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21 May 2018

Secretary of State, Department for Environment, Food and Rural Affairs
South East Water Resources Management Plan Consultation
Water Resources
Department for Environment, Food and Rural Affairs
Area 3D, Nobel House
17 Smith Square
London SW1P 3JR

Dear Secretary of State

Re: South East Water consultation on draft Water Resources Management Plan 2019

Waterwise is pleased to respond to the South East Water consultation on its draft Water Resources Management Plan 2019.

Waterwise was founded in 2005 and is the leading authority on water efficiency in the UK and Europe. We are an independent, not-for-profit organisation, receiving funding from Supporters and Affiliates across and beyond the water sector and wider sponsorship and research projects. We like to be at the front, leading and supporting innovative efforts to realise our mission; that water will be used wisely, every day, everywhere. Although we are supported by water companies we know they value our independent challenge and that is why we are responding to this consultation.

Water efficiency is a key contributor to resilience, and water companies are currently carrying out large-scale retrofitting and customer engagement programmes. But water efficiency, scaled up even further, is also an invaluable tool in driving customer participation – as well as using water efficiency programmes to get customers to help deliver water savings, it can contribute to multi-layered relationships to help inform, track and improve customer service and outcomes across companies.

We know Ofwat is keen to see larger-scale water efficiency and we support Defra's expectation that Ofwat "promote ambitious action to reduce leakage and per capita consumption". This also links to the requirement to promote water efficiency in Ofwat's resilience duty and the ambition on water efficiency set out in the 25 Year Environment Plan.

In June 2017 Waterwise launched our [Water Efficiency Strategy for the UK](#). We produced this in partnership with the wider water sector and it is being delivered by a Water UK-supported Steering Group.

Waterwise has been highly supportive of Ofwat's work on customer engagement and participation, in particular the Tapped-In report. We have launched the 'Leadership Group on Water Efficiency and Customer Participation', which brings together Chief Customer Officers and equivalents of all the UK water companies in a more ambitious approach to wasting less water - using this to drive a more customer-led culture. We are also working with water retailers to drive water efficiency ambition and outcomes for non-household customers.

The key elements of our response include:

- We note - and welcome - that South East Water has achieved an average 18% reduction through their metering programme and will have 90% metering by 2020
- We support the innovative approach to behaviour economics and proposed step change in water efficiency
- This step change isn't reflected in an ambitious reduction in per capita consumption, forecast to only reduce to 140 l/p/d by 2044/45. We suggest that by 2045 the per capita consumption target should be around 100l/p/d, with milestones towards this set out at intervals and reflected in the business plan for PR19
- Waterwise recommends South East Water include a broader range of water efficiency actions in their baseline or final options in order to support greater ambition on reducing per capita consumption
- Given higher water efficiency is the second highest priority for customers willingness to pay, this should be better reflected in the final WRMP
- South East Water has been proactive in engaging retailers and suggesting joint non-household water efficiency options. Waterwise recommends that the impacts of discussions with retailers on the final non-household demand forecast and on joint options be clearly communicated in the final WRMP.

Attached is our detailed response to the consultation. We look forward to working closely with South East Water to deliver water efficiency in PR19 and would welcome the chance to discuss our response with you in person.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Aaron Burton". The signature is stylized and cursive.

Aaron Burton MCIWEM C.WEM CEnv CSci
Director of Policy and Innovation

Waterwise response to South East Water draft Water Resources Management Plan 2019

Ambition on demand management

South East Water outlines its water efficiency actions in PR14 in its draft WRMP. These include:

- Installing more than 286,000 water meters and providing water efficiency advice and the offer of free water-saving devices to all of those customers
- Developing a “My Water Use Report” through its partnership with Advizzo, an innovative behavioural economics company, leading to a reduction in consumption of between one and two per cent during a pilot of 22,000 customers
- Despite 47,000 new homes being constructed between 2011/12 and 2016/17, total household demand for water has declined by 21 MI/d
- People are using less water, down from 172 litres per head per day (l/h/d) in 2011/12 to 151 l/h/d in 2016/17

To build on these achievements and address the many pressures outlined in the dWRMP we expect South East Water to increase its ambition on water efficiency further. We support the objective set out to “evaluate and reduce demand for water” and the proposed step-change approach beyond what has already been achieved by metering to embrace behavioural economics. We note that the company has been trialling this approach with Advizzo on 22,000 households since November 2016.

When scaled up, this behavioural economics approach is expected to deliver 20.7 MI/d cumulative saving by 2079/80. This approach has considerable potential, including but not only when mainstreamed across the customer base.

Water efficiency saving	2019/20	2024/25	2044/45	2079/80
MI/d saving (cumulative)	0.0	2.2	5.7	20.7

South East Water has played an important role in Waterwise’s Leadership Group for Water Efficiency and Customer Participation, and has also been in the vanguard in the industry in training its customer service staff in water efficiency messaging - great practice which other companies can learn from.

We also support the proposed innovations that will be developed between now and 2025:

- extending the behavioural science approach to engage with customers to reduce groundwater contamination, reduce internal leakage and improve the uptake of water efficiency devices
- using tariffs combined with both behavioural science and smart networks to reduce demand further, following on from our successful customer metering programme

Waterwise suggests that South East Water needs to build in more of a step-change on water efficiency in its final WRMP to reduce per capita consumption.

Ambition on Per Capita Consumption (PCC)

The NIC report “Preparing for a drier future” sets out an aim for water efficiency to provide 34% of the recommended level of resilience we need through water efficiency. This includes reducing demand from 141 to 118 litres per person per day by 2050. Southern Water is setting a demand reduction target to reduce per capita consumption to 100 litres per person per day across its region by 2040. Target 100 is not just about reducing water consumption; it is about shifting society to value water. A recent report for Ofwat suggests that levels of between 50 and 70 litres per person per day by 2065 are possible.

South East Water’s per capita consumption is forecast to reduce from 156 l/h/d at 2016/17 to 140 l/h/d at 2044/45. This reduction occurs for two main reasons:

- The metering programme is expected to increase the proportion of measured households from 78 per cent in 2016/17 to almost 90 per cent by 2018/19. Meter penetration will continue to increase to about 91 per cent at 2044/45 as a result of all future new homes being metered and some further voluntary opting for meters
- The take-up of more water efficient household appliances and changes in water use behaviour in the future, driven in part by initiatives the company is planning in this area

The Government’s 25 Year Environment Plan sets out the commitment that “We will work with industry to determine appropriate targets for personal water consumption and the measures needed to achieve them”. Ofwat’s final PR19 methodology also sets out PCC as a common performance commitment area and that:

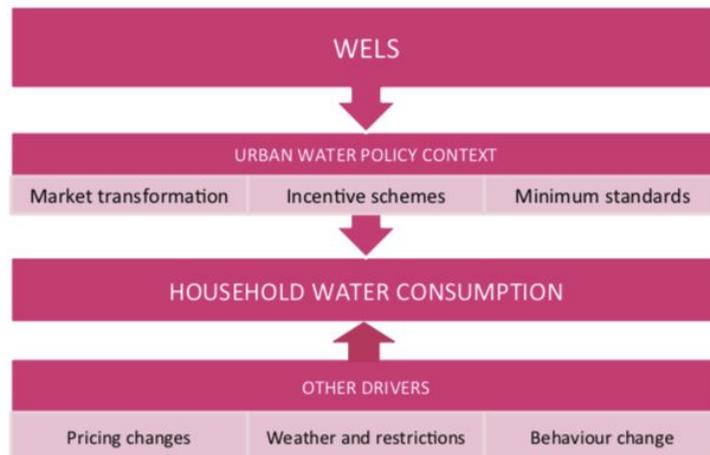
- It expects to see companies propose more ambitious reductions relative to previous years and to support their proposals using the approaches to setting performance commitments
- companies should challenge themselves against the levels and reductions achieved by other water companies, including in other countries.

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In the Waterwise response to the draft PR19 framework we set out approaches to setting PCC targets. Using a ‘frontier approach’ based on the PCC reported by water companies for the year 2015-16 the upper quartile of performance (first quartile in the case of PCC) was 132.435 l/h/d¹.

We suggest that by 2045 South East Water’s per capita consumption target should be around 100l/p/d, with milestones towards this set out at intervals and reflected in the business plan for PR19.

Waterwise recognises that to get to lower levels of PCC will require effort by water companies, government and a wider range of stakeholders. We are working with Defra and the Collaborative Water Efficiency Fund, who are co-funding an independent review of water efficiency labeling in the UK. An effective labelling scheme has resulted in a 20% reduction in consumption in Australia between its introduction in 2006 and 2016. We’d like to see South East Water support water efficiency labelling as an integral part of their water efficiency strategy (see figure below that shows how WELS is a key part of water efficiency in Australia).



Waterwise recommends that the final WRMP for South East Water shows greater ambition in reducing per capita consumption. We suggest that by 2045 the per capita consumption target should be around 100l/p/d, with milestones towards this set out at intervals and reflected in the business plan for PR19

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<http://www.waterwise.org.uk/resource/in-this-section-campaigns-communications-policy-consultation-on-a-water-efficiency-strategy-for-the-uk-waterwise-leadership-group-on-water-efficiency-and-customer-participation-research-and-evaluation/>

Water efficiency options

Baseline

We note that the company's baseline water efficiency is based primarily on metering, education and product giveaways:

- "World of Water" school talks - as given to 1,883 pupils during 2016/17
- Water efficiency trailer at community events across the region
- Customer orders for a range of water-saving products
- Partnerships with organisations such as the University of Kent to support MSc students working with company data to explore the most effective and efficient ways we can encourage our customers to save water

A major area that is lacking in this baseline programme is retrofits and partnership working with social housing or energy efficiency providers to enable these retrofits. Other water companies have been scaling up retrofits as part of their metering programmes. We recommend a water efficiency visit to fix household leaks, including leaky loos, across the customer base and over the period of the plan, including linked with metering, and other customer measures such as the social tariff.

Options development

South East Water developed an unconstrained list of options. An internal workshop was held focussing on "understanding topics such as: behaviour change approaches; how people "consume" water; behaviour change initiatives and campaigns; and public attitudes and awareness before embarking on a brainstorming session to identify new ideas". This led to 28 ideas on water efficiency and 16 new unconstrained options for screening. This in turn led to a total of 49 unconstrained water efficiency options, of which 26 were taken forward to the constrained list.

The feasible option list contained 17 options for both household and non-household water efficiency. These include a range of standard and some innovative approaches, including:

- New home welcome packs
- Household retrofit programmes
- Social housing retrofit programme
- Household leak detection sensors
- Greywater and rainwater harvesting
- Water efficient white goods discount vouchers, partnerships and promotion.
- Leaking toilets repair
- Third party collaboration with incentives to install WEFF equipment/use less water.

Although South East Water is using behavioral economics via Advizzo, we suggest that the plan should also include assessment of incentives. Thames Water and other companies are trialling or planning individual incentives based around "GreenRedeem". Southern Water has

demonstrated that incentives can work, through a 'community incentive' to share the proceeds of water savings on a community scale in Hampshire. The project has saved between 5 – 7% and is now part of a scheme to roll out incentives to 1.6 million customers in AMP 7. Community incentives can also work in areas with less affordable income, and can contribute to co-creation with customers (so they say what they'd like to spend it on).

There are many medium- and long-term opportunities for innovation, which could be either led by South East Water or led by others and adopted by South East Water, such as:

- Developer incentives and/or coordinated policy change to reduce consumption in new developments below 110 lpd
- Further innovations in behaviour change and segmentation research over the medium- to long-term
- Alternative service models and better integration with energy sector decarbonisation and energy efficiency agendas
- Improved integration of water reuse or closed-loop systems at household or development scale
- Better integration of SuDS and rainwater harvesting through changing technologies - recognising multiple benefits for water efficiency and flood risk/ water quality
- Improvements in integrated water management at the development scale

A report by the Institute for Sustainable Futures for several water companies in Victoria, Australia, has identified a wide range of water-efficient technologies that require further consideration. These include²:

- Showers - a range of innovative water-efficient showers are hitting the market that potentially offering significant water-savings as well as associated energy savings
- Showers - other relatively low cost water-efficient shower products are readily available via retailers and online shopping including: shower shorteners, timers, displays and alarms which target reducing shower length; and aerators that focus on reducing flow rates
- Highly efficient clothes washers that incorporate new sensor technologies
- Nylon bead washers in the commercial setting can use up 80% less water
- Supercritical washing machines that use zero water are being developed
- Steaming wardrobes are on the market and can provide an alternative to washing
- High efficiency toilets are available, along with alternative waters that use almost no Water
- High efficiency taps with sensors have been developed, along with taps that combine soap

² Liu, A., Turner, A., and White, S., 2017, Assessment of Future Water Efficiency Measures. Report prepared for City West Water, Yarra Valley Water, South East Water, Melbourne Water, Barwon Water and Department of Environment, Land, Water and Planning by the Institute for Sustainable Futures, University of Technology Sydney.

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- A range of leak detection devices that can shut off water flow remotely are now available
- Highly efficient dishwashers could use less than 10l/ wash.

Final options

The final water efficiency options, focussing on behavioural economics and non-household water efficiency, provide 20.7 MI/d by 2079. We also note that the preferred plan provides for greater levels of water efficiency than the Water Resources South East plan covering all six South East companies - we welcome this, but suggest greater coordination across WRSE on demand management would be powerful and impactful for customers, the environment and the economy.

Option type	(MI/d) Summer peak / 1:200 drought			
	2020-25	2025-30	by 2044	by 2079
Leakage	3.8	6.3	7.0	14.0
Water efficiency	2.2	1.9	5.7	20.7
Groundwater	18.2	18.5	22.7	29.6
Surface water	0.0	0.0	35.7	75.1
Water treatment	0.0	9.0	9.0	9.0
Effluent re-use	0.0	25.0	34.0	48.8
Desalination	0.0	0.0	0.0	70.0
Regional transfers	0.0	0.0	9.0	27.0
Totals	24.2	60.7	123.1	294.2

Demand management scheme	WRSE regional plan	Our preferred plan
Leakage	16.1	14.0
Metering	1.1	0.0
Water Efficiency	7.2	20.7
Total at 2079/80	24.4	34.7

There were a wide range of household water efficiency options in the feasible list, however only one of these has been chosen and the remaining focus is on non-households. As outlined above we believe there is a need for South East Water to be more ambitious on reducing per capita consumption.

Water efficiency option name	Cumulative savings DYCP (MI/d)			
	AMP7	AMP8	by 2045	by 2079
Household				
Behavioural change water efficiency savings	0.7	1.4	5.7	20.3
Non-household				
Water efficiency audits	1.0	0.3	0.0	0.3
Whole farm water efficiency programme	0.2	0.1	0.0	0.1
Online WEFF audit tool	0.2	0.1	0.0	0.0
Leaking toilets	0.1	0.0	0.0	0.0
Totals	2.2	1.9	5.7	20.7

Waterwise recommends South East Water include a broader range of water efficiency actions in its baseline or final options in order to support greater ambition on reducing per capita consumption

Metering

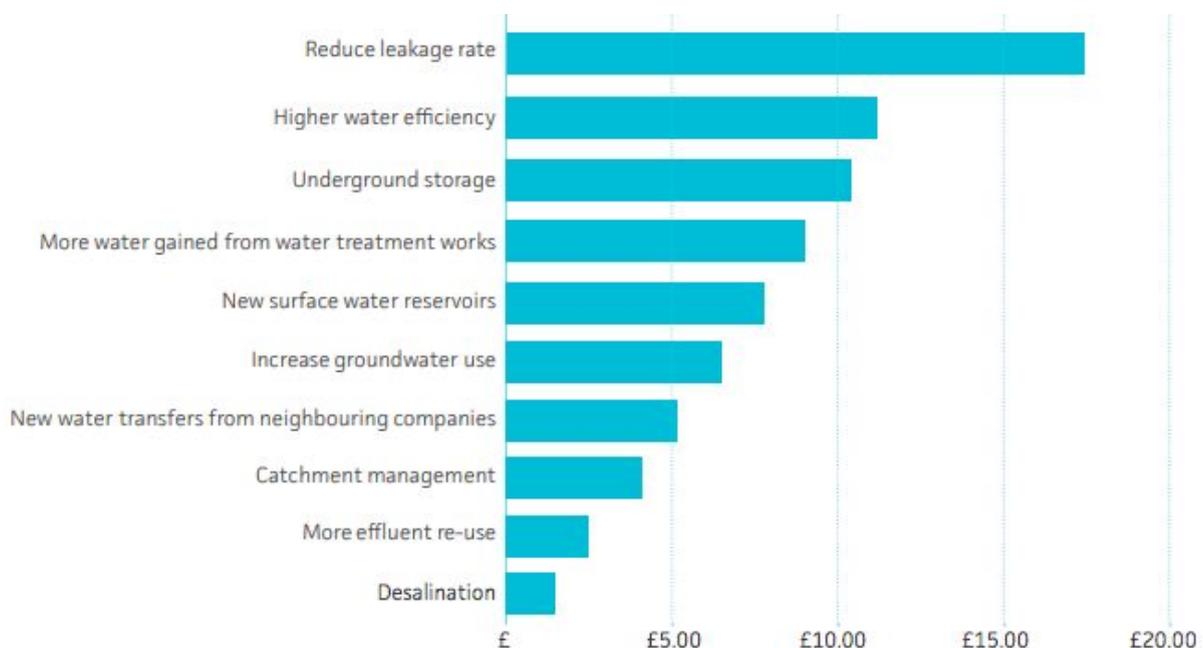
South East Water will achieve around 90% metering by 2020. This is industry-leading (with Southern Water) and has resulted in a large reduction in customer demand over the last 10 years and improved accuracy of demand forecasts. On average households reduced their consumption by 18 percent compared with an estimate of 15% and the 16% achieved by Southern Water.

We note that the company's customer engagement suggested that 80% of households said they used less water since having a water meter installed and that this was a conscious decision to change their behaviour. However, in comparison with other water companies there are a range of potential options that could complement metering and reduce per capita consumption:

- Retrofit and advice visits during metering
- Water efficiency linked to affordability and vulnerable customers
- Link to 'leaky loos' programmes to reduce wastage from WCs
- Moving to 'smart metering' to provide a broader range of feedback to customers
- Incentive programmes at a household or community scale

Customer engagement

South East Water’s customer engagement and willingness to pay work suggests higher water efficiency as second only to reducing leakage in priority. This isn’t reflected in the ambition to reduce per capita consumption or the range of water efficiency programmes in the final options list, either in specific periods or across the period of the plan as a whole. If these aren’t options then they should be included as baseline water efficiency activity in order to meet ambitions around customer participation and engagement in addition to water efficiency.



Given higher water efficiency is the second highest priority for customers willingness to pay, this should be better reflected in the final WRMP.

Non-household consumption

South East Water has written to all retailers and planned to engage with them during the consultation period. It is important to keep this connection between the wholesalers and customers in terms of forecasting demand.

South East Water is one of the few companies that has opted to include some water efficiency activities in their dWRMP. Appendix 7F details these and suggest they are

“considered indicative of the measures that the wholesaler (SEW) will be encouraging the retailers to implement with their customers”. Wholesalers remain responsible for the overall resilience of water supply and Waterwise would support further partnership in the final WRMP. Other water companies are continuing to deliver business water efficiency awareness and visits in conjunction with retailers and we suggest this type of collaboration be considered for South East Water also.

Non-household				
Water efficiency audits	1.0	0.3	0.0	0.3
Whole farm water efficiency programme	0.2	0.1	0.0	0.1
Online WEFF audit tool	0.2	0.1	0.0	0.0
Leaking toilets	0.1	0.0	0.0	0.0

South East Water has been proactive in engaging retailers and suggesting joint non-household water efficiency options. Waterwise recommends that the impacts of discussions with retailers on the final non-household demand forecast and on joint options be clearly communicated in the final WRMP.