The Water Framework Directive and the Catchment Based Approach in your area

Bridget Marr
Catchment Co-ordinator Norfolk
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What is the Water Framework Directive?

- The European Water Framework Directive (WFD) came into force in December 2000 and became part of UK law in December 2003.

- It is an ecology-led directive providing framework for community action in water policy.

- Affects everyone involved in management of rivers

- Aims for all rivers to be at good ecological status
River Basin Management Plans

- Delivered through River Basin Management Plans (RBMP)
- 1 for each River Basin District (RBD)
- 11 RBDs in England and Wales
- We are in the Anglian RBD
An Ecology Based Directive

New Classification System - key aspects:

- Biology
- Chemical quality (surface & ground waters)
- Quantity (surface & ground waters) – ‘hydrology’
- Physical structure – ‘morphology’

Considered for each ‘water body’ type – rivers, lakes, estuaries, coastal waters and ground waters
WFD objectives

- Improving rural land management
- More naturally functioning rivers
- Cleaner water for drinking, recreation and economic use
- A reduction in pollution
- Sustainable use of water
Typical Pressures on water environment

- Some farming practices
- Drinking water quality
- Invasive signal crayfish
- Phosphate from treated sewage discharges
- Invasive Himalayan balsam
- Invasive fish species
- Nutrient runoff
- Poor morphology
- Amenity use of pesticides
- Low flow/over abstraction
- Barrier to fish passage
- Surface water sewer abuse
Catchment Approach

- Working together to understand the issues
- Discussing and agreeing on outcomes and priorities
- Sharing information and resources
- Working together to tackle difficult issues
- Working collaboratively to deliver work on the ground that improves the catchment
WFD Management Catchments
Catchment Based Approach in Norfolk

- 3 active partnerships in this part of the county
  - Broadland Catchment Partnership
  - North Norfolk Rivers
  - North West Norfolk
- Hosted by Norfolk Rivers Trust
- NFU and Farming and Wildlife Conservation represented on groups
Catchment Partnerships

Broadland Catchment  – Neil Punchard
North Norfolk Rivers - Jonathan Lewis

i) Identifying Catchment issues
ii) Community engagement
iii) Improvement Projects
iv) Catchment Plan
Broadland Rivers Key Issues

- Physical modifications - fish barriers & lack of suitable habitat
- Pesticides
- Phosphate & Sediment
Physical Modification
Pesticides
Phosphate & Sediment
How you can help

- Lots of work to be done, this is the start of the process
- What can you change on your farm?
- Opportunities to get involved with new Catchment Partnerships
- Look at What’s in Your Backyard for Farmers on our website
- Keep soil in your field
- Silt traps
- Keep livestock out of water
- Fords & tracks near water
Why does phosphate matter? Guidance for farmers

Why is phosphate in water a problem?
Phosphate is not toxic on its own, but, when combined with nitrate, changes occur in the water and this is known as eutrophication.

The most well known symptom of eutrophication is the growth of algae which removes oxygen from water, smothers watercourses and lakes, and releases toxins when it dies. There are also many effects which are subtle and change the biodiversity and amenity value of water bodies, such as:

- Undesirable change in plant species composition and increase in plant growth
- Change in invertebrate populations (fish food) leading to loss of fish species
- Taste, odour, and water treatment problems
- Increased incidence of fish kills
- Less harvestable fish and shellfish
- Reduced aesthetic value of river

A large number of waters in Norfolk and Suffolk are potentially at risk of failing their water quality target due to phosphate enrichment.

The map below indicates the status of your nearest river.

How does phosphate from agriculture reach water?
Research has shown that there is an increased risk of phosphate entering surface waters particularly when soils are at P index 3 and above.

**PHOSPHATE FACT**
The major source of phosphate loss from agriculture is from soil erosion, runoff and drain sediments. The soil carrying the phosphate also damages fish spawning grounds.

Phosphate can enter water through:
- Manures or fertilisers direct from overspreading or from leaks and spills or washed off the field surface
- Water and wind erosion of soil carrying phosphate attached to clay and organic matter
- Soil sediments and manures, containing phosphate, reaching field drains. This is increased in cracked or recently fissured soils (e.g. land drainage, deep subsoiling or mole draining)

**PHOSPHATE FACT**
2 granules of TSP (46% P₂O₅) added to a ditch (1m wide with 33cm water) could cause WFD failure for around 1.2km of ditch.

What can you do to reduce phosphate losses to water?

**Soil, Manure and Fertilisers**
- Test soil and manure for phosphate content regularly on a 4-5 year basis. Your on-farm agronomist can help you with this, or if you are within a Catchment Sensitive Farming area your local CSF Officer may be able to demonstrate the benefits of soil testing where fields are not regularly sampled.
- Where phosphate levels in soil are high then use “P holidays” to bring them back towards Index 2

**PHOSPHATE FACT**
Reducing your phosphate fertiliser by about 2.5 tonnes per hectare, applied over several years, would change soil from mid index 4 to mid 3. So if you have a high index you could potentially make savings of about £800.

- Do not apply phosphate to soils above index 3 unless it is a phosphate hungry crop such as potatoes and the fertiliser is placed under the crop. Be aware that compound fertilisers contain phosphate which you may not need
- Calibrate fertiliser and manure application equipment regularly
- Crops like potatoes, maize and vegetables respond to fresh fertiliser placed near the developing crop. Use the most effective application method for the crop (e.g. placement, banding, combination drilling) and do not use excessive rates
- Avoid applications before heavy rainfall

**FURTHER HELP AND INFORMATION**
Sue Andrews, Environment Agency
sue.andrews@environment-agency.gov.uk

For your local Catchment Sensitive Farming Officer contact details:
- www.naturalengland.org.uk
- The ‘Think Soils’ manual:
- www.environment-agency.gov.uk (search on the word ‘soil’)
What’s in Your Back Yard
www.environment-agency.gov.uk/wiyby
WIYBY - Phosphates
WIYBY - Sediments
Summary

- Know your local catchment and water quality issues – WIYBY
- Support the Catchment Based Approach
- Get involved in partnerships; CSF, Norfolk Rivers Trust, Broadland Partnership
- Protect your resources; managing your soil and land sustainably
- Talk to us about opportunities to improve the local water environment