

Defra consultation on measures to reduce personal water use

Yorkshire Water Response

October 2019



YorkshireWater

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Context

In 2018 the Yorkshire region experienced one of its driest summers on record. The early summer was marked by hot weather, which sparked a sustained increase in customer demand for water of some 200 million litres a day – equivalent to the daily demand of a city the size of Leeds. This was then followed by a sustained dry period, which continued to erode water resources which had already been hit by the high demand.

Whilst 2018 was an unusual year in our historical record, climate change means such extreme weather situations are likely to become much more frequent in the future.

At the same time, we are faced with a growing and changing population. The population of Yorkshire is likely to increase by around 1 million people by 2045. As people live longer, we are also seeing an increase in the number of people with long-term health conditions who rely on water for their treatment and medication.

All of this means that we face the challenge of having to supply more people, whilst having less water available to supply them with. We therefore strongly support the intention behind this consultation published by Defra.

Executive Summary

We support the establishment of a nationwide average per capita consumption (PCC) target in order to set the level of ambition and drive policy making. However, PCC targets on their own do not deliver water efficiency. More needs to be done to develop a coordinated delivery plan and to incentivise and enable water use reduction across all customer groups.

Currently water companies have PCC targets as part of their business plan performance commitments and reflected in their statutory Water Resource Management Plans (WRMPs), but are limited by how much they can achieve without cross-sector responsibility. Nationally set PCC target needs to correctly assign responsibilities to municipal bodies and other sectors



such as Government, local councils, manufacturers of white goods and housing developers and constructors.

In our response we argue that a mandatory water efficiency labelling scheme, not a PCC target, should be the top priority for Government. Such a labelling scheme would:

- Enable people to take more control of their water use by providing them with information on the water efficiency of their appliances.
- Allow a much simpler approach to Building Regulations when compared to the complex PCC calculation.
- Help to drive innovation and remove the most inefficient appliances from the market.
- Impact existing housing stock, not just new builds and help to drive reductions in demand from non-household customers.

Whilst mandatory labelling should be the priority for Government, such an approach needs to be tied in closely with large scale behaviour change campaigns with the public in order to realise the benefits in the short and long term. In order to maximise their impact, behaviour change campaigns should be delivered by a broad coalition of stakeholders including Government and NGOs and should not be left to water companies alone to deliver.

Our research shows that customers are more likely to be open to changing their consumption behaviour if they believe water companies are addressing water lost through leakage. It is vital that water companies continue to invest in reducing levels of network leakage, both to reduce the amount lost and to signal to customers that the companies are playing their part.

Finally, behaviour change campaigns should be underpinned by the rollout of smart metering to all areas. Although this does not necessarily require an immediate shift in moving all customers to measured tariffs. However, it should be noted that an increase in metering could result in an increase in reported PCC and a reduction in reported leakage, as better information allows water companies to better differentiate between the two.

Consultation Response

1. Do you consider that the current approach in Building Regulations (i.e. a mandatory minimum standard for new homes but with local authorities in water stressed areas having discretion to ask for a higher standard through a Building Regulations Optional Requirement) is effective?

No. We do not believe that the approach is effective.



We strongly support having a cross-sector nationwide target for per capita consumption (PCC) based on household water use to drive policy, innovation and decision making. However, we do not agree that the current PCC standard within Building Regulations is the best approach for a number of reasons:

- The current calculation for the PCC of a new home includes dated assumptions about customer behaviour that developers have no control over. Therefore, the actual household water consumption once the homes are inhabited tends to be higher than expected.
- Consumer acceptability of devices needs to be taken into account. There is a high likelihood of homeowners switching over time to higher water use products after the build is complete if they remain available.
- The current calculation method does not always encourage developers to install water efficient fittings throughout the household, instead encouraging measures which most effectively impact the calculation e.g. installing a smaller bath to impact PCC rating, whilst at the same time installing a power shower.

We believe that an approach based on mandatory water labelling would be significantly simpler to implement and would also be more effective. If a mandatory water labelling system were implemented, building regulations could be amended to require developers to install only the most efficient fittings as rated by the labelling system. This would ensure water efficient devices are installed throughout the household and would mean developers do not have to deal with a complex PCC calculation.

Mandatory water labelling would also drive up standards, as has been seen following the introduction of energy efficiency labelling, meaning it is less likely that inefficient products would be available for homeowners or tenants to switch to, meaning the benefits of building and fitting to low water use standards could be maintained.

In addition, mandatory water labelling would also have significant benefits across existing housing stock, as detailed in Question 5 below.

2. Do you consider that the current minimum standard of 125 litres per person per day and optional requirement of 110 litres per person per day should be changed, and if so what might be an appropriate new standard?

Yes.



As we stated in our response to Question 1, whilst we do not agree that minimum water usage standards in Building Regulations in isolation are the right mechanism to drive forward PCC target, we strongly support a nationwide multi-sector average PCC target to drive forward innovation and policy making. Our customer research shows that water use is not widely understood or appreciated, so having a national target which is more widely known can help drive ambition and influence institutional and individual decision making.

We believe that there should only be one nationwide target that is the responsibility of all sectors, rather than minimum and optional standards set against regional areas. This is because:

- Areas that are not currently water stressed are likely to face challenges in the future due to climate change and population growth. All parties operating in such areas should therefore be given the drivers and tools to take action now to reduce the risk of water stress in the future. We believe a new PCC standard should be applied across all regional areas.
- Areas not currently water stressed may become effective water sources through trading for support water stressed areas of the country. Enabling non-water stressed areas to enact consistent PCC standards may help to increase the amount of water available for trading.
- Having lower standards for areas not currently water stressed means potentially other benefits from reducing water use may be delayed or under exploited. For example, the reduced energy associated with lower water consumption would help to reduce carbon emissions.
- A national PCC would help stimulate the manufacture and supply of water efficient appliances and water efficient building design.

A new national target would need to reflect the level of future ambition for domestic water use and recognise any regional variations in current PCC positions to set a suitably stretching (but achievable) trajectory to achieve the target.

We believe any new target should also be ambitious enough to drive innovation in policy, technology and customer communications. Given the future focus on the target and it being universal in its application, consideration should be made to how such a target can be successfully adopted into the current regulatory frameworks across multiple sectors. With this in mind we would suggest a target of 100l pppd would be appropriate. Timely planning will be key to ensure regional variations are addressed, whereby it is accepted that some areas could take longer to reach a national target.



3. Are there any other issues relevant to using Building Regulations to set water efficiency standards that the Government should consider?

N/A

4. To what extent do you agree or disagree that Government should work with water companies and local authorities to run partnership retrofit and behaviour change programmes in existing homes?

Strongly agree.

Water companies are making significant efforts to communicate with customers to raise awareness and change behaviour. We recently trialled a new 'always on' approach to water saving messaging which responds to research which found customers were less responsive to messaging that only ran during periods of drought and dry weather. Our new campaign, which we began to pilot in the summer of 2019, was based on a sophisticated triggering model which altered both the messaging and campaign spend depending on a number of factors including water resource levels, weather forecast and current demand. In 2020 we will be taking this campaign to the next level by carrying out randomised control trials of different interventions to provide empirical evidence of their effectiveness.

Many water companies are already carrying out retrofitting schemes (for example the 'Yorkshire Water Fit to Save' programme) which demonstrate greater benefits than the previous approach of supplying customers with water saving packs, although at a higher cost. We are continuing to pilot the Fit to Save approach to further understand the benefits and more work and innovation is needed in the range of water saving devices that are available for retrofitting and to drive down their costs.

Despite the efforts of water companies, research shows that for the majority of our customers water use is low on the household agenda and many have limited interaction with their water company. A greater use of partnerships to deliver water saving messages through supplementary routes could significantly help to increase awareness of both the need to save water and of the retrofitting options available to help reduce consumption overall. A significant reduction in PCC will require a properly resourced, large scale behaviour change programme delivered and supported by a range of stakeholders including Government, local authorities, water companies, NGOs and others. Such behaviour change campaigns will have less sustained impact if left to water companies alone to deliver.



We would welcome any opportunity to work collaboratively with Government and others to improve the effectiveness of future campaigns and help the customers of our region. A recent example is our work with the Environment Agency on the pilot for the Love Water campaign, which has brought together a range of stakeholders to jointly communicate the need to value water.

5. To what extent do you agree or disagree that information on water efficiency should be displayed on water using products?

Strongly agree

Our research has consistently found that customers have little understanding about their water use and the contributions from appliances and products around the home. When customers are asked about their willingness to reduce their consumption, most are willing to make at least some form of reduction in their household. Even those who attach a higher emotional value to certain high water use activities, such as maintaining an attractive garden by using a hosepipe, are open to making changes. However, customers consistently express a desire to be provided with more information in order to be able to make informed decisions about their use. Efficiency labelling is a vital tool in allowing consumers to understand their water use and make decisions about action.

Evidence from energy efficiency labelling also suggests that mandatory labelling drives improvements in manufactured product standards and results in the most inefficient devices being quickly removed from the market. More needs to be done to encourage innovation of low water and energy use products. Technological development is also needed in order to provide water efficient devices that are acceptable to consumers such as low use showers that do not lead to longer time in the shower. A robust water labelling scheme could help to drive this innovation.

Mandatory water efficiency labelling schemes have been shown to be effective elsewhere in the world e.g. the Australian WELS system and research from the Energy Savings Trust found that: *“A government-led mandatory scheme linked to building regulations and minimum standards is projected to reduce per capita water consumption by 6.3 litres per day within 10 years, rising to a saving of 31.4 litres per day after 25 years.”*

Mandatory water labelling provides clear and simple information which allows customers to make decisions about their water use. It also allows minimum standards to be set across a range of areas, for example in building regulations as discussed above, or in ensuring all government procurement only buys the most water efficient devices.



That said, there is some evidence to suggest that many customers avoid using 'eco' settings on devices due to the perception that they aren't as effective. Therefore, any mandatory labelling system must be accompanied by significant behaviour change work.

6. To what extent do you agree or disagree that providing information about products' water efficiency changes peoples' purchasing behaviour and reduces their use of water?

Slightly agree

Our recent research found that customers identified the use of more efficient white goods as being the top area where they would be most willing to reduce their water use. Customers also consistently tell us that they want to be provided with more information on how to reduce how much they use. Water efficiency labelling clearly meets this desire.

However, our research shows labelling alone is simply a foundation on which behaviour change campaigns can be built. Customers need to be given information on both why there is a need to reduce demand, and the benefits of reducing their water use in order to encourage them to use the information that is available through labelling.

7. To what extent do you agree or disagree that water efficiency labels should be linked to building standards and minimum standards?

Strongly agree

See our response to Question 1.

8. How else could Government or water companies encourage people to use more water efficient devices/appliances at home?

As discussed in our response to Question 4, Government has a key role to play in delivering the large-scale behaviour change campaigns that are required to encourage the supply and take up of more water efficient devices. Government could also help to provide a stimulus to the market for water efficient devices following the introduction of a mandatory water labelling scheme by ensuring all government procurement only purchases the most water efficient devices. This could encourage goods manufacturers to innovate and compete for the advantages of producing the most efficient devices. In turn this would increase standards, helping to make more efficient devices available to domestic consumers.

9. To what extent do you agree or disagree that people should pay for water according to how much they use?



Strongly agree

If the overall aim is to reduce PCC, then ensuring people pay for what they use should be a clear priority. Whilst there is evidence that once some customers realise the relatively low cost of water their use actually increases, current figures show that overall customers on a water meter use significantly less water than those on an unmetered supply.

However, tariffs and methods of billing do need to take account of other factors including the need to ensure that water bills are affordable, particularly to customers in vulnerable circumstances who may need to use an above average amount of water. These issues can be addressed through water company social tariffs and other schemes, but the concern over the impact on bills for customers is a factor in moving towards universal metering.

Therefore, the best approach to increasing the level of metering is likely to be by encouraging and incentivising customers to apply for a meter. Recent trials during our annual billing cycle delivered a significant increase in the number of meter applications by simply highlighting more clearly the benefits of a meter on a customer's annual bill.

Such an approach could be supported in future by the universal introduction of smart meters to all measured households (without initially compelling customers to change to a measured tariff where compulsory metering is not already underway). The additional information that would be made available through smart metering could then be used to provide customers with more information about their consumption, helping to encourage those who would save money to switch to a metered tariff.

This approach, combined with giving customers additional information on how to reduce their demand – either through mandatory water labelling, or increasing behaviour change campaign activity – could help to significantly increase meter penetration through voluntary take-up as some customers seek to reduce bills by taking control of their water use.

10. To what extent do you agree or disagree that the amount of households charged by metered volume should be increased beyond and/or faster than what is already planned by water companies?

Strongly agree

We believe customers should be further encouraged to adopt water meters and volumetric based tariffs in order to promote lower water use in domestic premises as a whole, and as we noted we are trying new ways to promote wider deployment on a voluntary basis in



Yorkshire. As we have commented already, the wider introduction of meters does not result in all newly metered customers lowering their water usage, but in the round research shows water demand does drop. Some customers may be worse off financially changing to a volumetric charge and some customers in vulnerable circumstances such a change could be a distinct disadvantage. Therefore, any model for mandating of meters or smart meters across the country would need to recognise that for some customers there could be a downside to adopting a metered solution if this meant they were required to move onto a volumetric based charge for water and sewerage use.

11. If you agree that the amount of households charged by metered volume should be increased, what do you think would be the best or most appropriate approach? Do you have suggestions for increasing metering other than what is mentioned above?

See answer to question 9.

**12. Are there any other issues we need to consider with regard to increasing metering?
Add response in text box below**

We would encourage Government to consider granting powers to all water companies which would enable them to pursue compulsory metering, not just those in water stressed areas. This would give companies more options when deciding how to reduce demand and would allow non-water stressed areas to take action to avoid the risk of water stress in future.

It is also important to consider the implications that increasing metering may have for both leakage and per capita consumption. It is likely that a significant amount of water currently recorded as leakage is, in fact, consumption and therefore reported leakage is likely to fall and PCC will rise.

13. To what extent do you support or oppose use of smart water meters instead of manual meters?

Strongly support

Smart metering opens up a wider range of water efficiency possibilities thanks to the additional information they can provide on consumption patterns and suspected supply pipe leaks or wastage. Behaviour change campaigns can be significantly more effective when based on better information and targeted to the customers actual habits. For example, presenting customers with their energy use in comparison with the lower use of their neighbours has been shown to significantly encourage lower consumption in future.



It may be possible to realise some of these benefits by rolling out water smart meters without changing customers to volumetric based bills. However, there are likely to be greater sustained benefits when the majority of customers are also billed on the basis of their actual water usage and associated sewerage.

In early 2020 we will be carrying out a trial of smart meters in homes and businesses to assess both the practicalities of their installation and operation and their impacts on customer demand patterns. As part of the trial we will be carrying out a series of randomised control trials to the impact of test behaviour change interventions on demand.

14. To what extent do you support or oppose use of incentives to encourage customers to use less water?

Strongly support

We would welcome the exploration of all possible options to encourage behaviour change to reduce demand. The initial evidence from trials of the use of incentives to reduce demand would suggest that they can be beneficial, however further work is required to test and evidence the impacts of the range of different options.

We hope to have further evidence to support the use of incentives from our randomised control trials planned for 2020. These trials will look at a range of interventions, including the use of points based reward systems for customers.

15. What incentives could water companies use to reduce customer use of water?

See answer to question 14.

16. To what extent do you support or oppose the use of RWH and GWR schemes at individual level?

Strongly support

RWH and GWR schemes are valuable tools in both reducing demand for potable water, and helping to reduce flood risk by capturing and storing surface water. However, depending on the nature of the development such schemes may not always be viable. Further work is required to support the development of exemplar schemes which can test the implementation of RWH and GWR at a individual and community scale before any consideration should be given to making RWH or GWR mandatory.



The proposed exemplar sustainable development adjacent to our Esholt waste water treatment works in Bradford which is being developed by Yorkshire Water and Keyland will provide an opportunity to test measures across a development of 150 homes and an industrial development - <http://esholtpositiveliving.co.uk/>

17. To what extent do you support or oppose the use of RWH and GWR schemes at community scale?

Strongly support

See answer to question 16.

18. How can Government or water companies most effectively encourage people to reuse water in their homes?

Our planned behaviour change trials in 2020 should provide more evidence on the most effective ways to encourage customers to change their behaviour when it comes to water use, however it is likely that encouraging water re-use will require sustained customer engagement led by a range of agencies including government, water companies and local authorities. These campaigns would need to be built on a strong understanding of existing customer behaviours and the potential barriers to water re-use.

19. Do you have any evidence/views/comments on the potential impacts on water bills for various customers and geographical regions should the management of supply pipes be transferred to water companies?

Many water companies, including Yorkshire Water, have already implemented free supply pipe repair schemes based on the need to meet regulatory leakage targets. These schemes mean that supply pipes are already effectively being managed by water companies, without the complexity of the need to transfer ownership. Therefore, we would suggest that there is little additional benefit to be gained from transferring ownership, especially considering the complexity of such a transfer.

20. Of the alternative options above, which is your preferred? Please explain why or if you have other ideas.

- Increased use of metering and/or smart metering.
- National policy for a single continuous pipe from main to wall mounted meter box in new build properties, to address leakage.



- Create a mandatory code of practice for water supply companies (rather than voluntary).
- Require water supply companies to assist with maintenance and repair.
- **Voluntary adoption of supply pipes by water supply companies.**
- Water supply companies to run public relations exercise to identify and address problem pipes and clarify property owner responsibilities.

See answer to Question 19 which is effectively a version of voluntary adoption. Do we need to explain this more? Seems we want to adopt by giving a free repair without owning the asset when it gives a leakage benefit, but not otherwise? Is it regulated expenditure?

21. What other options are available to reduce leakage from customer supply pipes?

See question 19.

22. What are the main barriers to changing behaviours to reduce personal water use? Please rank your top three options by order of importance:

When considering what might stop people from considering changing water usage behaviours to reduce overall consumption, three key themes emerge from our most recent customer research:

- **Hygiene:** A broad awareness exists around the potential for water saving through things such as flushing the toilet less often, but for most hygiene is considered a higher priority.
- **Convenience** plays a significant role in reluctance to change existing water usage behaviours especially for those with young families and / or consider themselves time poor. Washing machines and dishwashers in particular are put on at set times, regardless of whether they're full or not.
- **Personal circumstance** - including those in vulnerable circumstances - play a part for some in dictating whether they feel they can reduce consumption, or not.

A lack of financial incentive is also a barrier for unmetered customers. Unmetered customers are generally less conscious of water usage overall, and less likely to consider 'wider' factors such as the additional energy used through heavy water usage.

23. Which organisation(s) (if any) should communicate about how to reduce personal water use? Please select all that apply.

- Water companies



- Government
- Local government
- Environmental non-governmental organisations, for example environmental charities
- Other – please specify

All

Each of the organisations listed above has unique strengths, both in terms of their opportunities to engage with customers and the influence they have. All stakeholders need to work together to influence changes in behaviour as it cannot be left to water companies alone.

24. If there are any further matters that you would like to raise or any further information that you would like to provide in relation to measures to reduce personal water use, please give details here.

N/A

