



POLLUTION
AND HOW TO SPOT IT



NRA

National Rivers Authority

Pollution Pollution destroys the purity of water and can pose a serious threat to drinking water supplies and people who come into contact with polluted river water, such as canoeists or children paddling.

Fish, plants, wildfowl, livestock and wild animals can all be killed by highly polluted water.

Where it comes from Pollution can happen naturally as a result of decaying plant life and impurities washed from the soil. But most pollution is man-made and comes from the community and industry around the river banks.

Man-made river pollution can result from several causes – industrial discharges, discharges from farms, including run-off from agricultural wastes, seepage from waste sites and discharges from sewage works and sewers.

A high proportion of the major discharges to rivers are from sewage treatment works where sewage and trade effluents are treated to acceptable standards before being discharged into rivers. When rainfall is heavy, sewers may overflow into the rivers and cause pollution.

Pouring any liquid or chemical which is harmful to animal and plant life into a watercourse can cause pollution. Ditches, even if they are sometimes dry, are still legally classed as watercourses if they eventually connect to a natural watercourse.

Biological changes Pollution which does not immediately kill fish can

still have serious effects if it continues for any length of time. It can drive fish away, prevent successful breeding and seriously damage any fish which remain.

Apart from the plants and animals which can be seen by the naked eye, there are many very small species which are vital to the life of the river. If any of the complex components of river life are harmed the whole life cycle of the river

What to look for Study the stream and its banks under various conditions so that you know its normal appearance at all times.

Any changes, such as an alteration in the colour of the water, an increase in cloudiness or signs of a film on the surface should be noted. It is also worth noting changes in the smell of the water since this can also be an indication of pollution.

Changes in the type, distribution and quality of plant growth are often due to a change in water quality.



and its inhabitants can be affected.

Chemical analysis of water by laboratories will show the quality of the water at the time of sampling, but may miss any pollution which occurs at other times. A biological survey shows if pollution has occurred during the preceding months.

Any signs of distress or change in the normal behaviour pattern of fish can warn of pollution before it becomes serious enough to kill them. Look for: fish gasping near the surface, sudden movement – including jumping out of the water, swimming slowly on their sides, stunted growth or patches of skin infection – they may be an indication of pollution.

Foam patches on water may be a sign of pollution from farm or factory

drainage. Heavy foaming is serious since it may be a sign of major pollution.

But, foam patches downstream of a weir or other turbulent water is not always a sign of pollution. Peaty waters can give this effect and some streams, at times of high flow, may produce foam patches because of natural run-off from the land.

If fish are found dead, dying or in distress, it is important to discover the source of the pollution as soon as possible. Contact the National River Authority's pollution control office immediately if you suspect a river or stream is polluted.

The NRA's job The National Rivers Authority was set up in September 1989, under the 1989 Water Act, to protect the water environment.

Anyone who wants to discharge trade or sewage effluent into a river must have our permission to do so. We set the quality and quantity standards the dischargers must meet in order to protect the watercourse. Samples are regularly taken and analysed to ensure the standards are being met. If they are not then we may prosecute.

Our pollution control officers also keep watch on our rivers, streams and canals and take regular samples to check there has been no pollution of the water.

When pollution is discovered we try to identify the source, stop it and, where possible, remove the pollution. Different types of pollution need



different methods. Oil may be contained by booms or straw bales and suction hoses, or specially designed absorbent materials, used to draw the oil off the water.

One of the most common effects of pollution is a reduction in the level of oxygen in the water. This can have serious consequences for future plant and fish growth. In these cases we may use an aerator to try to replace the oxygen in the water.

Any downstream users of river water are informed of a pollution incident that may affect them, particularly where water supply, spray irrigation or cattle watering are involved.

A success story Once one of the most polluted major rivers, the River Trent is now recognised as one of the best fisheries in the country.

Twenty years ago anglers might have hoped to catch small roach or gudgeon on the middle reaches of the river downstream of the River Tame -

but that was all. Now barbel, bream, chub and dace abound.

Salmon are also returning to the river and although they are few in number, anglers would never have dreamed of hooking this magnificent fish a few years ago.

Crucial to the success in cleaning up the Trent has been the work on its major tributary, the River Tame.

In the 1960s the quality of the River Tame was no better than that of a poorly treated sewage effluent. Under storm conditions, the river was often completely without dissolved oxygen.

Flowing through the industrial West Midlands, the river receives massive inputs of sewage and industrial effluent as well as large amounts of polluted run-off during wet weather.

The closure of old sewage works and the building of modern ones together with river purification lakes at Lea Marston has resulted in major improvements. A coarse fishery has been established in the lower reaches of the river for the first time in more than 100 years.



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Pollution doesn't only occur between 9am and 5pm, Mondays to Fridays. It can, and does, happen at any time of the day or night. The NRA's pollution control offices are on call 24 hours a day, 365 days of the year.

If you see any signs of water pollution contact us immediately on any of the following numbers.

- SOLIHULL 021-711 2324
- LICHFIELD 0543 444141
- NOTTINGHAM 0602 455722
- SHREWSBURY 0743 272828
- TEWKESBURY 0684 850951



NRA

Severn-Trent Region

Headquarters: *Sapphire East, 550 Streetsbrook Road, Solihull, West Midlands B91 1QT*
Telephone: 021-711 2324

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