

A photograph of a river with a chemical structure overlay in the top right corner. The river is surrounded by lush green vegetation and trees. The water is dark and appears to be polluted with brown leaves and debris. The chemical structure is a complex organic molecule with a benzene ring and several side chains.

A clean home shouldn't mean a dirty river

Markway Riverine Hampshire-Purslane © Clive Chatters

The babbling streams and rivers of the New Forest can hide a dirty secret - Phosphate.

Naturally-occurring nutrients feed the water-crowfoot, water-parsnip and watercress usually found growing in our streams. But in excess amounts, the plant nutrient phosphorus acts as a pollutant. It can't be seen in the water, but it makes its presence plain by disrupting the habitat, allowing nutrient-hungry algae to out-compete aquatic plants, and in extreme cases, triggering algal blooms. When the algae die and are deposited as sediment, this can smother plants, and as they decompose, oxygen is used up, suffocating aquatic insects and fish. As well as threatening our wildlife, these processes can prevent us from using and enjoying our waterways, polluting rivers, threatening angling, water sports and shellfisheries, and contributing to flood risk.





Stopping this pollution isn't easy, because phosphorus, in the form phosphate, enters rivers from a number of different sources, including naturally occurring sources, from agricultural land and via wastewater treatment works.

Up to fifty thousand tonnes of phosphorus per year end up in England's rivers

From farmland:

Only around a quarter comes from agricultural sources including soil and nutrient runoff, yard drainage and organic manure, and this contribution has been decreasing due to better nutrient management. Government schemes such as 'Catchment Sensitive Farming' provide further advice and support to help farmers reduce the loss of phosphate-rich fertilisers and soils from their land.

From waste water:

The remainder comes mostly in wastewater from homes and businesses. The waste from washing machines, dishwashers, sinks and toilets drains to wastewater treatment works or septic tanks, where it is treated, and the resulting treated water released into rivers or groundwater. Since the 1990s there has been significant water company investment to upgrade many wastewater treatment works, providing an additional level of treatment to strip out phosphates. By 2010, phosphate released from water company sewage treatment works had reduced by more than half, and further investment will be delivered over the next few years.

But despite improvements across all sectors, **over a half of our rivers in the South East still exceed phosphate standards.** Trials underway at wastewater treatment works nationally are helping the water industry to better understand the potential for more ambitious phosphorus removal in the future, to further protect our environment. Meanwhile, phosphate from all private systems like septic tanks (which don't actively remove the chemical), as well as residual phosphate from treatment works which don't have phosphate stripping, continues to be released directly into the environment.

But why is it in our waste water in the first place?

Some is added to the food that we consume, such as dairy and meat products, and so ends up in wastewater. This can be difficult to avoid.

But **there is one area where every householder can make a difference:** phosphates used in domestic cleaning products account for nearly a fifth of the phosphate from our homes, so being selective in your shopping can help to protect our local rivers. The Government has taken action to reduce the amount of phosphate in laundry detergents, but many other products still have a high content. **Dishwasher detergents are a particular culprit** with some containing over a third by weight, but a number of manufacturers don't use phosphate at all.

Brands with no phosphate include:

ECOVER

faith
in nature

bio^D

PlanetClean[®]
Your Source for Clean[®]

sonett
biochemie | organisch | mildharmonisch

These are available either locally or on-line. Alternatively choosing low-phosphate products can help too - aim for those with 5% or less.

<5%

Reducing the amount of phosphate that each household contributes in their wastewater will see conditions improve for our river wildlife. Fewer algal blooms, healthy populations of aquatic insects, and thriving fish communities are what we'd like to see for the streams and rivers of the New Forest. Improvements will also help to reduce the energy and chemicals required by the water industry in removing phosphorus from wastewater.

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The New Forest Catchment Partnership works with local communities and organisations to identify where they feel there are opportunities to improve the health of streams, rivers and lakes and improve the quality of the local environment.

This leaflet is supported by the following partnership members:



Environment Agency



Hampshire County Council

Southern Water



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The CATCHMENT BASED APPROACH (CaBA) is a community-led approach that engages people and groups from across society to help improve our precious water environments. CaBA Partnerships are now actively working in 100+ catchments across England and Wales.

<http://www.catchmentbasedapproach.org/>

