# Response from the Cam Valley Forum

For the attention of The House of Lords Environment and Climate Change Committee

The Cam Valley Forum (CVF) is a voluntary, not-for-profit charitable association, exclusively run by volunteers, that is dedicated to protecting and improving the health and environment of the River Cam and its tributaries in Cambridgeshire. We were established in 2001 and work throughout the Cam catchment to address issues affecting the river including pollution, over-abstraction, chalk stream health and the role of rivers and streams in the well-being of local people. We campaign for improvements, meet with water companies and relevant government agencies to discuss current issues, support and encourage community understanding of the river environment, and participate in a range of citizen science monitoring and water course restoration activities.

Our reports, newsletters, consultation responses and other outputs can be found here: https://camvalleyforum.uk/publications/

## Summary

If there is **one message** or warning the CVF we would urge upon their Lordships' consideration it is that many 'drought concerns' result, in a large degree, from the **unbalanced relationship between human society and the environment.** This environmental perception drives our volunteering concern for our River Cam and its tributaries.

In our perception, some members of the House of Lords often see this perhaps more clearly than do other of our elected representatives in the House of Commons. Our Natural Capital has been grossly drawn down in Britain whilst many political pressures on the environment have been unsustainable for decades. The real cure must be a change of our behaviour. To some extent 'droughts' are man-made and to some extent we are just reaping the whirlwind from our own misbehaviour.

In Cambridge and South Cambridgeshire we see the abuse of our natural Cambridge Chalk aquifer (a reservoir in itself, given that this county as yet has no reservoir) through **over-abstraction of its water** as the cardinal problem. This comprises a multitude of issues, all of which are exemplars of our disrespect for that sustainable pattern of development which we desperately need, including:

- the inability of water companies to keep pace with public water supply demand;
- the significant and numerous sewage disposal problems;
- the breakdown of historic river ecology systems;
- the running down of soil carbon by farm practice, and, lastly but most importantly.
- Climate Change

## Detailed responses to consultation questions

*Question 1. What are the potential risks of increased drought in England to: the urban, industrial, and rural environment; people, species and habitats; and the economy?*

Eastern England is much drier than the North and the West, and Cambridgeshire has some of the lowest rainfall areas in the whole of Britain. Records for Cambridge City, maintained by the Cambridge Botanic Garden for 125 years, show little change in rainfall **(**approximately 560 mm per annum) and, if anything, a very slight upward trend. However, this is **extremely variable from year to year** and periods of drought and considerable rainfall have been part of our historic condition. For this reason, Cambridge itself has been no stranger to urban flooding and to considerable drought periods when our chalk streams have occasionally run dry.

**Risks to species and habitats**

What has altered **with climate change is that this pattern has an even greater variance to it now, with increased ups and downs.** Our Chalk streams, though a fraction of those in the whole of Britain, are representative of an environment almost unique globally to this country. The River Granta, one tributary of the Cam, dried up in 2019; several locations in lesser tributaries such as Cherry Hinton and Coldhams Brooks, (but nevertheless chalk streams), dried up in 2023. In the 1976 drought, the SSSI Nine Wells springs (the source of Hobson's Brook which historically supplied water to Cambridge and its University), dried up completely, resulting in the disappearance of the rare Chalk Spring invertebrate species: these species had a long documented history and this is the first evidence of their disappearance.

The past year also saw a local wetland Nature Reserve (Kingfishers Bridge) almost dry up totally after massive falls in the water table. Other important wetland sites (including the internationally important Wicken Fen, a Ramsar Site) have also, in the recent past, suffered drought and considerable biodiversity loss: for example, the Cambridge Milk Parsley, a nationally rare species of wetland plant life now has only two remaining sites in the whole of the UK, both in this county.

Our Chalk streams and Wetland Reserves are sustained in summer often only by augmentation of flow pumped by the Environment Agency from the Chalk (reservoir) which itself is under pressure from the unremitting demand on it for drinking water. Local to Cambridge, Fulbourn Nature Reserve is sustained only by augmentation. Without this help there would be even greater biodiversity losses.

**Risks to people**

One salient impact of summer drought is that with clay shrinkage there is more soil subsidence leading to increased incidences of burst water mains. Cambridge Water's 2025-2030 business plan admits that 13.4 million litres per day (15% of treated water) is lost to leakage in the Cambridge area. As Cambridge Water supplies 138,000 households, this is equivalent to a shocking 97 litres per household per day. When it is compared to the average household water use of 136 litres per person per day, the significance of this is clear. Cambridge Water is planning to reduce leakage by 20% by 2030 but, given the seriousness of the water scarcity situation in the Cambridge area, and the expectation that climate change will increase the risk of leakage while making droughts more severe, it is clear that we need much faster progress in reducing leakage.

Another effect of drought on the River Cam is that base-flow of the streams from their springs is reduced. Many of these water courses are already polluted, and the reduced flow rates leads to their greater concentration, and consequently more hazardous pollution. As elsewhere, sewage treatment works re-cycle treated waste water to the River and its tributaries but again, as elsewhere, there has been insufficient investments in the treatment of such waste water, leading to regular Combined Sewage Overflow incidences and widespread sewer pipe leakage. The net result of drought is

therefore to concentrate pollutants, leading to, in many places, rapid growth of aquatic plants that respond to high phosphate and nitrate (nutrient) levels. CVF and its partners involved in water quality monitoring have recorded phosphate levels at 40 times that of a good Chalk stream and Coliform bacteria at levels well above that needed for safe river-bathing. This is not good in a City where river recreation (swimming, canoeing, punting and rowing) is both a key part of its heritage, and a focus of current local tourism and leisure industries.

In summary, drought is already contributing, in a cyclical manner, to environmental problems that have negative environmental effects in increasing water scarcity further. Drought detracts from nature itself and that will harm us all eventually if unchecked.

*Question 2. How will climate change affect drought risk (including severity, frequency and type) and impacts of drought*

Climate change has a huge impact on drought risk, even locally. Cambridge is a global centre of research and action on climate change, contributing to key knowledge of national and global relevance. Rising carbon in the atmosphere is a real threat in the form of global warming and its destabilisation of our weather. Perhaps a less well understood impact is that it also brings higher levels of evapotranspiration rates (from more wind and more heat), and longer 'summer' periods, leading to leaves remaining on the trees for longer, greater soil drying and proportionate lower Chalk aquifer recharge.

CVF pointed out to the Environment Agency (EA) in 2023 that their monitoring of Soil Moisture Deficit (SMD), or soil dryness, in their monthly climate reports did not show deficits of more than 100 mm rainfall although these clearly occurred. Only in the last year has that been rectified by the EA. Areas of Cambridgeshire in October 2025 had SMDs of >160mm of rainfall. This means that 2026 may well be a drought year if that deficit is not made up over the present 2025-26 winter. As pointed out by the EA[1], England needs at least 100% of average rainfall (482mm) by the end of March next year to recover from this year's drought, but only two months of 2025 have so far seen more than 100%.

Rainfall has several characteristics that matter (amount, intensity, season). Season is important as from March/April (when leaves appear) to October/November (when leaves fall) the great bulk of that rainfall is transpired by plants. Such summer rain is not harvested into public water supply. The summer ends typically with a high SMD and that dryness needs to be made up by autumn and winter rainfall before there can be any Chalk aquifer recharge. By autumn, the Chalk aquifer here has dry soil above it. Only when wetted fully, does rain percolate through the soil to depth at which point the aquifer can begin to recharge. CVF estimates that it does not recharge fully in at least 40% of winters and that drought is thus very easily the result. When drought is 'declared' it is only a matter of degree on a scale that is considered 'normal'. But the metric for 'normal' now is far from what it was a hundred years ago.

*Question 3. How comprehensive and responsive is drought monitoring in England? Could early-warning systems be more effective?*

Our experience in East Anglia is that the EA, though understaffed and under-resourced by some past governments, does a good job of monitoring drought. They produce an excellent and informative

[1] https://www.gov.uk/government/news/drought-likely-to-continue-into-2026-due-to-record-dry-weather

monthly ANG water situation report[2] for East Anglia, which CVF and other organisations are able to use to inform the local community.

In addition, the Open Data Source commitments by government (dating from March 2010) have been slowly introduced by the EA. The EA's Hydrology Data Explorer unit, with its own web pages is a case in point. We have been greatly assisted as a voluntary group by such data-openness. We have a dozen 'river groups' in our catchment and it was through the observations of these 'citizen scientists' that we first alerted the water companies to the harm of their abstractions.

In 2019, the EA staff expressed great concern at our findings about Cambridge Water Company's unsustainable licencing. Since the Cambridge City Water Scarcity problem was first identified, during the summer drought of 2019, the EA has started asking Cambridge Water to cut their actual abstraction by 60% in order to return river flows to a more normal level. Cambridge Water are unable to comply immediately, of course, because the Company has **no alternate source of supply**, as yet. The contract they are operating under must have initially assumed that they had almost unlimited access to ground water supplies without causing harm to the environment. However, the aquifer resources are definitely finite and the harm to them is manifest in our County's declining wetlands ecology.

This year, the EA published its Drought Prospects for Spring 2026 report[3], which most effectively cautions about drought. But they have limited powers to publicise this and so have been helping to play this role ourselves. Generally, we have praise for the EA but we do not see them as equipped to be more than sirens in drought warning. They need to be more widely listened to for it to work better. Much more effective early-warning systems are needed. Cambridge Water publishes some information on its website and sent notifications to those customers who have signed up to receive them, but this information will reach a tiny proportion of those who use their water supplies. There needs to be a much larger, concerted effort by the water companies, ALL relevant government agencies, and local authorities to get the message out to the public, via all mechanisms: the press, radio, TV, social media and all other forms of advertising in use today.

*Question 4. How effective are drought response protocols in England, both before a drought has been declared and once a drought is underway? Are there opportunities for improvement?*

Like all water companies, Cambridge Water Company is required to have a Drought Plan. This is reviewed every 5 years. However, water companies do not visibly acknowledge that they are of necessity contribute to the water shortage. Our local aquifer has been drained unrelentingly for well over a century. Although the rate of abstraction is allegedly constant now it is not 'a normal situation'. CVFs' primary concern is that we do not consider the drought triggers published in their drought plan to be appropriate in the current situation, and the water company is determined to operate only according to these outdated and inadequate triggers. As a result the necessary action is not being taken. See also response to Question 6.

Cambridge Water currently benefits financially by abstracting from a depleted aquifer, which is in effect the region's reservoir, but is invisible to the public, The public therefore cannot 'see' directly the impacts of abstraction and erratic rainfall as is the case in other parts of the country. Some of our members question openly why the Water Companies should be in a position to abuse our water supplies in this way. We have pointed this out in our response to the consultation by the Independent Water Commission (the Cunliffe Review)[4]. There is a strong feeling in the region that other relevant

[2] published monthly by Laurence Cullen the Technical Officer, Hydrology, East Anglia Area
[3] https://www.gov.uk/government/publications/drought-prospects-for-spring-2026
[4] https://camvalleyforum.uk/wp-content/uploads/2025/04/CVF-Cunliffe.pdf

agencies and organisations within the catchment should have greater authority over drought management.

*Question 5. What are the potential economic costs of drought management actions that may be needed in the future?*

CVF cannot respond on this specifically, but it is clear that there could be very high economic costs to drought management if action is not taken now. Water scarcity is the major obstacle preventing the governments ambitions for growth of the Cambridge area. There would appear to be little prospect of there being any significant new sources of water within the next 10 years. This means that a water saving culture is an absolute essential. CVF would like to see more done in this area. All newly built properties should have roof water collecting water buts, and be fitted with all appropriate water recycling and saving devices, and incentives for retrofitting of existing properties are essential.

*Question 6. In what ways are residents, businesses and industry involved in drought management planning and drought actions? Could engagement by water companies with their customers be improved?*

CVF has for some years met annually with the Cambridge Water Company to discuss the matters that so concern us, as a representative of our members, local residents and the volunteer community (we do not represent business or industry).

**Hosepipe bans (*aka* TUBs – Temporary Use Bans)** have been a primary issue. TUBs make it illegal to use hosepipes and sprinkler systems (which can use up to 1000 litres of water in an hour) and thus can reduce use. However in our view, they provide primarily a platform from which to raise awareness of water shortages and to broadcast the need to reduce water consumption and ways and incentives for doing so, and so need implementing at the first sign of drought. CVF has been urging Cambridge Water to impose a TUB from early summer for the last 3 years, but the company insists that they are obliged to comply with their Drought Plan.

However, we understand that the EA does not have the authority to stop them from implementing a TUB, and indeed were disappointed and frustrated that they did not do so during the hot summer of 2023. This has contributed to the fact that many local people still do not believe we have a water crisis. It is estimated that our water meters clock up to 30% more water usage during hot dry summer weather, creating a considerable financial advantage for Cambridge Water. Tap water still costs very little considering its value - it is 400 times cheaper than petrol. Although Cambridge Water increased their prices by 25% on April 1st 2025, a litre of pure water pumped from our Chalk Aquifer costs only 0.35pence. However, a metered hosepipe, discharging 1000 litres in an hour, will add £3.50p to the water company's account.

Cambridge Water is now a subsidiary of the South Staffordshire Water Company which is largely owned by Canadian and Scandinavian pension funds. Cambridge Water's company managers are located in Walsall and by and large show no appearance of having genuinely engaged with Cambridge's water scarcity crisis. To all intents and purposes, their motivation seems to be more about providing profits for the benefit of overseas pensioners than for protecting Cambridgeshire's precious chalk streams. In our view, the company's claim to be making progress in persuading their consumers to reduce their water consumption is far from evidence-based or correct.

*Question 7. Are roles and responsibilities in relation to drought management clear enough?*

No, not at all. As the previous observations make clear, we are nowhere approaching an adaptive system fit for purpose.

A good local example of this is that there is, by and large, a built-in assumption that water will be readily available for all new developments. Here, in Cambridge, the EA has quite rightly queried this. The Greater Cambridge Local Plan is proposing to require developers to design new houses so that the consumption is only 80 litres per person per day. This compares to the current requirement to design new houses to use 110 litres per person per day, whilst Cambridge Water Company's 2025-30 business plan is to provide for 136 litres per person per day.

We think 80 litres per person per day is a good target for our highly water stressed area and, as we understand it, developers should be required to install water saving equipment, smart metering and grey water recycling systems. This will of course require the necessary regulators, such as the Drinking Water Inspectorate, to allow those systems to be used. As the experience of Cam Valley Forum members shows, designing for low water consumption does not mean that households will actually choose to use less water, without other structural or regulatory measures to provide incentives.

*Question 8. What lessons can be learnt from other countries about managing rapid or severe droughts? What innovative solutions or technological approaches to water management are being deployed in other countries to improve drought resilience and preparedness?*

There are probably lessons to be learned from hotter climates, and differing styles of Government. Drought in California, for example, is managed through a combination of supply-side augmentations and demand-side reductions, involving state-regulated policies. Our local authorities have no powers over water usage or supply side provision. The Chatteris reservoir (a supply-side augmentation) is a national, but not a local, infrastructure project and is not expected to be operational before 2037.

*Question 9. Are emerging sources of future water demand, such as new housing, data centres, industry and energy processes, adequately accounted for in water resource planning and drought plans? What impact might these sources of future demand have on drought risk?*

No, emerging sources of future water demand are quite clearly not adequately accounted for. This is of major concern in Cambridgeshire, given that part of it is a key part of the emerging plans for a new 'Silicon Fen', comprising extensive expansion of technology centres including for AI and the biomedical sciences that have a vast water requirement.

If drought is to be defined in terms of 'a prolonged period of reduced from normal rainfall' we shall need more reservoirs on the supply side. Our Water company has regarded the Chalk aquifer as 'their' reservoir for decades yet it has been seen by us as inadequate for decades. It is now provenly so and far greater water supply is going to be needed. In our view Water Resources East is the local body that has researched this thoroughly and they have the best grasp on the future options.

*Question 10. How should the Government consider drought management alongside its other priorities such as nature restoration, food security, flood management and expansion of artificial intelligence?*

Drought management should be an integral part of all actions taken in relation to nature conservation, food security, flood management and the expansion of AI, given that drought, and the risk of drought, has a major impact on all. For flood management, much can be done though Nature Based Solutions but there has been little incentive for landowners to develop and apply these.