wildlife. Sensitive plants like the beautiful Water-violet have been eliminated from over half their former range in the past 100 years and are still declining fast.

Why is the survey so important?

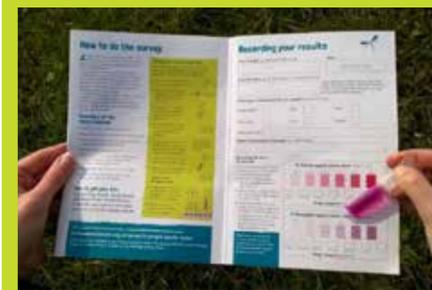
Although government agencies monitor pollution in our larger rivers, streams and lakes, **we know nothing about nutrient pollution in 99% of our ponds, smaller streams, ditches and other freshwater habitats**, where so much of our fantastic freshwater wildlife lives.

What's new?

Until recently, the only way to find out about nutrient levels in water has been to do expensive laboratory tests. But in the last few years simple reliable kits have become available.

With these kits, we can all 'see' nutrient pollution: **quickly, easily and inexpensively** for the first time.

This gives us a wonderful new opportunity to discover more about water quality in all freshwater habitat types across England and Wales.



Making the invisible visible

You can't see nutrients in the water: often water that looks crystal clear can be polluted with nitrate and phosphate. Test kits are a quick and easy way to find out.

How to do the survey

Joining in with the survey is fun and simple. As part of the Heritage Lottery funded Brecks Fen Edge and Rivers (BFER) Landscape Partnership Scheme, the Freshwater Habitats Trust's project Citizen Science: Testing the Water is looking for volunteers to help map the extent of clean, unpolluted water in the Scheme area.

Using cutting edge rapid water quality test kits to sample ponds, streams, ditches and river headwater streams, we are able to make visible pollution that is otherwise invisible and largely unknown.

Results will be mapped to identify water quality in the project area to facilitate improved awareness and better conservation management practices.

Summary of the steps involved

- Identify the body of water you want to test.
- Take a water sample (see Health and Safety Info Pack).
- Measure the amount of two nutrients in the water, nitrate and phosphate, using the kits.
- Fill out a survey sheet for each site.
- Tell us what you've found - enter the data online so that it contributes to the national survey database or email us your results.
- Find out what your results mean (over the page).



Using your Testing the Water kits

You use one phosphate and one nitrate tube for each water sample (marked N for nitrate or P for phosphate on the tab at the base of the tube)

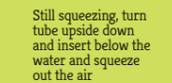
- 1 Pull out and discard the yellow pin leaving a small air hole
- 2 With the air hole pointing upwards, use your finger and thumb to squeeze out the air
- 3 Keeping the air squeezed out, turn the tube upside down and insert below the water
- 4 Gently release the pressure and suck up enough water to fill the tube just over half way
- 5 If you need to, turn the tube upright again, squeeze out a bit more air to suck up more water to just over half way
- 6 Gently shake the tube to mix the water and powder inside
- 7 Make a note of the time and wait for the colour reaction



Pull out the pin and discard



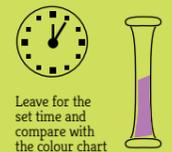
Keep the pin hole upwards and squeeze out the air



Still squeezing, turn tube upside down and insert below the water and squeeze out the air



Let go, to suck up just over half a tube of water



Leave for the set time and compare with the colour chart



Nitrate: 3 mins
Phosphate: 5 mins

- 8 Compare the tube with the colour chart immediately when the time is up, as the colour will continue to develop.
- 9 Record the results below and enter them online or via email

Testing the Water is part of the Lottery funded Brecks Fen Edge and Rivers LP Scheme, for more information please visit www.brecks.gov.uk or contact bfer.admin@suffolk.gov.uk

Recording your Testing the Water results

Surveyor names(s) – your name and anyone with you collecting the sample e.g Anne Smith, John Smith

Recording Group – if you are collecting results on behalf of a group, enter the name e.g. Wild About Cheshire

Email – Please supply your email address to receive the online results for your survey.

Grid reference e.g. SP 3212 6543 or nearest postcode

Date

If you don't know either of these, make notes of the waterbody location (e.g. name of nearest road), so you can find the site later on a map. See the website for more help.

What type of waterbody did you sample? (please tick one)

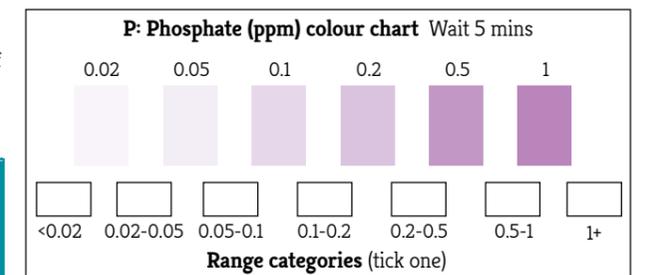
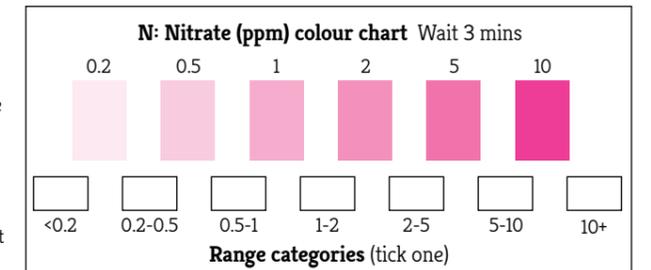
Garden pond Other pond Lake Ditch River Stream

Other (please state)

Name of waterbody e.g. Collier Pond, or Pond in Stubbs Wood (if pond name not known)

Recording the level of nutrients

- 1 Once the development time is up, compare your N or P tube with the corresponding chart (right).
- 2 The chart is based on ranges e.g. my colour falls between 0.5 and 1. Tick one.
- 3 If the tube hasn't changed colour at all - tick the lowest range category <0.2 N, or <0.02 P
- 4 If your tube matches one colour exactly, tick the higher range e.g. if recording 0.5, tick the range 0.5-1



Submit your results online using the Testing the Water hub: <https://bit.ly/BFERCleanWaterDataPortal>

92% of ponds are biologically damaged – clean water is a precious resource.