



HOUSEHOLD
WATER EFFICIENCY

BRIEFING NOTE

MARCH 2020

This briefing note contains a summary of the issues around household water efficiency and covers Per Capita Consumption (PCC). PCC is a measure of how much water household customers use at home every day. It is usually measured in litres per person per day (l/p/d). It is important to note that personal water use outside of the home, for example at work or the gym, is not included in this figure. These are reported as non-household consumption figures and should also be considered.



WHAT IS OUR CURRENT DOMESTIC WATER USE?

The latest information, from April 2018 to March 2019, shows an average PCC level of 143 [1] litres per person per day (l/p/d) across England and Wales [i]. This average figure, based on values reported by the water companies, masks a range in actual consumption.

PCC varies in relation to a wide range of factors, including; the number of people living in a house, property type, the water using products installed, if the household is metered or unmetered, household affluence and, importantly, customer behaviour.

Increasing metering or smart metering would give water companies and regulators a greater understanding of current water use and leakage across different regions and socio-demographic groups, allowing better informed discussion on water efficiency targets. Smart water metering can help water companies spot customer leaks and help customers understand and cut their water use, resulting in bill savings.

WHY IS WATER EFFICIENCY IMPORTANT?

Water is needed to meet the needs of nature, industry, businesses and domestic consumers. Though it is recycled through both natural and artificial processes, a limited amount of water is available at any one time and/or location.

Improving water efficiency is important because:

- Using less water helps secure water supplies in the face of climate change and population growth.
- It saves money on water and energy bills and can reduce the level of investment needed in new water supply infrastructure.
- It leaves more water in the environment for nature.
- It reduces our energy use and carbon emissions and helps us reach net zero.

[1] This figure was higher than previous years, which reflects the dry 2018 summer.

HOW DOES WATER EFFICIENCY LINK TO THE CLIMATE AND NATURE EMERGENCY?

Water abstracted (taken from the environment) for use in homes and businesses reduces the amount of water available for nature. This water needs to be treated and transported, processes that require energy and emit greenhouse gases. Therefore, water abstraction can, in some cases, negatively contribute to the climate and ecological crises.

Improved water efficiency can offset increases in abstraction that would otherwise occur as a result of population increase leaving a similar amount of water available for nature. Reducing abstraction can also help to reduce carbon emissions.

IS PCC A USEFUL MEASURE?

PCC is seen by water companies as a good communication tool because individuals can understand how much water they use at home. Ofwat has set water companies individual PCC reduction targets for 2015-2020.

However, PCC is not universally viewed as a good measure of household consumption. This is because:

- There is no direct measurement of PCC. It can only be estimated based on household consumption divided by occupancy.
- Average PCC conceals a wide range of factors and variability in actual use.

WHAT TARGETS SHOULD WE BE AIMING FOR?

As population growth and climate change continue it will become increasingly difficult to meet the water needs of nature, industry, businesses and domestic customers. Reducing PCC is one way of easing this competition for water resources.

Research [ii] indicates that over the next 50 years it could be possible to meet a PCC target for England and Wales of 75 l/p/d or less. The PCC target introduced by the recent National Framework for Water Resources is 110 l/p/d by 2050 [iii].

Affecting our
FUTURE



WHAT FACTORS ARE IMPORTANT IN THE CONTEXT OF WATER EFFICIENCY TARGETS?

- **Social expectations**

- How water is used links to lifestyle habits that continue to evolve, relating to personal habits and preferences, hygiene, leisure and wellbeing.

- **Infrastructure and leakage**

Household consumption accounts for 55% of all water abstracted followed by leakage at 22% and then non-household use at 20% [iv]. Remaining use is made up of minor components. Ofwat has set all water companies a target to reduce their leakage by 15% by 2025. Water companies have responsibility for most water infrastructure, but householders are responsible for identifying and repairing leaks in their homes and the supply pipes on their property.

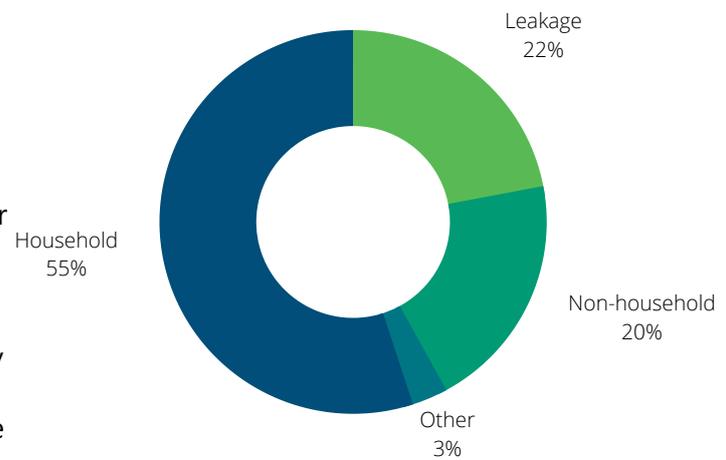
- **Population growth**

- This will place increased pressure on water resources. Reducing PCC will offset this to a degree.

- **Climate change impacts**

- Met Office UK climate predictions [v] show that in future we are likely to experience warmer, wetter winters and hotter summers, with increasingly extreme rainfall events. More frequent hot and dry summers like 2018 will result in more hosepipe bans [2] to help maintain supplies during drought events. This will in turn put greater focus on water use, leakage and water abstraction.

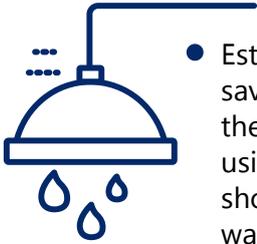
[2] Now known as Temporary Use Bans (TUBs)



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Where we could be
TOMORROW

WHAT CAN INDIVIDUALS DO TO IMPROVE WATER EFFICIENCY?



- Establish and maintain water saving habits, for example; closing the tap when brushing teeth, using a washing up bowl, taking shorter showers/shallow baths, waiting for a full load when using the washing machine/dishwasher.



- Purchase more water efficient products when old ones have come to the end of their lives.
- If on a meter, monitor bills for signs of leaks.

- Install water saving devices, for example; tap aerators, efficient shower heads/taps, dual flush toilets, devices to reduce the volume in the toilet's cistern.
- Get leaks at home repaired.
- Get in touch with the water company to get advice on how to reduce water use.
- Spread water efficiency information.



The most effective water efficiency measures require co-ordinated effort from a range of stakeholders, including government.

A mandatory water labelling scheme linked to minimum standards would need to be government led.

Increasing meter penetration would be much easier if the regulations around this were changed.

WHAT CAN STAKEHOLDERS DO TO IMPROVE WATER EFFICIENCY?

DON'T FORGET THE WIDER WATER EFFICIENCY PICTURE

Water abstracted from the environment is used both domestically and commercially as well as lost through leaks in water supply infrastructure. To improve the availability of water for the environment all three areas of 'demand' need to be addressed. PCC looks at domestic use in isolation. In focusing on PCC only, other (potentially more cost effective) solutions addressing leakage and commercial use may be overlooked.

FINDING MORE INFORMATION

If you're interested in finding out more about water efficiency and water resources planning more widely, please see:

CIWEM report [Water efficiency helping customers to use less water in their homes](#)

CIWEM [consultation response](#) to DEFRA's measures to reduce personal water use consultation

CIWEM Policy Position Statement [Planning Water Resources in England and Wales](#)

RESOURCES

[i] discoverwater.co.uk/amount-we-use

[ii] www.ofwat.gov.uk/wp-content/uploads/2018/05/The-long-term-potential-for-deep-reductions-in-household-water-demand-report-by-Artesia-Consulting.pdf

[iii] www.gov.uk/government/publications/meeting-our-future-water-needs-a-national-framework-for-water-resources

[iv] www.ofwat.gov.uk/wp-content/uploads/2018/05/The-long-term-potential-for-deep-reductions-in-household-water-demand-report-by-Artesia-Consulting.pdf

[v] www.metoffice.gov.uk/research/approach/collaboration/ukcp/index



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YEARS
SHAPING THE ENVIRONMENT FOR OUR FUTURE