

Essex Rivers Hub

Landmanager Newsletter

March 2014

The Essex Rivers Hub Project.

The Rivers Chelmer and Blackwater lie in the heart of Essex and the area is rich in landscape and wildlife heritage. The two rivers also run through highly productive arable land in Essex and there is increasing pressure on farms to introduce more effective measures to control diffuse pollution of phosphate reaching our rivers and streams.

The Essex Rivers Hub is a partnership project that has been developed by the Essex Wildlife Trust and the Environment Agency. The aim is to provide a way for all local people to get involved in helping to improve the water quality of our rivers. Landowners are a vital partner in this process and the Project aims to support a hands-on approach to establish practical, balanced and cost-effective farm management solutions.

FWAG East are visiting farms in the catchment to discuss specific funded projects that can be undertaken to help farmers protect water quality in rivers.

www.essexrivershub.org.uk

Working together for healthy rivers



What's the problem?

Never have soils and water been the focus of so much discussion as in the last few months! However, as the waters retreat and the spring work gets going, the discussions go on. Different factors influence water quality and they differ from catchment to catchment. With more extreme weather patterns the challenge of managing soils and helping to improve water quality is not an easy one.

The health and well-being of our streams, rivers and ground waters have always been a core business concern for farmers and growers, as well as an environmental one. Good quality water is a vital resource which farming has a responsibility to protect, both in its own interests and on behalf of society generally.

One of the particularly damaging nutrients going into watercourses is phosphate. The bulk of phosphate going into our rivers and streams nowadays is a direct result of human activity (sewage treatment works etc.).

However, agriculture is also a significant source of the phosphate loading in rivers, groundwaters and streams.

Why farming?

Losses of phosphorus from agriculture are of particular concern, as agricultural systems traditionally have high inputs of P applied in fertilisers and manures to enhance productivity.

There is strong scientific evidence that agriculture is a significant source of the phosphate loading in rivers, groundwaters and streams. Estimates suggest that up to a quarter of the phosphate load to surface waters comes from farming sources.

The size and impact of agricultural phosphate emissions from farming into our watercourses is complex and variable from place to place. They are influenced by a range of factors such as climate, topography, soil type, inputs, land and livestock management.

We can't ignore it—it's a legal requirement!

The important bit of legislation

The Water Framework Directive (WFD) is a major piece of long-term legislation that pulls together all of the fragmented pieces of water legislation that first started in 1975. The Directive came into force in 2003 and culminates in the final deadline for meeting objectives in 2027. The Directive is here to stay, it is the current focus of Defra and the Environment Agency and it requires that our waterbodies (both surface and groundwater) are managed sustainably to reach good ecological condition.

What does all of this actually mean?

Good ecological and chemical status means that all waterbodies should be clean and contain the right type and number of animals and plants. It is measured in terms of:

1. fish, invertebrates and plants.
2. waterbody shape, depth and variety of shape, e.g. is the watercourse heavily modified.
3. levels of phosphate, nitrate, dissolved oxygen, etc.
4. pollutants and heavy metals.

The Water Framework Directive works on the one-out all-out policy, so if one of these fails then the whole waterbody is classified as failing.

The groundwater in the Anglian region shows some of the highest phosphate concentrations in the UK – above 0.12 mg per litre in some areas (the maximum figure set for phosphate levels in water). Indeed, phosphate is a reason for half of the failures to achieve WFD 'Good' status in the region's rivers (381 out of a total of 757).

Is it just sewage?

Previously, efforts in the UK to tackle phosphorus pollution in rivers and lakes have been directed at decreasing the phosphorus loadings from sewage treatment works. Although this is still ongoing, with water companies investing huge sums of money over the next decade, attention is now being directed towards avoiding the transfer of phosphorus from agriculturally managed soils and livestock enterprises to waterbodies.

Farmers can make a difference

The transport of phosphorus from agricultural soils is often described as a "diffuse" loss, e.g. spread out across a catchment. However, not all fields in a catchment contribute equally to the phosphorus load in the river. Consequently, to reduce phosphorus loss farmers need to identify those fields that contribute most to phosphorus ending up in waterbodies. The issues can be complex but losses can be due to soil enriched with phosphorus being liable to erosion, or because the animal husbandry and manure management system being practised needs adjusting.

It is important that the efforts to control the movement of phosphate in farming are balanced with the need for phosphorus in food production. It is therefore important that farmers have an input into the solutions and that we work together locally to reduce diffuse pollution and improve water quality without affecting yields.

The prospects for a positive outcome from farm management changes are good. Improvements in management practices can result in significant reductions in phosphate losses and we aim to demonstrate that voluntary farm management will deliver the necessary reduction in phosphate losses from farms.

What can the project offer you?

- FWAG East will work with farmers in the catchment to adopt actions that are known to reduce phosphate run-off.
- A selection of projects have been identified to help farmers achieve this and full funding is available to help make them happen.
- Invitations to workshops looking specifically at soil management and organic matter.
- Information on latest research into reducing phosphorus loss from agriculture.

Other partners involved in the project include FWAG East, Chelmer & Blackwater Catchment Partnership, Essex & Suffolk Water, Dedham Vale & Stour Valley Project, Parish Councils and the Rural Communities Council for Essex (RCCE), Essex County Council and the Rivers Trust.