



**South West
Water**

Evidence for increased Water Efficiency

Devon and Cornwall

Date: July 2024

Published by:

Environment Agency
Horizon House, Deanery Road,
Bristol BS1 5AH

www.gov.uk/environment-agency

With:

South West Water
Peninsula House
Rydon Lane
Exeter
EX2 7HR

pennon-group.co.uk

© Environment Agency 2020

All rights reserved. This document may be reproduced with prior permission of the Environment Agency.

Email: DCISenquiries@environment-agency.gov.uk

Contents

1. Policy:4

2. Water company work/targets:.....5

3. Local Context:6

4. Opportunities:9

5. Conclusion:10

1. Policy:

1.1 One of the major imminent and future risks for the UK from climate change is reduced water availability. Projected changes in weather patterns and climate will reduce water availability. This, coupled with increased water demand due to population growth, behavioural changes to cope with the shift in climate and other demand pressures means that, without action, more frequent and severe water shortages are likely to occur¹.

1.2 The UK Climate Change Risk Assessment 2022² also highlights that ‘Higher temperatures can ...increase the possibility of water quality problems through increasing the rates of biological and chemical processes, especially algal growth rates and nutrient cycling [...] impacting on the provision of clean water for consumption and associated water treatment costs, and the recreational potential of fresh waters.’

1.3 [National Planning Policy Framework](#) (NPPF) paras 153-154 are in line with Climate Change Act 2008 and state that ‘Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. New development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change...’

1.4 Planning Practice Guidance published in 2015³ sets out new home water efficiency standards of 125 litres per person day (l/p/d), however this also states that where there is a clear local need evidenced, Local Planning Authorities (LPAs) can adopt the tighter Building Regulations optional requirement of 110 l/p/d. The building regulations guidance and Approved Document G is clear that the only way this tighter level can be adopted and secured is by planning condition⁴.

1.5 In September 2022 Steve Double MP, former Parliamentary Under Secretary of State, wrote to all Local Authority Chief Executives in England urging them to address and tighten water efficiency in new homes; ‘The latest regional water resources plans suggest we will need an additional 4,000 million litres of water a day by 2050. Half of this will need to come from reducing demand for water.’⁵ this followed a written ministerial statement earlier in 2021 to encourage local authorities to adopt the stricter 110l per person per day target. Mr Double went on to state that ‘Recognising the clear need for immediate

¹ UK Parliament (2021) Water supply resilience and climate change [POST Publication on water supply resilience](#)

² [UK Climate Change Risk Assessment 2022 - GOV.UK \(www.gov.uk\)](#)

³ Planning Practice Guidance (2015) Housing: optional technical standards [Housing: optional technical standards - GOV.UK \(www.gov.uk\)](#)

⁴ [How to get it right: Domestic water usage for new dwellings | LABC](#)

⁵ [Environment Agency Review of England's emerging regional water resources plans.](#) ² [2021 Written Ministerial Statement on reducing demand for water.](#)

reduction in water use, we encourage Local Authorities to apply the tighter standard of 110 litres per person per day (l/p/d) set out in the 'Housing: optional technical standards' guidance and prescribed by regulation 36(2)(b) of the Building Regulations 2010'.^{6,7} this government message was reiterated in the recent Plan for Water policy paper updated on 4/4/23⁸.

2. Water company work/targets:

2.1 The Policy and Governmental direction align with those of the emerging targets and Plans from the water and regulation industries. They are reiterated at the opening of the South West Water (SWW) Water Resource Management Plan (WRMP) which states 'Our Plan must meet key government targets: delivering stretching reductions in per capita consumption and leakage; reducing abstractions from our rivers to provide long-term protection to our river environment; and increasing our resilience to drought.'⁹ It also states that 'we face longer, drier and hotter summers, and more erratic rainfall in autumn and winter, making the supplies of water less.'¹⁰ The SW River Basin Management Plan also projects the potential issues associated with increasing water demand and the potential impacts additional abstraction pressure would have upon water quality and ecology and identifies the SW peninsula as being less resilient than other areas to this abstraction pressure with a potentially greater negative impact.¹¹

2.2 The WRMP sets certain aims for the Water Industry and confirms, 'We have a long-term per capita consumption (PCC) target of 110 l/p/d with an intermediate target of 120 l/p/d by 2037. We have a contribution to make towards achieving these targets through water efficiency programmes including education and identifying leaks on the customer-side pipework. Achieving the targets will also be enabled by the implementation of future government policy changes on water saving devices'¹². It also includes the aim to be resilient to a 1 in 500 year drought by 2039/40 and to reduce non-household (business) water use by 9% by 2038 and 15% by 2050.

2.3 Similarly, in 2020, this target to achieve an average 110 l/p/d of water use by 2050, while also reducing non-household demand, was also introduced by the government

⁶ [Housing: optional technical standards - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/housing-optional-technical-standards).

⁷ DEFRA Steve Double MP letter to Chief Executives 1/9/22

⁸ Plan for Water: [Plan for Water: our integrated plan for delivering clean and plentiful water - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/plan-for-water)

⁹ Draft WRMP24 P3 [Water Resources Management Plan \(southwestwater.co.uk\)](https://southwestwater.co.uk/water-resources-management-plan)

¹⁰ Draft WRMP24 P6

¹¹ SW RBMP [South West river basin district river basin management plan - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/south-west-river-basin-management-plan)

¹² Draft WRMP24 P6

National Framework for Water Resources¹³. The Chartered Institute for Water and Environment Management also published a Briefing Note on Household Water Efficiency that went further to state 'research indicates that over the next 50 years it could be possible to meet a target of 75 l/p/d across England and Wales ¹⁴.

2.4 It is clear then, that alternative proposals to increase supplies of water in the short term, such as additional/extended abstraction licenses, transportation of water and desalinisation, whilst providing a short term solution, do not reduce water use and therefore have their own environmental implications. Such solutions regarding supply must be coupled with solutions to reduce demand also, particularly as research has shown that 97% of people in the UK underestimate their water usage, with 67% believing they use less than 69 litres per day and 21% believing they use less than 19 litres per day¹⁵.

3. Local Context:

3.1 Water resources in Devon, Cornwall and the Isles of Scilly are especially vulnerable to water scarcity both due to the combined pressures of high demand, and limitations in supply.

3.2 Demand:

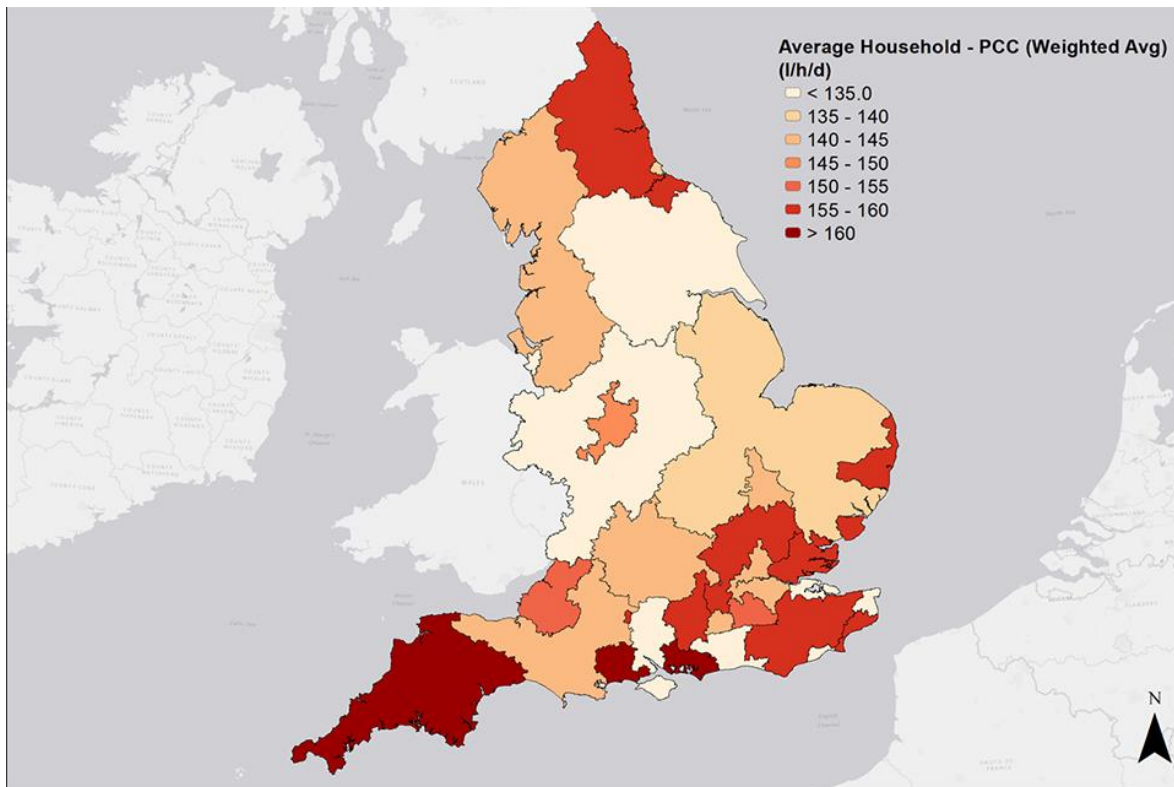
The Government Plan for Water specifically identifies the far South West as the area with the highest water consumption:

¹³ [Meeting our future water needs: a national framework for water resources - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/meeting-our-future-water-needs-a-national-framework-for-water-resources)

¹⁴ [Briefing note: Household Water Efficiency - CIWEM](https://www.ciwem.org.uk/publications/briefing-note-household-water-efficiency)

¹⁵ Water UK, 11th January 2023

Fig 1. Water consumption in litres per person per day, mapped by water companies in England (average for metered and non-metered households) in the period 2021 to 2022:



(The above shows SWW and BW joint reported PCC for this year however, SWW PCC alone was 158l/h/d' SWW data).

In addition to this domestic use, industry and agricultural water usage in the South-West is also high, particularly due to dairy and potato production. This has been recognised by the industry through OFWAT's innovation fund which has given a grant of £1m to a partnership project to aid farmers in Devon and Cornwall¹⁶ to create water storage on their farms and thus reduce mains water demand.¹⁷ DEFRA too recognise this area of demand with an aim in the Environmental Improvement Plan to increase the amount of water stored by the farming sector by 66% by 2050 to support food production and protect the water environment.¹⁸ This is of particular importance as almost 1/5th of all agricultural holdings in the UK are located in the South West¹⁹.

¹⁶ Water Net Gain Westcountry Rivers Trust, wrt.org.uk

¹⁷ [Devon and Cornwall farmers to be paid to store water on their land - BBC News](#)

¹⁸ [What the Environmental Improvement Plan means for you - Farming \(blog.gov.uk\)](#)

¹⁹ Farming and Food Statistics: South West England, 2022

3.3 Supply:

Further local work on Devon through the Devon Carbon Plan states that Exmouth has recorded a temperature increase of 1.05°C since 1900 and Ilfracombe 0.64°C.¹⁵ In comparison to the 1961 – 1990 average, south west England now experiences almost 10% more rainfall each year. Winters are wetter and summers drier; the South West already receives 28% more precipitation in autumn, almost 16% more in winter and approaching 9% less in summer.²⁰ If Green House Gas emissions continue unchecked then the projected shift to wetter winters and drier summer will become even more polarised and magnified.

3.4 Even with the increased precipitation within the autumn and winter periods, the hot and dry summers can lead to an inability to make full use of the rainfall when it does occur. During such summers the soil loses moisture content, which compacts the soil. When rainfall does then occur, the soil is unable to absorb the rain at a sufficient rate leading to an increase in surface water which quickly drains into watercourses and surface water sewerage infrastructure.

3.5 In October 2022, despite higher than average October rainfall (although only the second month of above average rainfall since February), Autumn 2022 saw the 8 month cumulative rainfall total (March to October) in Devon and Cornwall remain the 11th lowest in the 132 year record. Soil moisture deficit continued and many river flows remained low. The majority of groundwater sites remained low and, despite the rain, total reservoir storage still decreased at all reservoirs during October. Storage at Colliford was particularly low for the time of year - at 30th October storage decreased at Roadford, Colliford and Wimbleball reservoirs and was at 34%, 15% and 18% respectively.²¹

3.6 Following a continuation of this trend, South West Water welcomed the autumn and winter rain but continued to emphasise water efficiency campaigns including the temporary hosepipe use ban and the need for customers to reduce the amount of water they use in order to help recharge the region's rivers and reservoirs.²²

3.7 The March 2023 Water Situation Report saw Devon and Cornwall receive 203% of Long Term Average (LTA) rainfall, classed as 'exceptionally high' for the time of year. Yet although river flows, soil moisture and groundwater improved as a result and even though reservoir storage increased by 2% at Wimbleball, 5% at Roadford and 7% at Colliford, only Wimbleball reached 100% net capacity and reservoir levels remained lower than at the same time in 2022 (Roadford reservoir was 25.5% lower than April 2022)²³. In response to

²⁰ [Devon Carbon Plan Summaries – Devon Climate Emergency and](#) Jenkins, G.J. et al. (2008) *The climate of the United Kingdom and recent trends*. Met Office Hadley Centre, Exeter, UK. Available at: https://www.ukcip.org.uk/wp-content/PDFs/UKCP09_Trends.pdf

²¹ October 2022 Water Situation Report, Environment Agency

²² [Reservoirs still low says South West Water despite large rainfall this week | okehampton-today.co.uk](#)

²³ SWW email to customers 25/4/23

this situation, in April 2023 SWW extended the hosepipe ban into further areas of Devon and undertook a public campaign to encourage more careful water usage.

4. Opportunities:

4.1 There is need for a step change in the culture of water use to reduce the demand on water supplies as reflected in government and professional body guidance, National Policy and Water industry targets. There is also a clear role and reasonable expectation, that the planning system, developers and housebuilders will aid in achieving this reduction in demand.

4.2 As a result of the above evidence and current trends and situation, it is therefore suggested that emerging planning policies and wider advice given by LPAs to applicants include increased consideration of water efficiency and the future water resilience of proposals. This could include water storage alongside new agricultural building applications (many forms of which also have biodiversity and flood management benefits), grey water recycling on offices, factories and schools and the stricter 110 l/p/d applied to new housing. Actively addressing these issues early in plan-making will ensure it is firmly on applicant and local authority agendas and timely inclusion is likely to increase uptake due to the current OFWAT Innovation monies and DEFRA 'Plan for Water' targets and incentives (such as the Water Management Grant).

4.3 The sources of evidence the Government advise could be used to inform and support adoption of the tighter water efficiency standards include (but are not limited to) River Basin Management Plans and locally specific evidence. This is aligned with the WRMP24 list of demand-side feasible options and the Draft Regional Plan Demand-side preferred options²⁴. It is considered that there is ample locally specific evidence, as set out above, to robustly justify the application of the more environmentally sound 110l standard in Devon and Cornwall.

4.4 In addition to taking the opportunity to highlight and influence demand-side policies relating to domestic use, the planning system also has the opportunity to influence and promote demand side benefits within agriculture, industry and commerce. Once included within Planning Policy these water efficient requirements would apply to tens of thousands of new homes and countless new commercial and agricultural developments for the long lifetime of the Plans, ensuring that we are both responding to the immediate climate effects on water supplies, but also securing increased future resilience to climate change for this essential natural resource.

²⁴ [west-country-water-resources-plan-summary.pdf \(wcwrq.org\)](https://www.wcwrq.org/west-country-water-resources-plan-summary.pdf) page 8

5. Conclusion:

5.1 As a result of the above compelling local evidence and in order to demonstrate the gravity of this issue and their solidarity on it, the Environment Agency and South West Water take a joint position on this matter. We accept the above evidence and as a result both concur that as new Development Plans are formed or existing ones reviewed in Devon and Cornwall, water efficiency measures should be a policy requirement of development, and newbuild dwellings must be required to comply with and demonstrate the tighter building regulations requirement of 110 l/p/d.
