



## HABITATS

Examples from left to right: Ponds – Goulet Isabelle, Wetlands – David Chandler

# Freshwater

Information: Abigail Marshall

### All about freshwater

The UK has a vast array of freshwater habitats split into running waters (i.e. rivers and streams) and standing waters (i.e. ponds and lakes). Freshwater habitats are a priority for nature conservation as they host thousands of species, including some highly specialised plants and animals.

### Streams & rivers



Streams are small (< 8.25 m wide), meandering running waters, whereas rivers are classed as larger (> 8.25 m wide) running waters and there are over 265,000 km of rivers and streams across the UK. However, many of these are polluted (with litter, chemicals and untreated sewage), with only 14% of English rivers being classed as of 'Good Ecological Status'.

**Flora** includes water mint, brooklime, water-crowfoot, water-starwort, water-cress, water-milfoil.

**Fauna** includes trout, salmon, bullhead, lampreys, pearl mussel, native crayfish, golden-ring and club-tailed dragonfly, cool water stoneflies, white-legged damselfly, wandering snail, mayflies, dipper, kingfisher, otter, water vole.

**Management** River management ideas are provided by a number of organisations. This includes The River Restoration Centre, who provide a manual of different techniques of good practice in river restoration that works within the natural processes. There are dozens of techniques depending on the restoration aim (e.g. bank protection, diversions, restoring meanders).

**Learn more** Latest water classifications results published – Defra in the media [deframedia.blog.gov.uk/2020/09/18/latest-water-classifications-results-published](https://deframedia.blog.gov.uk/2020/09/18/latest-water-classifications-results-published)

Manual of River Restoration Techniques [therrc.co.uk/manual-river-restoration-techniques](https://therrc.co.uk/manual-river-restoration-techniques)

## Ponds



A pond is defined as a body of water between 1 and 20,000 sq. m, which exists for at least 4 months of the year. Ponds are ubiquitous across the UK landscape – both in towns, cities, gardens and the countryside, either formed naturally or man-made.

**Flora** includes pillwort, broad-leaved pondweed, hornwort, water lilies, water soldiers, yellow flag irises, reed, rushes, water mint, water starwort.

**Fauna** includes damselflies, dragonflies, beetles, caddisflies, water boatman, water scorpions, snails, newts, frogs, toads, feeding for some species (bats, grass snakes, water voles), moorhen, teal, redshanke, snipe.

**Management** Pond creation, in residential settings or natural areas where permission is granted, can be a great way to improve freshwater habitats, particularly if the water being used to fill ponds is clean. Toolkits from the Freshwater Habitats Trust can help with pond building in your garden or as part of a natural area under the Million Pond Project.

**Learn more** Pond life: facts about pond habitats, plants and animals – Natural History Museum [nhm.ac.uk/discover/pond-life-facts-about-habitats-plants-animals.html](http://nhm.ac.uk/discover/pond-life-facts-about-habitats-plants-animals.html)

Pond Creation Toolkit – Freshwater Habitats Trust [freshwaterhabitats.org.uk/projects/million-ponds/pond-creation-toolkit/](http://freshwaterhabitats.org.uk/projects/million-ponds/pond-creation-toolkit/)

How to build a pond | The Wildlife Trusts [wildlifetrusts.org/actions/how-build-pond](http://wildlifetrusts.org/actions/how-build-pond)

## Lakes



Lakes are standing bodies of water greater than 20,000 sq. m and can be further classified based on productivity: (1) eutrophic = high, (2) mesotrophic = moderate, (3) oligotrophic / dystrophic = low. Reservoirs are classed as artificial lakes. The variation of productivity due to high / moderate / low nutrients result in a different floral and faunal landscape (examples below are across all types – view references for species for different lake types).

Of the 10,000 lakes in the UK, many are considered to be in good ecological condition.

**Flora** includes planktonic algae, reeds, rushes, long-stalked pondweed, fennel-leaved pondweed, spoked water-milfoil, yellow water lily, common reed, bottle sedge, bullrush, shoreweed, quillwort.

**Fauna** includes snails, dragonflies, water beetles, native crayfish, roach, tench, pike, great crested newt, vendace, schelly, charr, birds (red-throated and black-throated divers).

**Management** Various techniques can be considered for maintaining healthy lakes, including minimising nutrient inputs (pollutants), water level management and crafting linked subhabitats (e.g. open water, marginal vegetation, banks).

**Learn more** Lakes – Freshwater Habitats Trust [freshwaterhabitats.org.uk/habitats/lake/](http://freshwaterhabitats.org.uk/habitats/lake/)  
Mesotrophic Lakes [buglife.org.uk/resources/habitat-management/mesotrophic-lakes](http://buglife.org.uk/resources/habitat-management/mesotrophic-lakes)

## Other notable freshwater habitats



**Wet grasslands** are low-lying, often when farmland floods and provide nesting habitats for lapwing, curlew, black-tailed godwit, hornet robberfly, large garden bumblebee. [buglife.org.uk/resources/habitat-management/lowland-meadows/](https://buglife.org.uk/resources/habitat-management/lowland-meadows/)

**Wet woodlands** have decreased due to land-use changes but include alder, birch and willow and support invertebrates such the 10-spotted pot beetle and netted carpet moth. [buglife.org.uk/resources/habitat-management/wet-woodland/](https://buglife.org.uk/resources/habitat-management/wet-woodland/)

**Reedbeds** are colonised by common reed and have many faunal species, including hundreds of invertebrates, reed leopard moths, rove beetles, bitterns, eels, water rails. [wildlifetrusts.org/habitats/wetlands/reedbed/](https://wildlifetrusts.org/habitats/wetlands/reedbed/)

**Ditches** are manmade, usually straight, channels for collecting runoff but can support all sorts of life if not overly polluted, most notably the great silver water beetle. [freshwaterhabitats.org.uk/habitats/ditch/](https://freshwaterhabitats.org.uk/habitats/ditch/)

**Springs** are emerging waters from underground and can have a variety of species including mosses, liverworts, cold water flatworms, caddis flies, southern damselfly. [freshwaterhabitats.org.uk/habitats/spring/](https://freshwaterhabitats.org.uk/habitats/spring/)

**Fens** are nutrient-rich and support thousands of invertebrates; half of the UK dragonfly species can be found at some sites, along with orchids, swallowtail butterfly, water vole, Chinese water-deer. [buglife.org.uk/resources/habitat-management/fens/](https://buglife.org.uk/resources/habitat-management/fens/)  
[wildlifetrusts.org/habitats/wetlands/lowland-fen](https://wildlifetrusts.org/habitats/wetlands/lowland-fen)

**DID YOU KNOW?** Globally, freshwater habitats account for less than 0.01% of the world's surface, yet support more than 100,000 species.

**More than half of the world's wetlands have disappeared since 1990!**

**In the UK, two thirds of all freshwater species are supported by ponds.**

**A common frog tadpole can sense water level changes and will develop faster if a pond is drying up!**

## How can we help?

We can look after our freshwater environment in different ways: taking part in river cleans, reducing the amount of water we use, not polluting the natural environment, creating natural ponds in our garden, and volunteering to take part in freshwater habitat surveys. Lobbying government can also help, as seen most recently to the backlash of voting against the Environment Bill, where the public outcry arguably led to a change in policy agreement.

Climate change is also having a big impact on our environment. Freshwater habitats are an integral part of the environment and are being impacted due to climate change through variations in rainfall, increased temperatures and changes to the physical habitat. Therefore climate action is helping towards a cleaner and healthier environment. This can be in the form of personal lifestyle changes to reduce our carbon footprint, or activism and advocacy to encourage governments and companies to make green and ethical decisions.

### Learn more

- Freshwater habitat descriptions: UK Terrestrial & Freshwater Habitat Types [data.jncc.gov.uk/data/b0b5e833-7300-4234-8ae5-bdbf326e854c/habitat-types-freshwater.pdf](https://data.jncc.gov.uk/data/b0b5e833-7300-4234-8ae5-bdbf326e854c/habitat-types-freshwater.pdf)
- Home page – Freshwater Habitats Trust [freshwaterhabitats.org.uk/](https://freshwaterhabitats.org.uk/)
- Parliamentary Briefing: Environment Bill – The Rivers Trust [theriverstrust.org/about-us/news/parliamentary-briefing-environment-bill-lords-amendment-45b-on-sewage-pollution](https://theriverstrust.org/about-us/news/parliamentary-briefing-environment-bill-lords-amendment-45b-on-sewage-pollution)
- [assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/291081/scho0507bmoj-e-e.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/291081/scho0507bmoj-e-e.pdf)
- Contact an A Rocha UK naturalist at [naturalist@arocha.org](mailto:naturalist@arocha.org)