

West Midlands State of the Environment

Water

Good quality water is essential for a healthy environment, a healthy economy and a healthy society. It is vital that we have enough water of good enough quality to support people and wildlife. Although we have plenty of rainfall in the UK, parts of the East Midlands are among the driest in the country. A high population density and competing demands puts pressure at times on the supply and quality of water in parts of the region.

Much improvement has been achieved in the quality of our water environment in the last twenty years. However, new legislation called the Water Framework Directive (WFD) requires water in our rivers, canals, lakes and underground sources to meet even higher quality standards. To do this we will have to tackle many types of pollution and work with a range of sectors to continually manage and improve water quality.

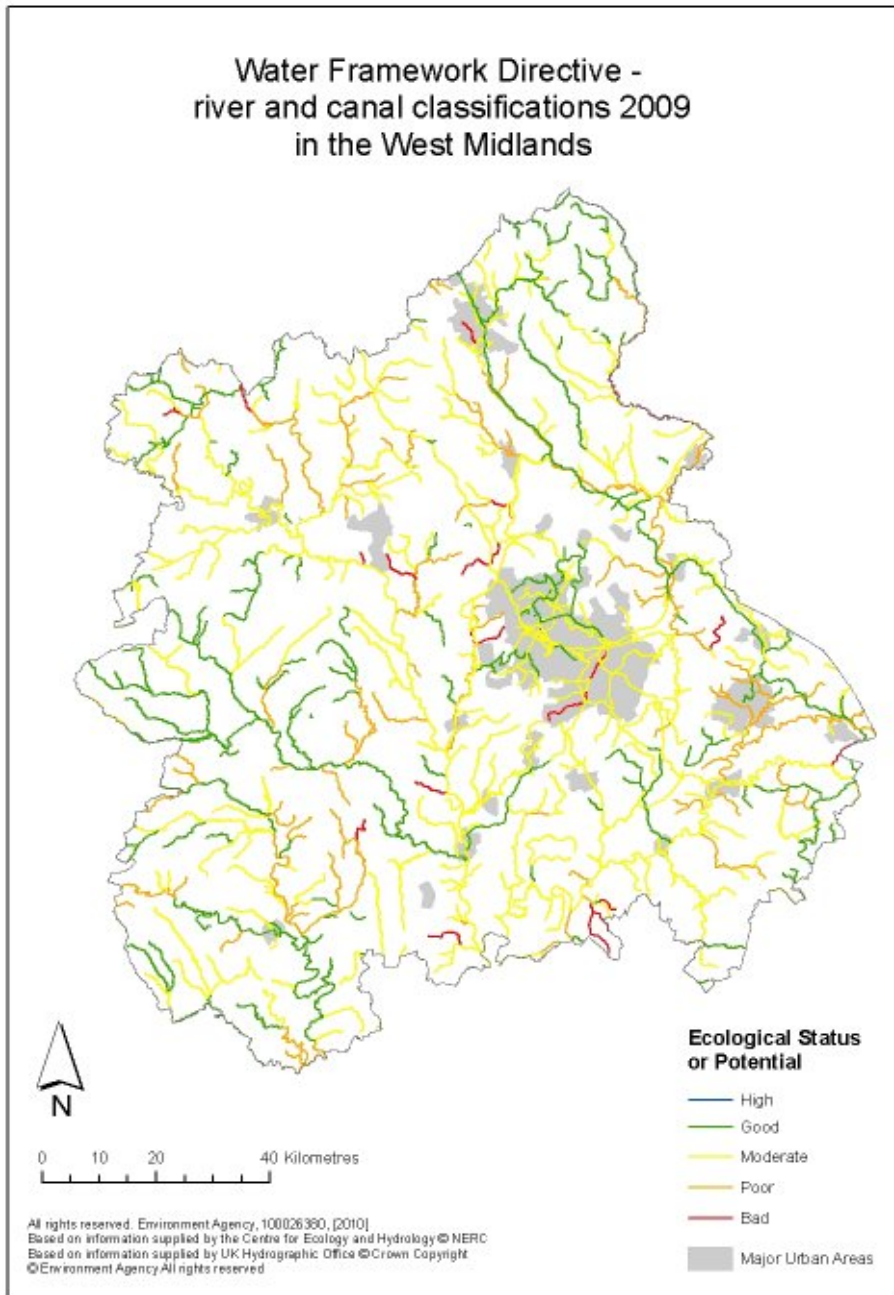
There are many challenges ahead. As well as a growing population, we must contend with an ageing water supply infrastructure, tougher environmental standards and climate change. All must be addressed to ensure that the needs of people and wildlife will be met in the future.

At a glance

- Average annual rainfall in the region is 754 mm compared to the England and Wales average of 900mm. The driest areas are in the east and south-east of the West Midlands, whilst the wettest are the western edges of Shropshire and Herefordshire and the Staffordshire Moorlands in the north-east.
- Domestic water consumption is close to 130 litres per person per day. Households with a meter use on average around 20 litres less water per person per day than unmetered households.
- Under the WFD we monitor the quality of 542 stretches of river and canal (known as water bodies) in the West Midlands. This represents about 5,300 km length of watercourse.
- Only 25 per cent of river and canal water bodies met the new target of 'good' ecological status or potential in 2009. Around a third of lakes and 62 per cent of underground sources (known as groundwater) also reached good WFD status.
- There were 34 major or significant water pollution incidents in 2009, a third of which were attributed to agricultural premises.

Data and trends

The map below shows the WFD ecological classifications for rivers and canals in the West Midlands in 2009. The Environment Agency analyses various physico-chemical factors such as dissolved oxygen and phosphate levels and biological factors such as fish, diatoms and invertebrates.



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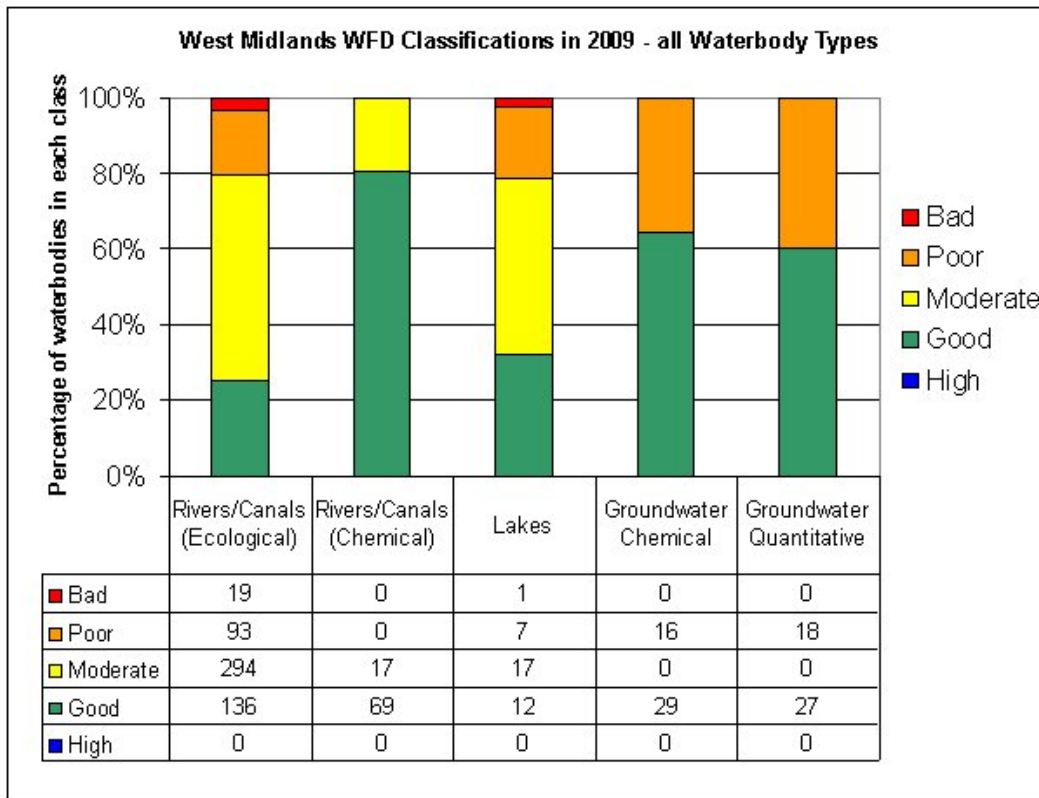
incident hotline

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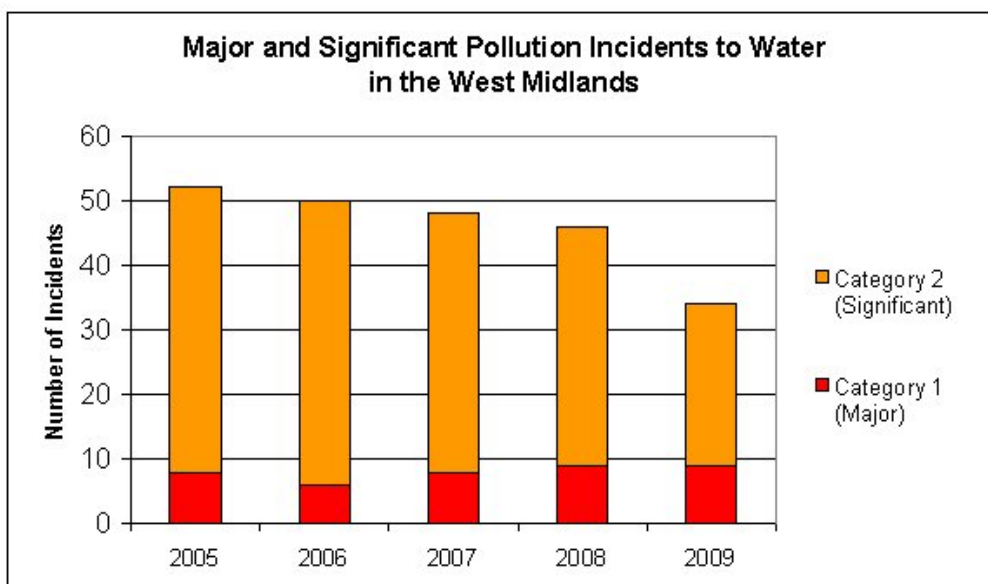
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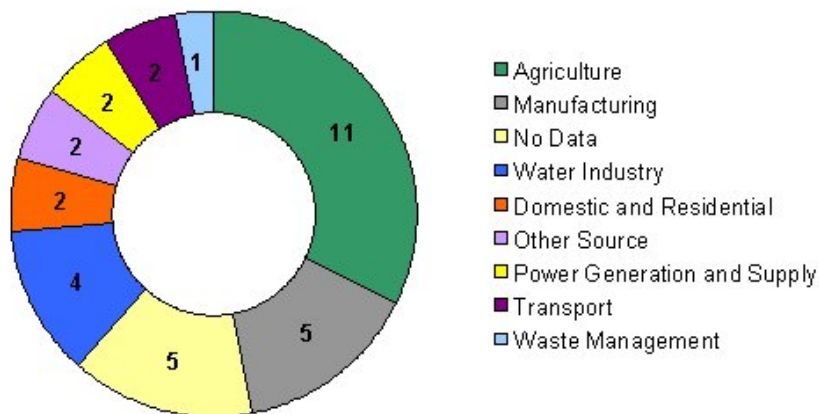
The following table shows the percentages of different water bodies meeting each Water Framework Directive classification. By 2027, all water bodies are required to reach at least 'good' status or potential.



In 2009, we recorded 34 major or significant pollution incidents affecting rivers, canals or lakes. These are recorded in our National Incidents Recording System. The data shows there has been a reduction in the number of incidents since 2005 when there were 52 incidents. The pie chart shows that the agricultural sector was most commonly cited as the source of the pollution.

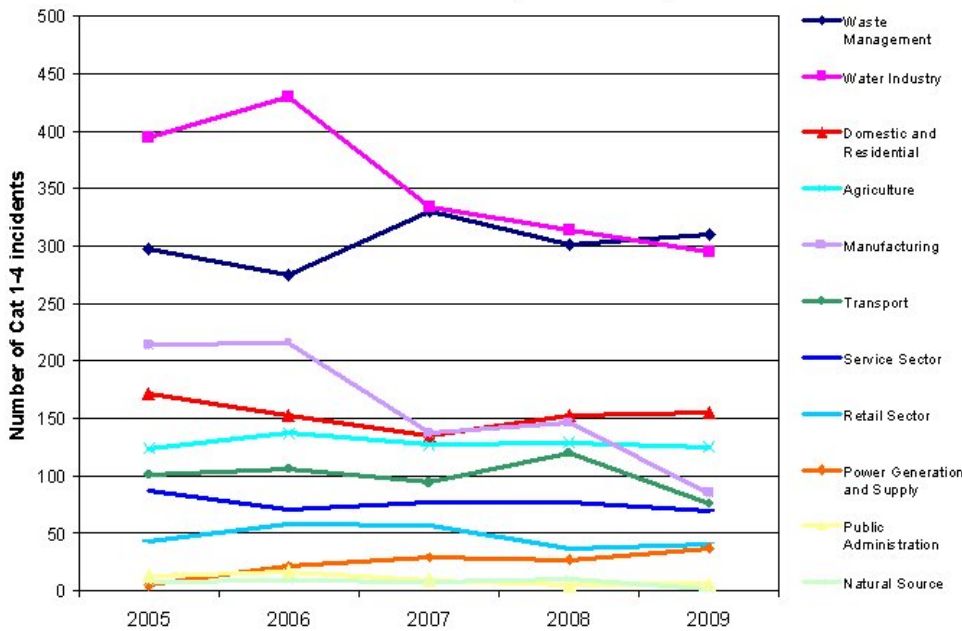


2009 Category 1 and 2 Incidents to Water by Sector in the West Midlands

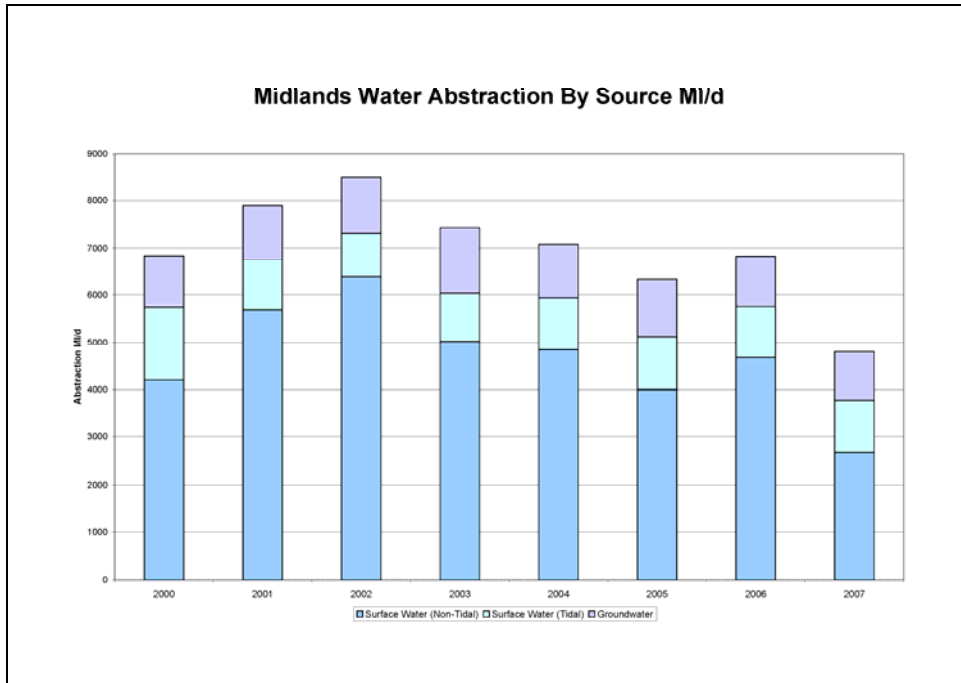


The following chart shows the trend data for all incidents to water (categories 1 to 4) from each sector since 2005. It excludes incidents where no sector was identified.

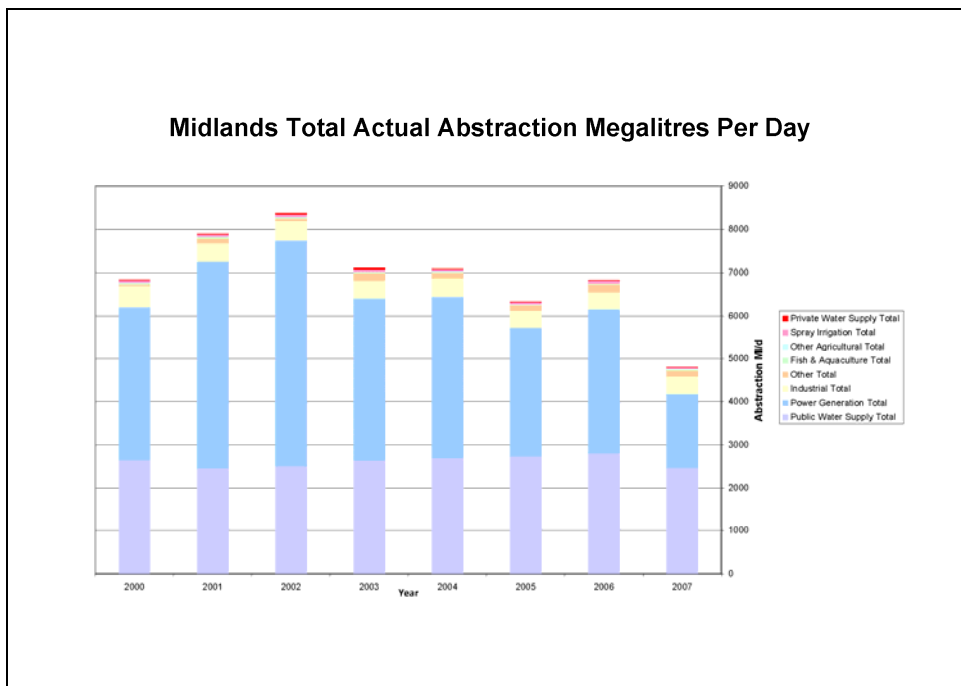
Source of Category 1-4 Water Pollution Incidents in the West Midlands (where known)



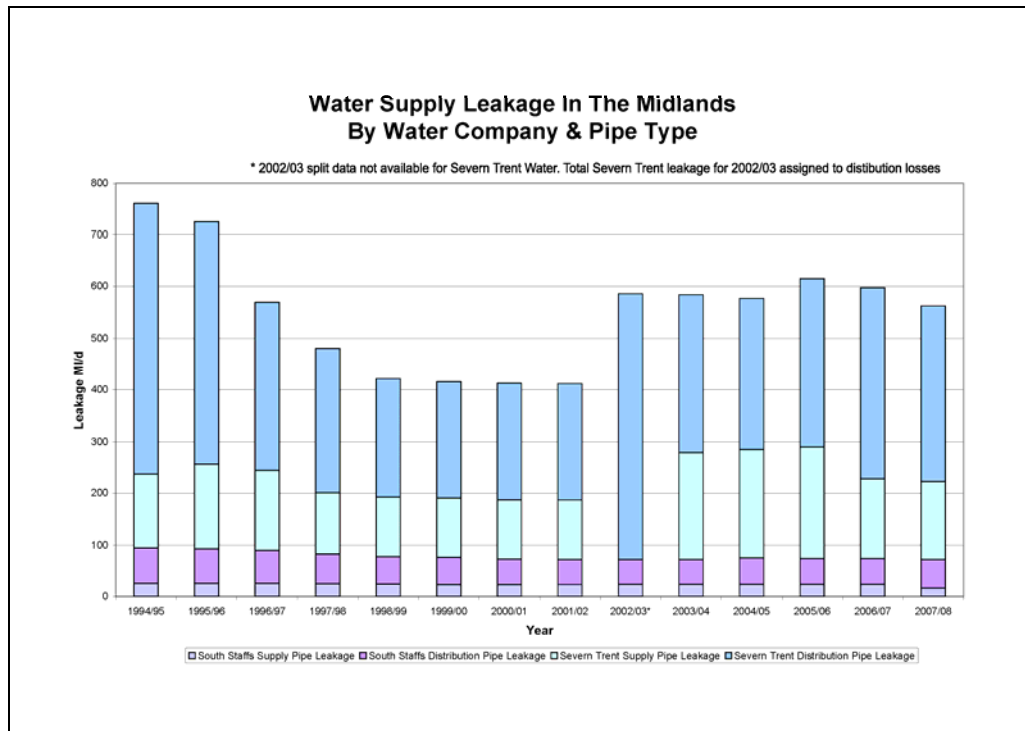
Midlands water supply comes from abstraction of water from tidal and non-tidal surface waters (rivers and reservoirs) and groundwater. Surface water provides 78 per cent of total abstraction and groundwater provides 22 per cent. Total abstraction of water has been showing a general downward trend since a peak in 2002. In 2007, 4800 million litres were abstracted each day, a 30 per cent reduction on the previous year.



Water abstraction can be broken down by economic sector. In the Midlands, public water supply and power generation are the main water users. Together they account for 87 per cent of all water abstraction in the region. Water use in all sectors has shown a general downward trend in recent years.



Losses of water put into supply occur through distribution pipes owned by the water companies and supply pipes connecting customers to the mains. Total leakage losses for the two main water companies in the Midlands (Severn Trent Water and South Staffordshire Water Company) were 561 million litres per day in 2007. Losses due to leakage are reducing but are still high.



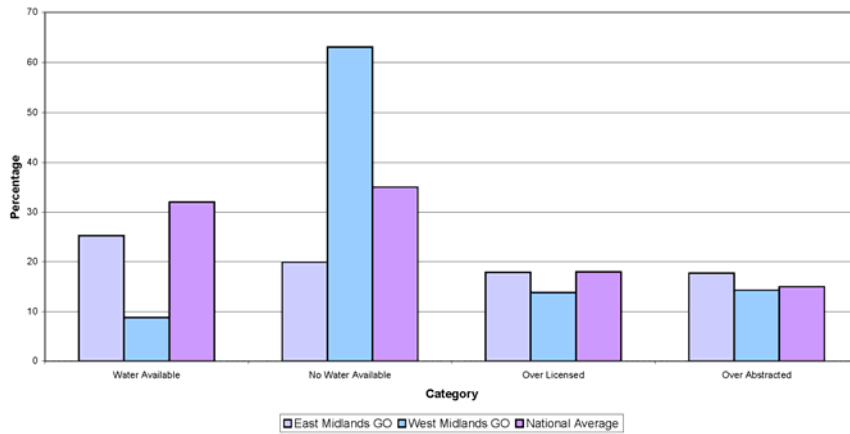
We make assessments of the availability of water resources as part of our Catchment Abstraction Management Strategies (CAMS). These determine whether the current level of licensed and actual abstraction leaves enough water available for a sustainable aquatic environment.

Over abstracted areas are those where the amount of water being taken for human use is more than is sustainable and environmental damage is already occurring.

In over licensed areas more water has been licensed for abstraction than is available but the full licensed amounts are not yet being taken. These areas have potential for environmental damage to occur if the licensed amounts are abstracted.

In the West Midlands the percentage of resources that are over abstracted and over licensed slightly below the national average.

Water Resource Availability Status East & West Midlands Regions



This following map shows water availability for abstraction across the West Midlands. Water resources are heavily utilised across the region with most areas having no (additional) water available for abstraction without causing environmental damage. Significant portions of the region already suffer from over abstraction or over licensing problems.

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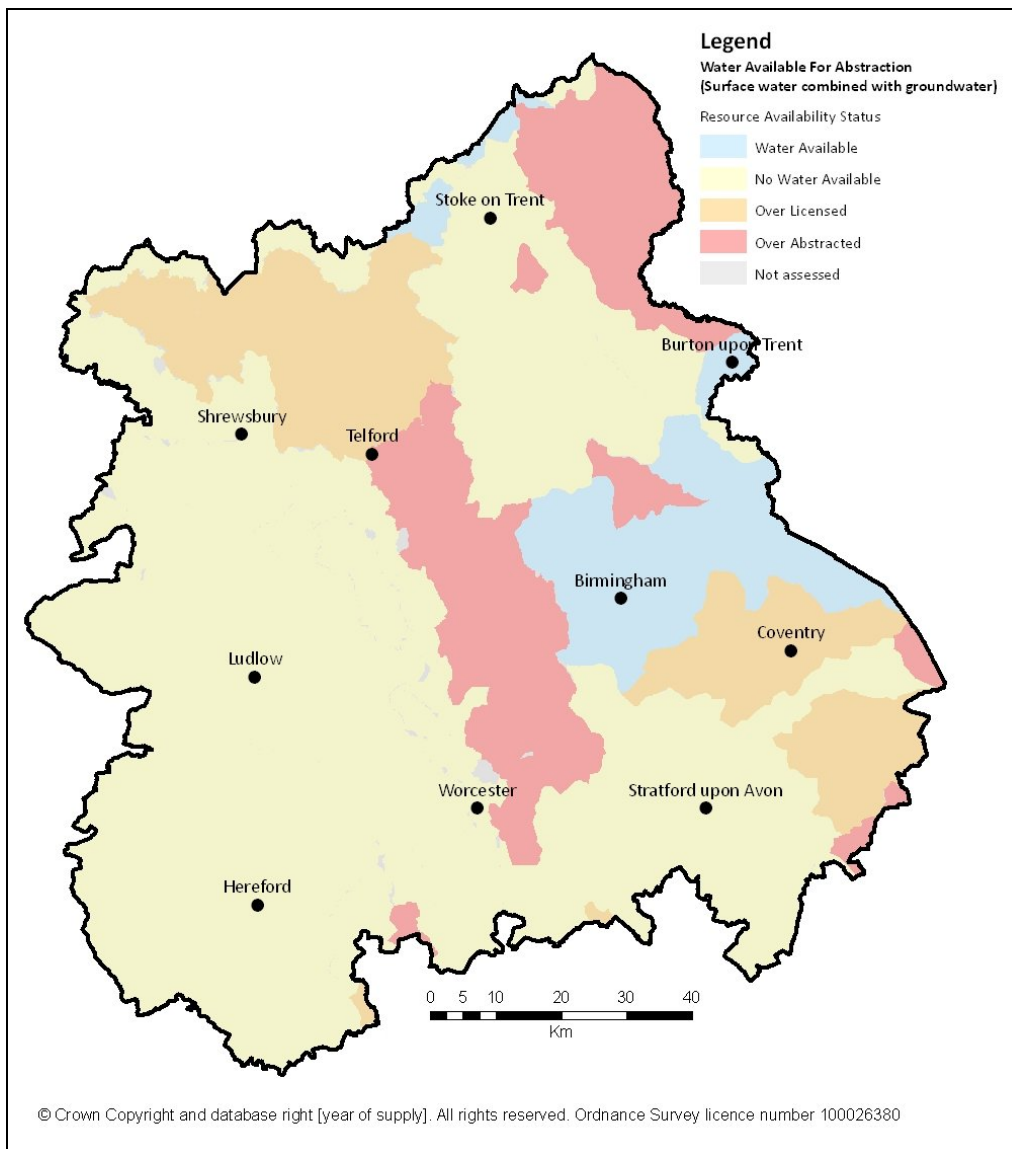
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The following two maps show effective rainfall in the West Midlands in summer and winter. Effective rainfall is the rainfall that is available to recharge groundwater resources after losses from evapo-transpiration. Across large portions of the region summer effective rainfall is less than 150mm per annum. Effective rainfall is greater in the far west of the region and in the Staffordshire Moorlands in the northeast of the region.

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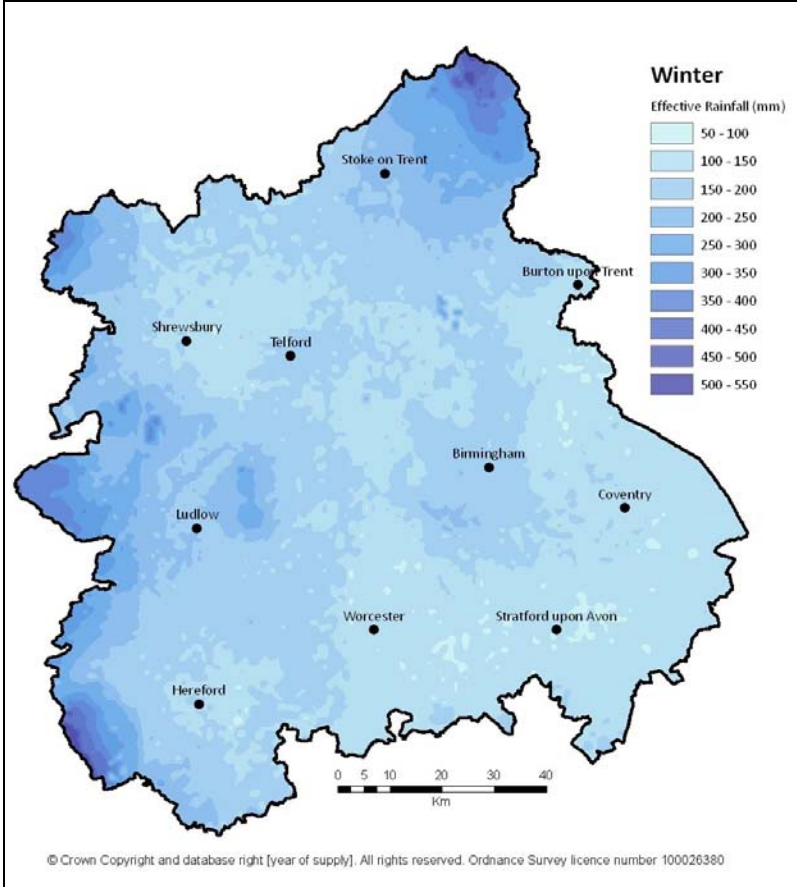
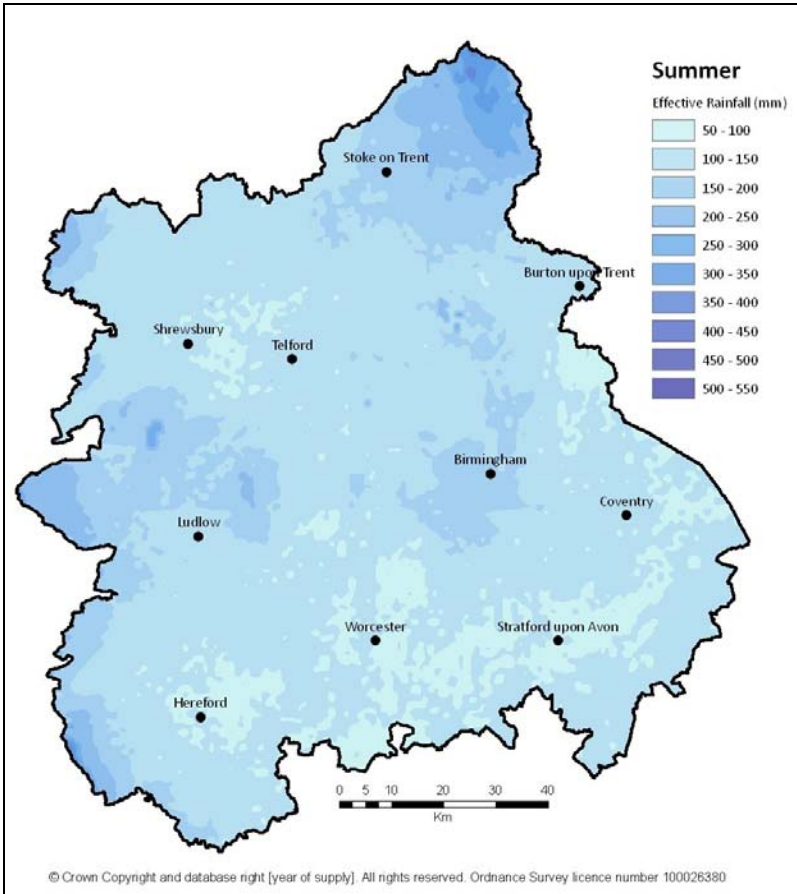
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Our role

We are responsible for safeguarding the water environment. To do this, in the next few years we will:

- Work with partners to implement the Severn and Humber river basin plans to achieve 'good ecological status' for surface waters.
- Improve fish stocks, which contribute to a healthy and more ecologically diverse environment that provides opportunities for recreation.
- Implement our 'Restoring Sustainable Abstraction' programme to protect the environment by changing or removing unsustainable extraction from surface and underground supplies.
- Ensure that water-related Sites of Special Scientific Interest (SSSIs) will be in favourable or recovering condition and Biodiversity Action Plan (BAP) habitats and species are enhanced.
- Work in partnership with others to manage droughts.
- Ensure that people use water wisely, understanding the value of water to the economy, society, wildlife and the environment.

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