



AGRICULTURAL

NITRATE VULNERABLE ZONES

Nitrate Vulnerable Zones (NVZs) are designated by the Department for Environment, Food and Rural Affairs (Defra) to protect rivers, lakes and groundwaters at risk from agricultural sources of nitrate. Currently, 55% of land in England is designated an NVZ, these designations are reviewed by Defra every four years. All farms should be following the [farming rules for water](#), however if you farm within an NVZ there are additional rules that must be followed when it comes to [using nitrogen fertilisers](#) and [storing organic manure](#). Non-compliance can result in prosecution and fines from the Environment Agency and Rural Payment Agency payments being withdrawn/reduced. Although NVZs are focused on agricultural pollution, their presence highlights the vulnerability of an area to nitrate pollution from other sources too.

Find out if you are within an NVZ on the [Environment Agency website](#).

THE NITRATE ISSUE

Nitrate is an important source of nitrogen, an essential nutrient for plant growth. It is formed naturally in soil by microorganisms, but problems can arise when additional nitrate runs off into watercourses or leaches into groundwater. Common sources of additional nitrate include fertilisers (artificial and organic), waste from livestock (including horses and sheep), wastewater treatment works discharges and unsewered properties. Excess nitrate can have negative impacts on the environment, promoting algal blooms and suffocating aquatic life. It can also pollute drinking water sources.

Diffuse nitrate pollution is an ongoing problem for many water companies in the UK. High nitrate concentrations in water can be harmful to health, in particular infants, which is why water companies must comply with strict drinking water standards for nitrate of 50 mg/l (milligrams per litre). Removal of nitrate at water treatment works is expensive and energy-intensive; instead, preventing deterioration of raw water quality at source offers a far more sustainable approach and can also have benefits for the environment and surrounding community.

THINGS YOU CAN DO

TO REDUCE THE IMPACT OF NITRATE ON WATER QUALITY

DO NOT SPREAD FERTILISERS OR MANURE ON...

- Waterlogged, flooded or snow covered fields
- Fields frozen for more than 12 hours in the previous 24 hours
- Ground within 2 m of surface water for manufactured nitrogen fertiliser
- Ground within 50 m of a spring, well or borehole or 10 m of surface water for organic manure

KEEP MANURE HEAPS AND SLURRY STORES OVER...

- 10 m from freshwaters, including those that are seasonally dry
- 50 m from springs, wells or boreholes



PROTECTING WATER QUALITY

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SOURCES OF NITRATE



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ADVICE AND SUPPORT

Catchment Sensitive Farming (CSF) work with farmers and partners across England to produce food in a way that protects water, air and soil. Your local CSF Adviser (CSFA) can provide impartial, locally informed and confidential on-farm advice, including information on a range of additional measures including herbal leys, cover crops, infrastructure and yard improvements that can be used to reduce the impact of nitrate on the environment. They also specialise in signposting to available funding to help deliver measures through schemes such as [Sustainable Farming Incentive](#) and [Countryside Stewardship](#). CSF have now expanded their advice and funding opportunities to offer nationwide coverage - contact your local CSFA at csf.southeastthames@naturalengland.org.uk for more information.

SES Water's Catchment Management Team also works alongside CSF with landowners, farmers and other stakeholders to address water quality at source to help ensure wholesome drinking water. They can also offer financial support for measures that help protect drinking water quality.

For more information, visit the [SES Water website](#) or email catchment@seswater.co.uk.



Catchment
Sensitive
Farming

Report any suspected pollution incidents to the Environment Agency using their 24- hour incident hotline (0800 80 70 60)

This document was produced by Dalcour Maclaren and SES Water, with input from CSF, to help raise awareness on NVZs. We do not accept any liability for its use. Please be aware updates to NVZ requirements may be issued following the publication of this leaflet; the latest, most up to date guidance in full is published by Defra and available on the www.gov.uk website.



PLAN FERTILISER APPLICATIONS...

- Make informed decisions based on the needs of your soil/crop. An agronomist can offer advice. Guidance on best economic use can be found in the Agriculture and Horticulture Development Board [Nutrient Management Guide](#)
- Ensure [N-max limits](#) on the amount of artificial and organic nitrogen applied are observed for the crop being grown
- Ensure farm records are kept

ASSESS RUN-OFF AND WATER QUALITY RISK BEFORE APPLYING; THE RISK IS GREATER...

- On steep slopes, especially on gradients over 12 degrees
- On bare soil with no ground cover provided by vegetation
- If spreading close to surface water/boreholes/wells/springs
- If heavy rain/snow is forecast
- Dependent on the soil type and condition
- If land drains are present, in particular if flowing