




Climate change in the UK

+1°C	Warmer than pre-industrial period The average annual UK temperature is around 1.2°C warmer than the pre-industrial period.	
x2	Twice the likelihood of a hot summer The chances of experiencing hot summers like in 2018 have doubled in recent decades and are now about 10-25% per year. This will rise to 50% by 2050, i.e. on average, every other summer will be as hot or hotter than 2018.	
+16cm	Rise in sea level since 1900 UK average sea level has risen by 16cm since 1900, and will continue to rise for a time, despite reductions in carbon emissions, because it takes time for the impacts of climate change to be reversed.	

What is a drought?

A drought is a long period of dry weather, which reduces the amount of water United Utilities has available to use.

A drought can impact United Utilities ability to provide water to customers, and lead to temporary use bans such as hose pipe bans to help manage the region's water demands.

On average, they expect to impose a hose pipe ban no more than once every 20 years on average. The region has experienced two very dry periods in the last two years (2018 and 2020) and whilst they did not on these occasions lead to a hosepipe ban being imposed, they are indicative of a trend towards hotter and drier summers which means United Utilities would need to do more to prevent more frequent bans in the future

As droughts usually occur during the summer months, they occur where the demand for water is highest.



How a drought may affect you...



Poor water pressure



Loss of supply



Water quality issues



Customer service disruptions
For example busy phones



Health & wellbeing



Taste/odour/discolouration



Increased frequency
of temporary use bans



Moorland fire, fire risk



Pressure on fire services and
availability of water to fight
moorland fires

What is United Utilities doing about the risk of drought?

Development of new sources of water, particularly boreholes

Water sharing between different regions of the UK

Identify and reduce leakage from our pipes

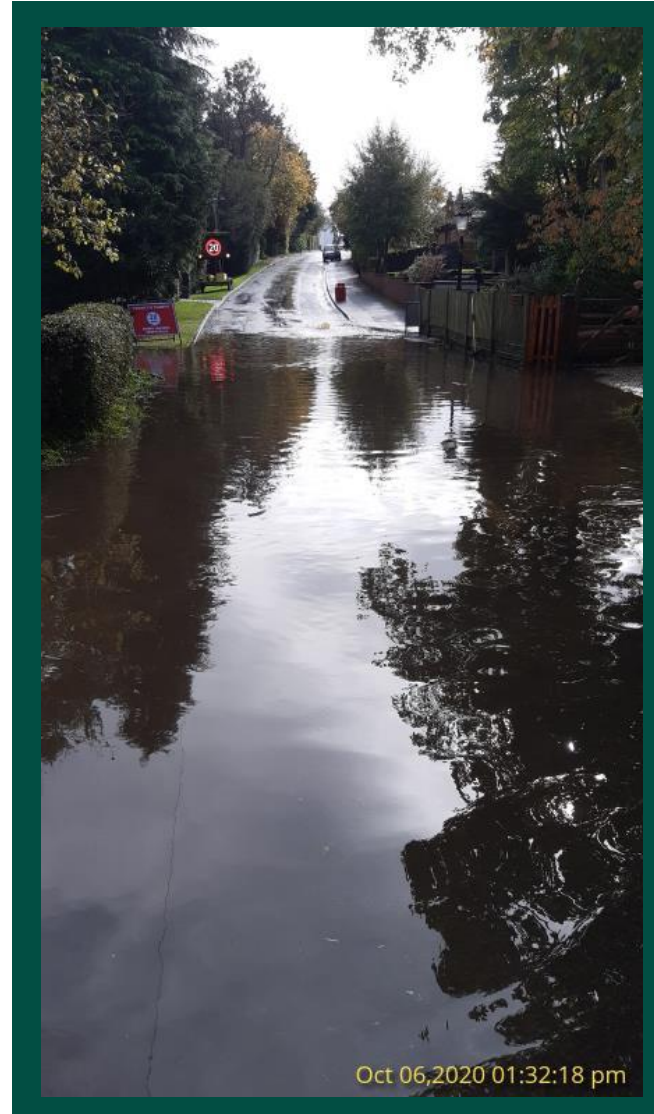
Encourage and inform customers about using less water

Install more meters on domestic properties

What is sewer flooding?

If there is a heavy downpour, there can be too much water in the sewage network, resulting in sewage flooding outside (i.e., external flooding), or even flooding inside people's homes and businesses (internal flooding). United Utilities recognise that flooding of sewage into homes and gardens is absolutely unacceptable.

While the majority of internal flooding is caused by blockages, due to non-flushable items entering our sewers, predictions show that the most severe storm of the next 50 years could cause sewer flooding to 1 million customers in the North West.



How sewer flooding may affect you...



Damage to property including personal possessions



Issues with insurance



Health & wellbeing



Customer service disruptions

For example busy phones



Having to evacuate your home

How is United Utilities tackling sewer flooding?

Increase sewer capacity and build storm water holding tanks

Implement and encourage sustainable drainage solutions to slow the flow of rainwater into sewers (such as green roofs and permeable paving)

Use technology to monitor and better control flows in the sewer system

Install a 2nd network to separate rainwater from the sewer system

Install flood protection devices to at-risk properties

How climate change may cause flooding of infrastructure

“Heavy or prolonged rainfall can also result in the flooding of our water and wastewater treatment works. When a United Utilities site floods, it can impact the services we provide, whether that’s the supply of clean drinking water to your taps, or our ability to process what goes down your drain.”

United Utilities

One study found that the frequency of events which caused severe asset flooding (such as Storm Desmond in 2015) has increased by 59% due to recent climate change, and this trend is continuing.



Garstang Sewage Treatment Works

How flooding of infrastructure might affect you...



Localised lack of supply



Supply interruptions



Health & wellbeing



River pollution



Discolouration of water



Customer service disruptions

For example busy phones

How is United Utilities tackling flooding of infrastructure?

Install permanent flood defences at flood prone sites

Improve flood forecasting capabilities

Build better network connectivity so that supplies can be maintained from elsewhere if a treatment works is flooded

Invest to ensure sites can bounce back quickly once flooding subsides

Power cuts

Increased rainfall, summer heatwaves and thunderstorms can increase disruption to electricity transmission and distribution networks and cause power outages or cuts, all of which are expected to increase as a result of climate change.

The increase in severity and frequency of such outages can increase pressure across of the services that United Utilities provide, and can result in issues with not being able to clean water to send to customers taps, or effectively treat water from the sewers.



How power cuts may affect United Utilities' services



Loss of supply



Low water pressure



Customer services busier



Health & wellbeing



**No internet, electricity,
payment issues**



Phone lines could be down



**Delayed fixes to the power
cut and return to supply**

How is United Utilities tackling power cuts?

Install more permanent backup generators

Coordinate with electricity distribution network operators to help them build a more robust network

Generate more of our own renewable energy

Be flexible in when and how we use electricity to help stabilise national supply

Access to temporary generators to support in emergency situations

The impact of climate change on our natural environment

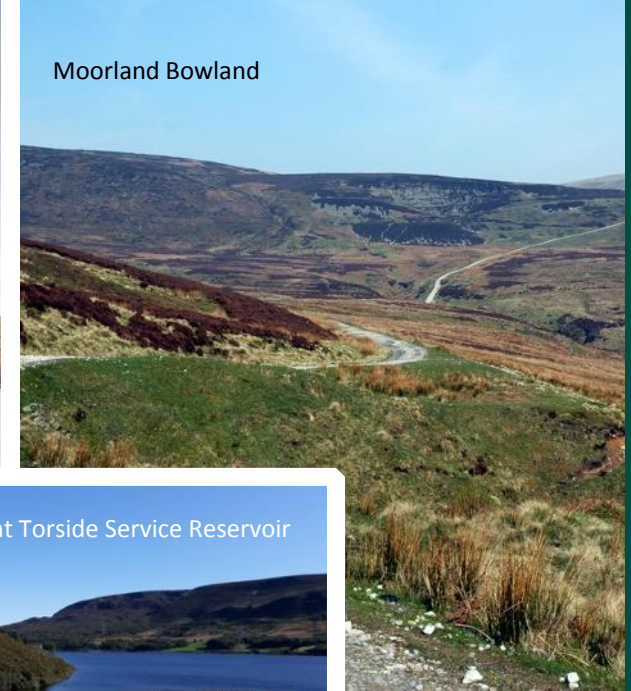
Shifts in climate patterns are expected to have a great impact on our natural environment, affecting habitats and biodiversity, natural assets which United Utilities rely on to provide services, and which provide value for all customers, cleaning our air and providing recreational spaces.

Climate change will impact our environment in many ways, such as the hotter drier summers which increase sensitivity to the spread of fires across moorlands. Such devastating events are becoming more common and less predictable.

Watergrove Reservoir



Moorland Bowland



Spillway at Torside Service Reservoir



Torside & Woodhead Reservoirs



Macclesfield Forest

How climate change impacts on the environment may impact households & business



Loss of recreational space



Access & transport issues



Fire associated issues

Air quality, emergency service pressures



Loss of wildlife



Damage to local scenic areas

Sites of special scientific interest; areas of natural beauty etc.



Health & wellbeing



Travel restrictions



Customer service disruptions

For example busy phones



May result in water discolouration or changes to taste or smell



Cause of flooding, and so the other risks



Landslips etc. causing health and safety risks, and supply interruption

How is United Utilities tackling the impact to the natural environment?

Use more 'green' solutions (e.g. building wetlands to treat wastewater, rather than dosing with chemicals)

Reducing its carbon footprint by encouraging more efficient use of water, using renewable energy and converting to electric vehicles

Provide net gains in biodiversity from our construction projects

Directly restore peat land and woodland

(the peatland is an area in the region that stores a lot of water; 70% of the UK's drinking water come from areas like this)

Work in partnerships with farmers, the Environment Agency and others to improve rivers and lakes