




A Community Guide to Your Water Environment

This guide has been produced with support from Defra and the Catchment Based Approach. Your community will be in one of England's river management catchments, where organisations are working in partnership with communities to help deliver a better water environment.

For further information on catchment partnerships in your area, please visit **www.catchmentbasedapproach.org**

Contents

Introduction

Water is something we tend to take for granted. This guide aims to help you understand the importance of the water in your local environment. It offers advice on how you can take action to become more prepared for extreme weather events of flood and drought while protecting the purity and biodiversity of your waterways.

Our natural water systems have been affected and changed by human activity and infrastructure, such as the building of houses and roads.

However, if we begin to understand how water impacts on our local community we are better able to take targeted action to reduce risks from flooding and drought and protect important environmental aspects, such as rivers, lakes, ponds and streams.

Flooding, water quality, soil biology and biodiversity are intrinsically linked and building your knowledge of how one affects the other will help you to develop understanding, resilience and preparedness, and deliver a wider range of benefits to the local environment and community.

Why is managing water important?

Managing the water environment means managing the coast, estuaries, reservoirs, lakes, rivers, run-off, groundwater, highways and sewers.

Natural weather patterns and events are unpredictable. Extreme rainfall can result in flooding in different ways from all these elements, and all of which can be devastating for local communities.

However, infrastructure and systems can be designed to manage their effects safely, and these need to be based on a good understanding of local conditions and should involve the systems put in place locally by communities on the ground.

What's involved?

This guide aims to help you understand how your actions can protect this vital resource by helping you identify and record local issues, understand the shared governance of the water environment and help you develop the preparedness and resilience of your community.

Here you will find practical help for communities to carry out local projects that identify local pressures and opportunities in the water environment. It is designed to help you understand who has responsibility and capacity to act to address local issues and what actions you can take yourself.

Importantly, this guide also provides information to help communities carry out projects with the local farming community, who are often pivotal in the management of water in the area. By building up soil health, farmers can better manage water for the community as well as producing healthy food with a high mineral content, and supporting biodiversity.

The principles of community planning will be used

The principles of community planning will be used and communities which have prepared Parish Plans or community-led plans will recognise the key principles involved:

- Addressing local issues at the right scale, most often at parish or ward level.
- Valuing local knowledge and sharing this within the community
- Mapping resources, responsibilities, assets, opportunities and risks that exist locally.

VALUE LOCAL KNOWLEDGE AND SHARE IT WITHIN THE COMMUNITY

A very useful approach is known as Integrated Local Delivery (see Integrated Local Delivery (ILD) pull out section). This was developed to enable local knowledge to lead local solutions, with all organisations working in a coordinated way in support.

It is a simple framework, that works at parish or ward level, which enables communication with all the people who live within that area. This ensures that anyone who wants to can offer knowledge, local resource and observations that can be included in the plan.

You can also find out who the partner organisations are that have an interest in the area that could come together in a coordinated way to help the community with expertise, funding and resources. This is done through a simple exercise to create the local team relevant to your area.

Who has a say on the water in your community?

Knowing who owns and manages land is the starting point for involving everyone in a community project. There are many bodies that regulate and manage the water environment and on occasion there can be a conflict between groups where they have differing objectives. In order to pull together the wide range of national and local bodies, the Government has called for the adoption of the Catchment Based Approach.

This approach aims to ensure that action to safeguard and improve the water environment should bring 'multiple benefits' to ecology, communities and the economy.

River or stream bank ownership (riparian owners) – You are known as a riparian owner if you own land or property adjacent to a watercourse or a watercourse runs through your land. There are a wide range of responsibilities associated with being a riparian owner including; the responsibility to pass on flow without obstruction, pollution or diversion; accept flood flows through your land; responsible for maintaining the bed, bank and biodiversity of the watercourse and for clearing any debris, while not causing any obstructions to the free passage of fish.

Local Authorities – are responsible for managing flood risk and land drainage in ordinary watercourse i.e. those which have not been designated as main rivers and which are not within Internal Drainage Board areas.

The Highway Authorities – are responsible for effective drainage of roads on the local road network, in so far as ensuring that drains, culverts and gullies which are their responsibility are maintained.

The Highways Agency – are responsible for managing road drainage from the trunk road network in England, including the slip roads to and from trunk roads.

Internal Drainage Boards (IDBs) - are independent bodies created to manage land drainage in areas of special drainage need. These areas include agricultural land but also large urban areas.

The Environment Agency – is the principal flood defence operating authority, and has permissive powers for the management of flood risk arising from designated main rivers and the sea. They are also responsible for water quality, ecology and pollution incidents in all water courses. The flood defence functions of the Environment Agency are overseen by Regional Flood Defence Committees.

Sewerage Undertakers – are responsible for surface water drainage from development via adopted sewers which are indicated on the public sewer record maps, copies of which are held by the local authority. Sewerage undertakers are not, in many cases, responsible for domestic household drains.

INVOLVE EVERYONE IN A COMMUNITY PROJECT

Emergency Services and Multi-Agency Emergency Planning – Resilience Forums, which include representatives from the emergency services, Local Authorities and the Environment Agency, should ensure that risks from flooding are fully considered, including the resilience of emergency infrastructure that will have to operate during floods.

Who can help join all this together?

Managing the environment so that it delivers multiple benefits and meets the necessary national and international targets is a complex task, involving the joining up of a wide number of different people, funding streams and objectives. As such, where possible each community should have access to a trusted specialist facilitator. This person will need to bring together different partners in order to join up the international and UK environmental strategies and directives that are locally relevant. A good facilitator will have exceptional interpersonal skills, valuing all types of knowledge, and an in depth knowledge of environmental management and roles and responsibilities of all organisations. For help finding a facilitator, contact your local catchment partnership or your local national flood forum.

Developing a community project to manage your water

Choosing where to start your community project is an important decision. The following pages outline a step by step approach that has been successfully used to assess the water environment in relation to community led plans and neighbourhood development plans. The process is based in a framework called Integrated Local Delivery (see pullout section), which was designed specifically for community environmental projects. Further guidance is available from FWAG, ACRE Network members (Rural Community Councils) and the Catchment Based Approach.

Step 1 – What geographic area will your project cover?

Communities know most about their local area and have a clear sense of where they feel boundaries lie.

However, it is very useful to consider how the area is understood by others, such as Local Authorities and Government agencies. For this reason, it is generally best to conduct the project within a Parish boundary.

As the water environment does not respect boundaries, it is often useful for parishes to work together along waterbodies. For this reason, a scalable project template has been developed that allows the framework to be scaled up across the catchment, and help you manage water in a more joined up way. This may also help with accessing resources and sharing the work.

Communities know most about their local area and have a clear sense of where they feel boundaries lie.

STEP 2 - Engage with all of the community to begin assessing knowledge and collecting data

Communities often have all the knowledge and resource that is needed to protect the local environment, so start by giving all the people that live within the chosen area the chance to contribute. By talking with local people it is possible to bring together the community's collective knowledge of the water environment on a large-scale map. Making contact with your local Rural Community Council or Farming and Wildlife Advisory Group member, will ensure you have the right advice on what processes you can use.

Every national, regional and local agency of Government will have someone who is responsible for some aspect of the local environment in every locality.

2a Know what assets you have – start by taking note of and mapping where water is stored and flows. Organised walks across the parish can also be a useful exercise to make a note of features and identify local issues. This can involve working with people who have local knowledge – local farmers, local council officials, other experts who may be living in the community.

As far as is possible, the mapping process should also look to note wildlife in the area, including habitats and important woodlands and meadows. These ecological assets are important in their own right and as part of the water environment.

It is often a good idea to talk to people who have lived in the community the longest – their knowledge of how things work, or used to work, could be invaluable. This way a wealth of local knowledge is captured, which should be mapped at large scale for ease of reference.

ORGANISED WALKS ARE A USEFUL WAY TO NOTE FEATURES

Every patch of land is owned by someone and every national, regional and local agency of Government will have someone who is responsible for some aspect of the local environment in each locality. Understanding this land ownership and the management responsibilities is a first step to creating dialogue and build a team with the right people.

2b How do we collect the data and in what form? This is very much up to you, but a simple way is to collect the information in a central place held by the parish or ward council. Information can be stored in a simple document, with notes identifying possible actions and people or organisations that you might need to contact. A photographic record can also be valuable for documenting all the issues in a Parish. If possible, the photos should be kept within grid references using an Ordnance Survey mapping website. XY coordinates can also be useful for uploading issues/actions onto mapping systems.

STEP 3 – Put your locality in context

Every piece of land and its management has a potential role to play in improving the environment, supporting communities and driving the economy. Looked at the right way, the things a community decides to do can deliver important Government policies locally; this can unlock Government money not otherwise available. Understanding where local actions contribute more widely can help community plans gain support and resources for local projects.

3a Establish common ground - Establishing common ground between different bodies and community and private interests is a key step. No one should have to act against their own interests, but a key challenge is for participants to recognise others' priorities and to have some flexibility in how they carry forward their objectives. Skilled specialist facilitation support can be important.

3b How do we connect with 'Government'? It is an important early step to find out who has the duty for managing rivers, ditches, drains, and water supply in your area. The Government's Catchment Based Approach (CaBA) was developed to help the Environment Agency, Water Companies and Local Authorities get the support for partnership projects being developed at a catchment scale.

Other organisations will have priorities that may align with yours. Check what they are and get in contact with them to see if they can help.

For example, Natural England might have an interest in improving biodiversity, the Local Authority might be interested in drainage onto land from their highway, or it could be a developer who wants to develop land. These interests also need to be mapped possibly as part of a neighbourhood plan. Further information about your parish/ward can be found in useful links section.

Community Guide

Water Environment

STEP 4 – Think creatively in problem solving

The water environment is intrinsically linked with the surrounding landscape. As such it is often possible to provide multiple benefits through land management practices designed to protect water. Investment in local schemes could be designed to provide multiple environmental benefits, and relevant agencies can be approached for support and resource. Wider economic and social benefits could be gained by connecting local people back to the management of the water environment, for example by linking land management for water with diversified and ecologically sound farming practices; by improving recreational access to land; by establishing new 'buyers' for ecosystem services, such as water companies interested in natural solutions to polluted water; through outdoor community volunteer opportunities.

STEP 5 – Prioritising actions and opportunities

The most important job, having mapped everyone's knowledge and interests, is to prioritise actions and opportunities, and find a way of tackling them. Imagination and creativity are required to identify perhaps novel solutions, and local communities tend to be better equipped for this than anyone. For example, a traditional response to a local flooding problem might be to ask the Environment Agency or Local Authority to fund works. Funding constraints might make this a difficult thing to achieve. However, local community knowledge may be able to pinpoint a novel solution; for example, a farmer might reduce surface flow by rotating with deep rooting grasses in sloped fields. This may open other funding opportunities from different sources.

STEP 6 – Find project sponsor and Catchment Host

Finding capable project sponsors is an important task and the aim should be to spread responsibility amongst key partners. These can be in the community, the Parish Authorities or other bodies, and your facilitator can help you coordinate them.

Resources

There are a wide range of resources available that will help you to develop a good understanding of your area and build a picture of the water resources. There is an additional document produced that sets out in more detail how to access the following resources. Please visit **www.acre.org.uk**

Parish Maps

To obtain a map and information on your area you can visit the **GOV.UK** website and access **www.magic.gov.uk** which provides authoritative geographic information about the natural environment from across Government. Local record centres and the Environmental Agency may also hold detailed information on the water environment and biodiversity in your area.

Interactive maps: Environment Agency 'What's in your backyard?

For up-to-date, interactive maps and environmental information for England and Wales. Find out if you live in an area that is at risk from flooding.

Farmers can use the tool 'What's In My Back Yard (WIMBY) for farmers' which has been created to help farmers find out if the land they farm drains to water bodies (groundwater, streams, rivers, lakes and estuaries) that are thought to be affected by agricultural pollutants.

VISIT MAGIC.GOV.UK TO OBTAIN A MAP OF YOUR AREA

You can click on the map to view information about each area and follow the on-screen instructions to read guidance on what actions would improve or minimise the impact of farms on water quality in your local area.

Catchment Mapping Portal

A new mapping portal has been created specifically to support the Catchment Based Approach.

The tool provides quick access to environmental information in an interactive Geographic Information System (GIS), including help and how to videos and an interactive layer summarising local CaBA activity. Follow the link below in order to register as a user.

www.catchmentbasedapproach.net

Case study 1: Water with Integrated Local Delivery

The Water with Integrated Local Delivery (WILD) project

WILD is a demonstration project for the Upper Thames Catchment Partnership, working with 20 parishes and towns to improve the water environment through integrated local delivery. It aims to demonstrate how a specialist facilitator can inspire and enable farmers, communities, businesses and partners to work together to integrate water management with other environmental and development imperatives, in this way building resilience and helping deliver sustainable growth.

Fairford is a small market town, situated in Upper Thames on the River Coln. It has been developing a Neighbourhood Development Plan to accommodate a large number of new proposed developments.

The Gloucestershire Rural Community Council (GRCC) offered the Town Council the support of the Farming and Wildlife Advisory Group South West (FWAG SW) the Cotswold Water Park Trust and the Countryside and Community Research Institute, through the Water Integrated Local Delivery project (WILD).

As a rural community Fairford has strong links with the farming community. It was felt that the project could help to resolve some of the issues raised in the town, in particular flooding problems that put strains on infrastructure.

As a result of partnership collaboration, the following activities were successfully undertaken by members of the community in Fairford:

- Working with farmers and villagers to map the Coln and Dudgrove Brook water bodies and their interaction with agricultural land, woodlands, wetlands and meadow habitats. Water bodies within the town were also mapped, as well as the general condition of rivers, brooks, ditches, streams, road verges, natural and human infrastructure.
- Research was carried out into the historic management of water through the town. Many historic meadows, brooks, culverts and ditches were found from as far back as the 17th century, offering an opportunity to slow and divert the flow.
- All flood-risk areas in the town were identified and solutions that could be linked to planning mitigations proposed and put into action.

The project has re-engaged landowners, farmers and residents with the good management of their water environment. The community now has a detailed water flow map and data set, with which green and grey infrastructure can be protected in and around the town. This will allow Fairford to become more resilient to extreme weather in the future.

Poulton

Poulton village has been developing a Parish Plan and, with the support from GRCC and the WILD Project, a village survey identified flooding, water quality and fish habitats as issues in the parish.

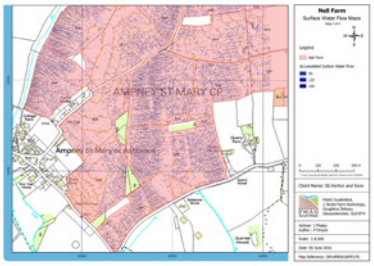
The NFU farmer champion for the village worked with FWAG SW and Catchment Sensitive Farming to create detailed maps of surface water flows across farmland above the village. These were then used to prioritize actions that would protect the water environment and reduce flood risk

The Parish Council also met with landowners and mapped rivers, streams, ditches, road culverts and drains in and around the village. They discovered that much of the ditch infrastructure was not enabling water to flow along a natural path, resulting in water flowing to a central point in the village. They also identified 40 issues, such as the lack of suitable culverts and some ditch networks being filled in or disconnected.

The Lead Local Flood Authority and District Council are now implementing a plan with the farmer to reconnect ditches and create a bund to slow the flow.

Water flow map

The creation of detailed water flow maps for farmers has been an innovative tool for targeting land management actions so that they protect the water environment and deliver multiple other benefits.



WILD across the Catchment

- 298 farm visits over 3 years covering 22,692 hectares
- 461 farmers now engaged in sustainable pesticide management through work with Thames Water
- 5000 ha of countryside stewardship agreements facilitated under WILD
- 21,600 hours volunteer hours committed
- Nearly 60 km of potential river enhancements identified
- A total of 300 km ditches surveyed, 30 km of ditches sympathetically managed
- Shade reduction & tree pollarding works conducted on 8555m
- Large Woody Debris deflectors and faggots installed in 5,580m

Case study 2: Honeydale Farm

A Cotswold Seeds project to demonstrate farming for multiple benefits

The River Evenlode rises out of the limestone that underlies the Cotswolds, and flows south-east towards the clay vales of the River Thames. The surrounding catchment is home to some of the finest landscapes in the country, hosting many important habitats which support a wide range of wildlife.

In recent decades, intensive agriculture, poor water quality, abstraction and channel modification have led to the degradation of river habitats. Channel modification and land use changes, in conjunction with climate change, have also increased the risk of flooding locally.

Working with a range of partners across the catchment, the Evenlode Catchment Partnership is working to restore the river to health and facilitate multiple benefits, including water quality, biodiversity, flood management, resilience to climate change and community engagement.

The project has chosen the Cotswolds Rivers Trust / Cotswolds Seeds Honeydale Farm project as a demonstration site for flood attenuation and biodiversity enhancements.

Water is a Valuable Natural Capital at Honeydale Farm

Three years ago Cotswold Seeds acquired Honeydale, a 100 acre farm in Oxfordshire, which is being established as a Centre for Farming Diversity. At its heart is an eight year crop rotation, featuring deep rooting herbal leys to increase soil carbon and water holding capacity, while building up the nutritional value of farm produce.

The herbal ley is made of a wide variety of different species, each benefiting the soil in a number of different ways. The tap roots of chicory and some legumes can break through soil pans, improving soil structure, assisting drainage and drawing moisture from ground water reserves during dry spells. Meanwhile, the fibrous roots of grasses such as cocksfoot and timothy are able to reach many feet through the soil, providing aeration and stability to the soil.

CENTRE FOR FARMING DIVERSITY

This mixture of species makes a balanced and highly nutritional forage. The grasses provide carbohydrates, clovers provide protein, and the deep rooting herbs mine the soil for vital nutrients and minerals to make them available to livestock and ultimately consumers.

The herbal ley is the key ingredient to building up organic matter in the soil, which in turn is a cornerstone of preventing surface run off from the farm's sloped fields. Essentially, organic matter acts like a sponge, soaking up and storing excess water, which is then available to the crops in dry spells.

These benefits have been optimised at Honeydale by the implementation of an innovative flow attenuation scheme, under the guidance of Cotswold Rivers Trust and Vaughan Lewis from Windrush AEC Ltd. The scheme involved capturing spring water and slowing its escape downhill to help attenuate flood flows in this section of the Evenlode Valley as well as minimizing runoff, the scheme delivers multiple benefits including capturing eroded soils, detaining excess nutrients and creating a wetland habitat for wildlife.

The herbal ley is the key ingredient to building up organic matter in the soil

The scheme created a cascade of small leaky dams, connected by short lengths of meandering channel. Water is held back by the dams until it rises above a certain level. At this point, it is allowed to run through perforated stone structure and on to the next dam, where the process is repeated.

Once water over-tops the final dam it is collected in a shallow scrape where excess will drain away into the subsoil.

Approximately 0.25ha of the land around the shallow scape area is planted with a mixture of deciduous trees and shrubs to increase infiltration. As the tree roots develop over time they create preferential pathways for water to percolate into the subsoil.

The benefits of the scheme to the Natural Capital of the site are currently being assessed using a range of metrics, with the data being collated and processed by an MSc student.

Case study 3: Hills to Levels

Natural flood management in the Somerset Levels

Following the historically severe flooding in the Somerset Levels in the winter of 2013/2014, the Hills to Levels Project was launched with the aim of manage flooding through natural processes. With funding from the Somerset Rivers Authority and the Players of the People's Postcode Lottery, and partners including FWAG, the RSPB, local Wildlife Trusts and the Royal Bath and West Society, the project is working with hundreds of farmers across the entire 350,000 ha area of the Somerset Levels catchment.

Every farm, every field and every stream has a part to play in managing flooding. To prevent flooding in the long term, farmers were encouraged to work together on a catchment scale, both on the hills and on the levels, to support the natural processes that can slow water down as it runs off the slopes, and help store it when it reaches the flood plains below.

750 FARMERS MITIGATING FLOODING AROUND THE LEVELS

The collaborative approach is assisted by detailed mapping technology that records the movement of water across the land. This allows project officers to consider the role that each feature of the landscape plays in managing flooding across the wider catchment, and support farmers in maintaining and regenerating these natural processes in a ways that fits and enhances their wider farm businesses, benefits wildlife and supports high quality food production.

James Winslade – Planning for Floods on the Levels

Winslade's mixed farm on the levels was hit particularly hard by the floods of 2014; by the time the flood water finally drained off his fields three months after the floods, the soil was bereft of life and heavily compacted.

Like many farmers on the levels, Winslade needed to both bring life back to his land and create conditions to mitigate the effects should such a flooding event occur again. The answer to both lies in building up organic matter in the soil, which helps the earth absorb large amounts of water without flooding.

Following advice from the Hills to Levels team he invested in two subsoiling machines, which bring air back into the compacted earth and allow for water and manure to penetrate down to the roots. At the same time, he started experimenting with cover crops in his arable fields, to encourage soil stability and build up fertility.

The soil biology regenerated rapidly, in turn further enhancing the stability and porosity of the soil and building up a layer of rich compost on the surface. Within two years Winslade started to move towards a zero tillage operation, direct drilling straight into the soil to avoid disturbing its biology. The result is a dramatically increased resilience to flooding, as well as improved yields, reduced need for chemical fertilisers and benefits to wildlife.

Within two years Winslade started to move towards a zero tillage operation

Case study 4: Stroud Rural Sustainable Drainage Project

Photo: Large woody debris structure on Wick Street Farm

Like other parts of Gloucestershire, the Stroud Valleys suffered extensive flooding during the summer of 2007. Every year since has seen flooding in some parts of the Stroud Valleys, including most recently Chalford on the middle Frome, and Bridgend and Eastington on the lower Frome.

Following a 2012 study by the Environment Agency which looked into the feasibility and potential benefits of implementing Natural Flood Management (NFM) to reduce flood risk in the catchment of the Stroud River Frome, the Severn and Wye Regional Flood and Coastal Committee (RFCC) agreed to fund a project officer based within Stroud District Council to implement and promote rural sustainable drainage in the Frome catchment[†]

In the three years since the project was started, about 300 sustainable drainage measures have been introduced across 12 farms, spread throughout the Stroud valleys. 21% of the catchment now drains through NFM structures. Working closely with landowners, the project has overseen a range of natural flood management techniques including attenuating water in channel by building large woody debris leaky dams, creating dry ponds, and raised embankments in some fields; increasing infiltration through creating track run-offs, changing drainage flow routes and building soakaways.

21% OF THE FROME CATCHMENT NOW DRAINS THROUGH NFM STRUCTURES

Case study - Wick Street Farm

Wick Street Farm is a mixed livestock family farm on the north-east-facing slopes of the Painswick Valley. The majority of the farm is under permanent pasture, with rain fall running off the sloped fields into the Painswick Stream, which flows through the farm and down through Stroud town centre.

The owner of the farm helped plan and design the NFM works and undertook construction was of most of the measures implemented.

The aim of the measures on the farm are to slow the rate at which high flows travel off the farm and into the stream and reduce bank erosion caused by cattle and high flows. This will reduce the risk of flooding for Stroud and the villages of the Painswick Valley.

To achieve this, twenty eight large woody debris (LWD) leaky dams were installed within the spring-fed streams that flow through the farm. They provide a physical barrier for high flows and help slow down the rate at which flood water progresses down the valley. The main Painswick stream is also being fenced and willow stakes introduced to reduce erosion caused by cattle and high flows.

Over time, the large woody debris dams will have other benefits. By slowing the flow upstream from them, the dams speed up the flows that are immediately downstream of each structure, cleaning gravels and stones of silts. Silt and sediment will eventually accumulate behind the structures, creating a small head of water and resulting in long-term changes to stream structure. This helps provide a natural habitat for many invertebrates, lower plants and fungi, and engineers habitat diversity by creating a system of pools and riffles which will attract a range of invertebrates and fish.

When introduced downstream in wider valleys, large woody debris can divert water during higher flows and allow it to collect on the floodplain. This allows silt and sediment to drop out of the water column onto the floodplain, decreasing the total sediment load in the stream.

Getting your own house in order

Follow this advice to become more prepared for extreme weather events of flood and drought while protecting the purity and biodiversity of your waterways.

1 Saving Water

Water can be collected from your house drainpipes saving approximately 85,000 litres of water. This can then be used as an efficient and sustainable method of tackling the prospect of drought by providing your plants and garden with water in the summer months. Also, rain water is healthier for your plants and vegetables since it does not have the additives that tap water has such as fluoride.

2 Septic Tank

Pollution to drains, ditches, streams and rivers from effluent water leaving your septic tank is an offence under the Public Health and Water Resources Act. Overflowing septic tanks are a major source of pollution to rivers and streams and will affect the ecology of aquatic life, not to mention the bad odour it can give off. Soak away systems should lead away from the house but not directly into a water supply.

The best advice for keeping a healthy tank is to take the following precautions:

- Tanks should be checked every 1-3 years until you can get a predictable pumping schedule
- Tanks should be pumped every 3-5 years depending on the size of the tank
- For further information visit www.septictanksandsewagetreatment-plants.co.uk

3 Avoid polluting streams and Water Courses

Compost heaps, grass cuttings and leaves that are deposited near or next to a waterway will cause nitrate build up and potentially pollute the water by increasing nutrient levels. Increased nutrients cause algae build up which can prevent light from penetrating the water, as the algae dies it consumes vast amounts of oxygen leaving little for aquatic organisms to breathe, thus killing them. As well as changing the water ecology, nutrients can also cause blockages further downstream. Also, be very aware of what you are putting down the drain – drains can lead directly to water courses.

- Compost heaps should be located away from water sources and on a hard surface
- Leaf mould is the best compost you can apply to your garden and will supply it with all the nutrients and microorganisms it needs to thrive
- Increased micro bacteria in soils helps to eradicate slugs and keeps your soil healthy
- Only put rainwater down drains

4 Garden Chemicals

Misuse of slug pellets and garden chemicals can cause pollution; Nutrient build up can lead to the growth of plants such as nettles and docks, both of which can leach, causing damage to rivers and streams.

- Always read the instructions on the packet before applying to your garden
- Try alternative options such as composting
- Look up the right nutrient deficiency of the your plants so you apply what is needed

5 Misconnection

Waste water from homes has two outlets; water from baths, toilets, sinks, the dishwasher and washing machine goes to the sewer system to be cleaned. Rain water from roof tops and ground surface water leads to outdoor drains. The cost of misconnection is huge; just 1% misconnection can cost £190 million, and is one of the main sources of river and stream pollution.

- If you have recently put in a new extension have your pipes been diverted to the right waste system? A booklet is available that provides information on how to check if your home is polluting the environment.

6 Blocked Drains

Every year blockages caused by sanitary towels, nappies, cotton buds, tights, fat deposits and other items of non-disposable waste have to be cleared from the systems daily – fat disposal alone has resulted in 55,000 blockages a year. Septic tanks are also at risk. The tubes that go to the septic tank can become blocked and the result is the backing up of sewage into the lowest point of your home, garden and ground water.

- Avoiding putting anything man-made but toilet tissue down the toilet
- Do not grow trees next to your septic tank or waste water pipes

7 Buy local, healthy food

Nutritious food and clean, stable water environments go together, both are underpinned by healthy soils. The best tool to support farmers in building up their soils is a well-connected local food market, so communities have access to all thebenefits local farmers can provide.

Further information and support

There are a number of organisations which can provide advice and support to communities in starting projects to manage the local water environment more effectively. Contact details are provided for Catchment Partnerships from www.catchmentbasedapproach.org

Community Resources

ACRE

Suite 109, Unit 9
Cirencester Office Park
Tetbury Road
Cirencester
Gloucestershire
GL10 2EQ

01285 653477
acre@acre.org.uk
www.acre.org.uk

FWAG Association

FWAG SW
Hawkridge House
Summerfield Way
Chelston Business Park
Wellington
TA21 8YA

01823 660684
www.fwag.org.uk
www.fwagsw.org.uk

The National Flood Forum

Snuff Mill Warehouse
Bewdley
Worcestershire
DY12 2EL

01743 741 725
www.nationalfloodforum.org.uk

CCRI

Countryside and Community
Research Institute
University of Gloucestershire
Oxstalls Campus
Oxstalls Lane
Gloucester
Gloucestershire
GL2 9HW

www.ccri.ac.uk

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Pasture For Life

The Pasture-Fed Livestock Association brings together British livestock farmers committed to producing high quality food in a more natural and sustainable way. Feeding cattle and sheep on 100% grass means their meat is healthier for humans to eat, with lower saturated fats and more good fatty acids like omega 3. It also has more vitamins and minerals. Look for the 'Pasture for Life' symbol on packs of meat, as this guarantees it has been certified by the Pasture-Fed Livestock Association.

Find where to buy this meat at
www.pastureforlife.org.uk

Honeydale Farm

Honeydale Farm is being developed as a centre for food and farming diversity, an educational facility for promoting and demonstrating - to farmers and those interested in farming, food and the environment - methods of sustainable farming. It will address many of the issues facing today's agricultural sector by showcasing viable options for diversity on farms, including the natural flood management scheme, honey production, heritage orchard and crop rotation. Honeydale will provide a unique and stimulating venue for interested parties to meet, learn and share innovation and ideas. It is owned and managed by Cotswold Seeds, established 40 years ago, which advises 14,000 UK farmers on complex seed mixtures.

cotswoldhoneydale.blogspot.co.uk

Contributors

Action with Communities in Rural England (ACRE) is the national umbrella body for the 38 Rural Community Councils who make up the ACRE Network and work at a local level in support of rural communities across the country.

ACRE's vision is to be the voice of rural communities and is supported by the wealth of evidence and intelligence on rural matters that we collect from our members. We use this evidence to influence national policy on rural issues, from housing health and transport to broadband, services and fuel poverty.

ACRE has a strong track record of speaking up for rural communities and our rural community councils - some of whom date back 90 years - have a long and fruitful history of making a difference at grassroots level.

ACRE was formed in 1987 to bring them together under one umbrella and harness the strength of their experience to support our national work.

For more about ACRE please go to www.acre.org.uk

The Farming and Wildlife Advisory Group (FWAG) is a farmer-led charity that seeks to support, enthuse & inspire fellow farmers and landowners to value the environmental assets on their land and use them to secure sustainable and profitable businesses for the future. FWAG can help farmers with all the environmental challenges on the farm.

Best environmental practice makes good business sense. FWAG understands the need to maximise environmental opportunities in order to achieve business outcomes and objectives.

Our services focus on sustainable food production, conserving species, habitats and landscape; farm resource efficiency; climate change adaption to future challenges; educating the wider community; and, help for accessing stewardship agreements and preparing for greening.

For more about FWAG services please go to www.fwag.org.uk.

The Countryside and Community Research Institute (CCRI) is the largest specialist rural research centre in the UK, having expertise in all aspects of research in policy and planning for the countryside and the environment of the UK, Europe and further afield.

Some 85% of the CCRI's research is considered, through peer review, to be of international standing and its annual research income from external contracts is in excess of £700,000' The Institute also boasts a vibrant research student community and contributes to the University of Gloucestershire's under-graduate and post-graduate taught programmes, notably the Masters in Sustainable Environments.

The CCRI has developed a clear focus of undertaking work that is academically robust and clearly within the higher education sector but also has direct relevance to its client community. Its involvement in the development of the Integrated Local Delivery framework and the related local engagement projects are an excellent example of what can be achieved through collaboration.

For more about CCRI please go to www.ccri.ac.uk

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