Examination Library Document Reference EX021

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Water Resources Management Plan 2025-2050 (WRMP24)

Summary for Local Planning Authorities

Demand Management Preferred Plan

Why?

The Water Resources Management Plan (WRMP) is a statutory plan that's produced every five years to plan for supply of drinking water over next 25 years i.e. to 2050. The overarching aim of the Government's Environmental Improvement Plan is to reduce the amount of public water supply in England per person by 20% by 2038, which is reflected in our revised draft WRMP24. This would reduce use to 122 litres per person per day by 2038. The end goal set by Defra is an average use of 110 litres per person per day (or Per Capita Consumption - PCC) and a 15% reduction in business water use by 2050. To get to an average of 110 litres PCC domestic means that new properties need to be built to deliver below 110 litres – at least 100 litres and in some areas 80 litres PCC.

How?

The WRMP forecast customer's (domestic and non-household) water demand including growth to calculate the supply-demand balance. We are required to ensure sufficient water is available for current and new homes, but it is not a legal requirement of water companies to supply new non-domestic demand, although we would like to support sustainable business demands and include a small allowance for this in the WRMP.

Who & Why?

If there is insufficient water, then demand management options including reducing leakage are required. Our current WRMP19 for 2020 to 2045 means Anglian Water's investment will have reduced leakage by 15% by 2025. We have the lowest level of leakage in the water sector at some 15% of total water demand – this also includes customer supply pipe leakage. If demand management is insufficient to close the water supply demand gap, then water companies are required to propose supply side options. WRMP24 is the 'best value plan' and so balances environmental performance with customer's expectations and the level of water bills. The key drivers for demand management are growth, resilience and sustainability. Reducing abstraction to achieve environmental objectives is now the primary driver for reducing demands.

Where & When?

Supply options include water reuse - treated water from water recycling centres that can be used directly for irrigation, for example, or increasing flows in rivers so it can be abstracted downstream. The two proposed reservoirs in the Fens and South Lincolnshire are designed to meet the supply-demand gap with other options including strategic transfers, interconnectors, and water reuse (Colchester). Previous investment and the ongoing Strategic

Pipeline projects mean that there will in future be no significant differences in the small levels of surplus water available across all the 59 local planning authority (LPA) areas which Anglian Water serves.

The role of Local Planning Authorities

Anglian Water's assessment of growth is underpinned by LPA plans for growth set out in Local Plans. Environment Agency guidance directs water companies to include strategic growth such as that potentially from the Oxford Cambridge growth area as well as Garden Communities. Housing growth and the expansion of business generates new demands for water. On average, growth (identified through Local Plans and on unallocated sites via planning permissions) has meant that the number of homes increases by about 1% per year. Unconstrained water demand would increase by 138Ml/d (megalitres per day) due to the 911,000 additional people predicted to live in our region by 2050. Our forecast for the WRMP - based on planned growth set out in Local Plans - is that there will be a net addition of some 0.527m households by 2050 – a growth rate of 0.97% per annum for the 25 years from 2025. Hotspots for population growth include Cambridge and Peterborough.

We agree and support government plans and the calls from the Environment Agency (EA) and Natural England (NE) to reduce the amount of water taken from sensitive environments through abstraction. This therefore means that to have sufficient water we must first seek to reduce the amount of water new homes and businesses use. This reduction is demand is both in the operation/ use of developments and in the construction of the new buildings and infrastructure and services which support them. We therefore have an existing advice note in place with the EA and NE[1] which supports Councils having a policy of 110 litres per day per person for new homes. This is being updated as a Joint Protocol to recommend that water efficiency policies go to at least the 100 litres per person per day target for new homes announced in January 2023 by Government in the Environment Improvement Plan[2]. We are supporting LPAs that need to have more ambitious water efficiency targets to enable their levels of growth to be sustainable. This can be 80 litres PCC policy or and in the most water scarce areas water neutrality for certain developments.

Anglian Water and other water companies are not statutorily required to supply new non-domestic water demands from business but will accommodate this growth where possible. Regulators are now instructing water companies to reduce the overall amount of water supplied to businesses by 9% by 2038. This now means that businesses looking to develop or expand in the Anglian Water region may not be able to be supplied with water should they require significant non-domestic water supplies to operate. Instead, they will either need to

[1] https://www.anglianwater.co.uk/siteassets/household/about-us/aw-ea-natural-england-water-efficiency-advice-note-final.pdf
[2] https://www.gov.uk/government/publications/environmental-improvement-plan

invest in new water supply options, including final effluent reuse or desalination, or seek to locate in regions which have surplus water. Some businesses may elect to bring forward onsite wastewater treatment processes to minimise their consumption, have closed loop processes or rainwater/greywater reuse. These options may require approval from planning authorities as well as environmental regulators including the EA.

The role of Anglian Water

Demand management therefore looks primarily to use smart metering in new homes and for existing customers in 2 million existing properties to help them value water more highly and so reduce consumption. The smart metering approach looks to reduce demand so that the quantity of water saved meets or exceeds the demands from new homes and customers. Smart meter roll out will also support our 100,000 businesses to be more water efficient and identify leakages/continuous flow losses. Overall, the selection of the highest level of water leakage reduction, smart metering and water efficiency measures in homes and business looks to save 134Ml/d by 2050. The selection of the Aspirational scenario for WRMP24 does mean that the plan has higher risks in terms of costs (investment in leakage as well as carbon costs) and water supply being less resilient versus lower demand reduction scenarios.

Smart metering savings total some 32Ml/d by 2050 with water efficiency strategies, such as using smart meters to highlight plumbing losses within the home, saving 24Ml/d. A further 50Ml/d will be saved from non-household water efficiency measures. Water use will also be reduced by Government measures seeking to make household goods more water efficient (white goods labelling) as well as possible Building Regulations standard improvements for water efficient fixtures and fittings[3]. This saves a further 84Ml/d by 2050 (based on Artesia/Water UK/Defra research).

Having reduced customers' and businesses' water use including identifying leakage in properties, the required reduction is abstraction from groundwater and watercourses in sensitive environments is then addressed in the short term by strategic interconnectors and the longer term by Colchester re-use (2032), and the two new reservoirs in the Fens and Lincolnshire with associated interconnectors from 2036. Desalination is planned from 2040 although the timing and scale of such projects will adapt depending on regulators directions for example on supplying water to projects critical to the country's decarbonisation of the energy and the journey to net zero by 2050.

On the theme of climate change, reducing water use, as opposed to just increasing supply, means:

[3] Household goods to carry water efficiency labels

- water does not need to be treated and distributed which reduces our operational energy consumption,
- less new water supply infrastructure is required reducing our capital (embodied) carbon impacts in supporting sustainable growth.

Making the best use of available water resources, before developing new ones complies with the sustainability hierarchy as well as reducing capital costs and customer bills.

Summary

By 2050 the overall number of properties in the Anglian Water region will have increased by 58% compared to 1998. Leakage though will have been cut by 38% and the total amount of water in the supply network reduced by 4%. The WRMP enables us to have a balanced approach in supporting growth through reducing leakage and improving water efficiency and through valuing water resources and the wider environment. The cost of our demand management strategy in AMP8 (2025-2030) is £171 million with the majority of the cost being in smart meter roll out. The cost of smart meter roll out versus leakage reduction are roughly equivalent at circa £6 million per Ml/d saved up to 2030. Ongoing leakage reduction then is the most expensive element of the plan and by 2050 costs £117 million per Ml/d saved. This reduction in leakage relies upon a significant amount of mains replacement by 2049/50 (>8000km of mains replaced) at a very significant cost (>£4 billion), but we believe that these costs will be mitigated over time as technology advances.