

Wet winters and worsening pollution: Farmers urged to adapt to the climate crisis

We are experiencing the third wettest winter on record - having received, in some cases, over 0.5 metres of rainfall since August (over 1.5 times more than we would usually expect). This has led to some challenging conditions across East Anglia, and as a result, we have identified and dealt with high numbers of pollution events throughout the region.

Robert Munro, Ely Land and Water Team Leader for the Environment Agency said: *“Our officers are regularly told that these challenges have arisen due to ‘exceptional rainfall events’. However, with this happening year after year, these events can no longer be interpreted as exceptional or unprecedented.”*

The land in our catchments acts like a natural sponge, absorbing rainwater and releasing it slowly. When water flows uninterrupted over a field’s surface as a result of poor land management, or excessive drainage works, there is a direct impact on the environment and further downstream, including private properties.

Ed Bramham Jones, Head of Land and Water at the Norfolk Rivers Trust said: *“We’ve experienced acute problems with soil compaction, made worse by the late harvesting of crops, leading to large amounts of surface runoff reaching ditches and road surfaces, and ultimately ending up in our precious and fragile chalk streams.”*



*Runoff from a saturated pig field, which also has a manure heap located close to a watercourse (left).
Runoff from a harvested potato field that has flooded a pond (right).*

The impacts can be devastating: rivers can become over-enriched with nutrients, encouraging excessive algal growth, and sediment loading can result in turbid waters and the smothering of fish spawning grounds. Similarly, the direct loss of topsoil and reduction in soil quality will also reduce land fertility over time.

With a continuing wet winter, farmers and growers will need to do as much as they can to prevent soil erosion and pollution from entering streams and rivers. Buffer strips act by ‘slowing the flow’ of water to allow the sediment and associated nutrients to settle out before the water reaches the watercourse. Therefore, it is essential that channels are not dug through a buffer strip to release a build-up of runoff to a watercourse. This would be seen as a direct and deliberate act of pollution, and could lead to: enforcement action taken by the Environment Agency; being reported to the

Rural Payments Agency (RPA); and be in breach of [cross-compliance](#) and contrary to any stewardship agreement.

To prevent this from happening it is important to be aware of, and comply with, the [Farming Rules for Water](#), and implement best practice to reduce the risk of water pollution.

Best practice advice from Norfolk Rivers Trust (NRT)

For high-risk arable crops such as potatoes, maize and sugarbeet:

- Choose fields that have low runoff risk by looking at the topography, proximity to watercourses and soil health – sands, silts and those with low soil organic matter are particularly vulnerable to runoff.
- Refer to the ‘*source, pathway and receptor*’ model (see diagram) when considering water flow across a site and how best to mitigate. For example, relocating gateways to higher ground, leaving in cover crops for as long as possible or breaking up tramlines and wheelings with a ridging device (available to trial for free through NRT’s [Water Sensitive Farming Initiative](#)).
- Wait for correct weather conditions to harvest and minimise trafficking. Prevent all driving on margins and buffers.
- Cultivate immediately after harvest and if possible, sow a cover crop. Ensure road surfaces are swept and left clear after loading.
- Look at reduced tillage systems to build soil health and organic matter.
- Undersow maize to provide a green cover at harvest.



For outdoor pigs:

- Know where designated and restricted areas are located including Groundwater Source Protection Zones (SPZs). Pig units should not be located within a SPZ1 or SPZ2, and caution should be taken when considering a site near to a watercourse, field drain or protected area such as a SSSI.
- Carry out a risk assessment of the site to look at field topography, previous cropping and soil nutrient content and structure.
- Mitigate compaction and prevent runoff. This can involve moving gateways and creating ‘no-go’ areas such as wide buffer strips and margins. Use cover crops and grass leys both between and within pig pens.
- Track humps, cross drains and silt traps can be installed to intercept surface flow.
- Be prepared to rest and rotate pens around the site.



Cross drains in track to divert surface flow (left). Wide green margins for intercepting runoff (right).

Our climate is changing and will continue to do so for many decades as a result of the climate crisis. Adapting to the reality of generally wetter winters and drier summers, as well as more severe and frequent storms, is essential for building resilience and decreasing the negative impacts of this variability.

For further advice, please contact NRT to speak to one of their farm advisers on 01263 711299. NRT can deliver free advice and support for practical solutions as part of their [Water Sensitive Farming Initiative](#).

Further information

[Defra's Site Suitability for Outdoor Pig Farming](#)

[BPEX's Good Soil Management Practice: A Guide For Outdoor Pig Keeping](#)

[Cross compliance](#)

[Sugar beet growing best practice guide: Working together to achieve sustainable management of soil and water in sugar beet production](#)

[Potato Growing: A best practice guide for improving soil health, and water quantity and quality](#)

[NRT Case study: Working with an outdoor pig unit to reduce soil and water pollution](#)