

This list is not exhaustive. If in doubt, consult the Environment Agency or Working Wetlands for further information.

- The Water Resources Act and other legislation regulate discharges, abstractions, structures and other activities that can affect watercourses and fish – check with the Environment Agency www.environment-agency.gov.uk
- Cross-compliance regulations require annual preparation of a Soil Protection Review and restrict cultivation and spraying operations near watercourses and other environmental features.
- Nitrate Vulnerable Zones have 'additional' limits on timing and rates of nutrient applications and storage of slurries and manure.
- Environmental Impact Assessment regulations may prevent cultivation (sub soiling/aeration) of semi-natural and uncultivated land. Contact the Working Wetlands team for advice.

Sources of funding, further information and advice

- Working Wetlands offers advice on resource protection and whole holding farming and wildlife advice.
tel 01409 221823 or visit www.devonwildlifetrust.org
- Environment Agency offers advice and expertise in all aspects of resource protection.
Contact www.environment-agency.gov.uk
- Natural England offers advice on Environmental Stewardship Schemes including options for resource protection management.
tel 0300 0601110 or email devon@naturalengland.org.uk
Soils4Profit – soils and nutrient management advice and capital grants for machinery and farmyard infrastructure.
tel 03000 601244 or visit www.naturalengland.org.uk
- Catchment Sensitive Farming initiative offers advice and grants to reduce problems of diffuse water pollution in key river catchments in Devon.
tel 03000 600705 or visit www.naturalengland.org.uk
- Westcountry Rivers Trust offers advice and information for riparian land and water management and the potential capital grants available.
tel 01579 372140 or visit www.wrt.org.uk
- Tried and Tested – Nutrient Management Planning System, available at www.nutrientmanagement.org
Computer planning systems are available at www.planet4farmers.co.uk
- A guide to Better Soil Structure information on soil structure and management, published by the National Soils Resource Institute at www.cranfield.ac.uk



Healthy watercourses provide vital habitat for a wide range of aquatic wildlife including salmon, trout and their insect prey. Predators such as bats, kingfishers and otters also rely on a thriving network of ponds, pools, rivers and streams.

Water and soil management

Good management of water and soils ensures that valuable resources such as soils and nutrients remain on the farm, improving productivity, keeping operational costs down, and benefiting the environment. Well-managed farmland improves water quality in rivers by acting as a filter, removing silt and nutrients. It also slows the pace of water entering rivers during periods of high rainfall, thus reducing flood risk.

For these reasons farming practices need to be monitored and reviewed to ensure that they are not adversely affecting the quality of water through pollution with nutrients, silt, pesticides or faecal organisms.

To protect our water resources there are three key actions for the land manager:

- **Tackle the source of the problem** (eg reduce soil compaction).
- **Slow the pathway of the pollutant** (eg create buffer strips).
- **Protect the receptor from the pollution** (eg fence watercourses).



Soil management training

Tackling the source

Soil management

Good soil structure and composition is the key to efficient, productive and sustainable farming as well as resource protection.

DO

- **Test your soils for compaction and aerate or sub-soil to open up the soils and break up compacted layers.**
- **Plough along contours to reduce soil erosion and run-off.**
- **Move feeders regularly to minimise poaching and locate away from gateways, watercourses and sensitive areas.**
- **Manage maize fields by undersowing with a winter cover crop or cultivating to create a rough surface after harvest - choose early maturing varieties to avoid harvesting in wet conditions.**

DON'T

- **Cultivate fields liable to run-off or erosion problems – permanent grassland is usually the best management option for such areas.**
- **Carry out heavy field operations in wet conditions.**

Nutrient management

Crop nutrients need to be provided in the best ways, at the appropriate time and at the correct levels to maximise output and avoid environmental damage.

DO

- **Test your soils for nutrient and pH levels at least every four years - excess applications waste money and time – testing can pay for itself many times over.**
- **Regularly check and calibrate machinery used for application of nutrients and pesticides to ensure maximum accuracy and effectiveness.**
- **Incorporate slurry or manure into bare ground as soon as possible.**

DON'T

- **Apply slurries, farmyard manures or bagged fertilisers to frozen or waterlogged fields.**
- **Apply organic manures within ten metres of a ditch or watercourse.**

Slowing the pathways

Slowing the speed of surface water reduces run-off and the associated soil erosion.

DO

- **Create buffer strips or take field corners out of cultivation to catch run-off in grassland and arable fields.**
- **Identify and grass-over natural drainage pathways, such as gullies, to reduce channelling of run-off water.**
- **Consider restoring wetland habitat adjacent to watercourses.**

DON'T

- **Plough with the slope.**
- **Carry out further drainage operations in sensitive areas.**

Protecting the receptor

Wetland areas provide valuable grazing in drier summer periods and act as buffers to watercourses, they can also prove a benefit when applying for grant schemes because of their value to wildlife and resource protection.

DO

- **Create buffer strips adjacent to watercourses in arable and grassland fields to slow, filter and trap nutrients and pesticides.**
- **Fence river banks to prevent erosion by livestock – water can be accessed at drinking bays, from 'pasture pumps' or piped supplies.**
- **Maintain wet grassland areas as low input, permanent grassland.**

Infrastructure management

The built fabric of the farm has a crucial role in controlling problems with water pollution.

DO

- **Ensure adequate slurry storage to avoid spreading at inappropriate times - roofing can prevent rainwater adding to storage costs.**
- **Minimise dirty water volumes by efficient separation from clean water (eg roofing and guttering), clean water can be harvested and re-used.**
- **Construct surfaced animal tracks and bridges over watercourses to reduce bank erosion, bacterial contamination and lameness in stock.**
- **Re-site gateways away from watercourses and wetlands as these are likely to become poached by animals or machinery.**



Poaching caused by livestock