Rt Hon George Eustice MP, Secretary of State for Environment, Food and Rural Affairs
Rebecca Pow MP, Environment Minister
Sir James Bevan, Environment Agency CEO
David Black, Ofwat CEO
CEOs of wholesale water companies in England
cc members of the Senior Water Demand Reduction Group

December 2021

Dear Secretary of State, Minister and CEOs

Advice from Chair of the Senior Water Demand Reduction Group

This is my first letter to you as the independent Chair of the Senior Water Demand Reduction Group (SWDRG), established by Ministers to track progress on water demand reductions in England and to recommend if and when more action is needed to stay on track. The Group has now met twice and, drawing on those discussions, I am writing to you with some early conclusions. To clarify, I am writing this letter as independent Chair of the SWDRG and not on behalf of it - this independence enables me to draw on discussions in the Group whilst expanding ambition beyond what individual Group members may feel comfortable with. The letter has been discussed in the Group but not signed off by it.

I attach the Terms of Reference and membership of the Group for ease of reference. I would like to personally thank Defra officials and other SWDRG members for their work so far.

This letter is an urgent call to action - the gap is widening between what we need to do on demand management and the track we're currently on. The National Framework (NF) Senior Steering Group heard last month that the expected need for water has increased markedly from the original NF estimates in 2020, that **demand management plays a very important role in reducing the national deficit** (around 2,000 Ml/d by 2050) and that non-delivery of these demand reductions presents a 'significant risk of worsening supply deficits and security of supply'. And yet, the latest data, collated by Defra for the SWDRG, shows very clearly that overall water consumption has increased since 2019 and that **we are not on track** against Ministers' ambitions (despite this period covering Covid-19 and a heatwave, the upward trend was in place before the pandemic, and the scale of the challenge is such that this needs to be reversed).

This matters because England is already facing a water scarcity crisis, and reducing water demand is integral to securing future water supplies, improving the natural environment and meeting net zero. It is evident that more urgent action is needed to get back on track, by the sector and by government and regulators.

In this context, the recent Ministerial Statement on reducing water demand was very welcome, especially the commitment to introduce a **mandatory water efficiency label** to help households and businesses purchase more water-efficient products. A label must be accompanied by minimum product standards and be linked to water efficiency standards for new homes and retrofits if it is to achieve its full water-saving potential.

In addition to policy progress, it is welcome that the regulatory framework for water in England increasingly centres water efficiency alongside other challenges and solutions, for example in Ofwat's discussion documents for the next price review PR24. Wholesale water

companies have also made significant strides in supporting their customers to be more water-efficient in recent years, expanding the scope, size and innovative nature of their engagement on this issue - and many retail water companies are also supporting the water efficiency of their customers.

I would like to congratulate Ministers and officials on the passing of the Environment Act into law! The SWDRG strongly supports the legal commitment to a **water demand target** for England under powers in that Act (and I have enjoyed the robust discussions on the Act's water targets as a member of Defra's Expert Group). As with the carbon targets in the Climate Change Act, as Chair of the SWDRG I believe the statutory target should drive more ambitious policy and action, and not reflect existing efforts only. This should be defined as a **percentage reduction in distribution input**, encompassing household and non-household water use, and leakage, and not divided by head of population - because the aim of the demand target is to leave more water in the environment, despite the pressures of climate change and population and economic growth. Defining the target as distribution input also ensures there is as much focus on reducing water use by businesses as on reducing water use in homes, whilst holding water companies to account for their commitment to halve leakage by 2050.

Despite the areas of progress mentioned above, the SWDRG agrees that **more needs to be done** to get water demand reduction back on track - this is urgent, and an issue across the country.

In terms of the metric for the water demand target - and the sub-indicators beneath it for household and non-household use and leakage, my advice as independent Chair of the SWDRG is that:

- the overall distribution input target should be more ambitious than the 2037 equivalent of the National Framework target (of 110 litres per capita consumption by 2050) currently reflected in regional water resource plans
- the sub-indicators for household and non-household use should also be set at a more ambitious level than business as usual

In addition to my comments on ambition around the overall targets and sub-indicators, I have set out below four policy areas in particular where I believe Ministers, regulators and water companies should focus their attention - beyond existing commitments.

These water efficiency recommendations draw on existing evidence, including the draft regional water resource plans, the National Framework and research by and for members of the Senior Water Demand Reduction Group, as well as knowledge and conversations within and input from the group, and the Retailer Wholesaler Group's Water Efficiency Action Plan. They cover water efficiency only - I will write to you again in 2022 if I have any recommendations on leakage.

1. Ensure homes and buildings are water-efficient

Water consumption in homes has increased by over 60% since the 1960s. This increased use, coupled with population growth, adds to water demand, meaning more water has to be taken from the environment. Scarce water supplies are already beginning to constrain new housing growth in the south and east of England, and new homes being built today under

current Building Regulations will actually make it harder rather than easier to meet even the current 110 litres per person per day ambition for 2050.

I welcome the announcement of the 2022 Roadmap for greater water efficiency in homes. Water-efficient new development is a priority for urgent policy reform. All homes in the UK should be offered a water efficiency retrofit of their taps, toilets and showers. All buildings should be on a pathway to being water-efficient, including the use of rainwater and greywater harvesting.

Recommendations for Ministers (in the forthcoming letter to local authorities and the roadmap for new build and retrofits)

- Require local authorities to adopt the 110l/p/d in all new builds where there is a clear local need - as a minimum expectation, not a ceiling on ambition
- Require all buildings and all homes when sold or built to have a 'Water Performance Certificate', similar to the Energy Performance Certificate
- Require all new developments, business or domestic, above a certain level, to be water-neutral or water-positive
- Use the new water label to set fittings-based standards in new homes
- Set a target date for all new builds to be built to a far tighter standard, for example the equivalent of 75 litres per person per day - and to include water efficiency in all energy efficiency retrofit schemes
- Require greater use of rainwater harvesting and greywater recycling systems for new build homes and buildings

Recommendations for the sector (industry and Ofwat)

- Offer a water efficiency retrofit to all domestic customers and a free water butt to all customers with outside water use
- Phase out installation of dumb meters
- Set target dates for a smart meter for every home
- Offer a standardised national incentive scheme for new developments to be more water-efficient

2. Drive down water demand in businesses

Business (non-household) customers use around 30% of water supplies, but to date there has been insufficient focus by customers, wholesalers or retailers to reduce this demand - despite it being an early promise for the market. There are some structural barriers in place which have contributed to this.

At the request of Defra, the Environment Agency and Ofwat, an industry-led Retailer Wholesaler Group (RWG) has developed a joint action plan to kick-start progress. The key to delivering greater water efficiency from the non-household sector will be the engagement and motivation of business customers to take responsibility for their water consumption and change their behaviour. A national demand reduction target will be critical, but won't be enough on its own. Customer research conducted by the RWG highlighted the importance of the Government's role in raising awareness of the water scarcity problem amongst businesses and driving them to take the necessary action.

There is clearly a role for wholesalers and retailers to support business customers in the meantime, and the RWG's plan proposes changes to the regulatory framework to provide the industry with targets, incentives and funding for water-saving interventions.

Better consumption data will be critical to support customer, retailer and wholesaler action. Unlike domestic use, business use varies hugely across the different sectors and a better understanding of consumption patterns will support targeted reduction. Smarter meters, offering real-time consumption data, will be fundamental to more effective management of water use by businesses.

The RWG's plan includes specific actions for the market operator (MOSL) to improve the market's understanding of the nature of non-household water consumption through smarter use and better sharing of data, and a number of actions to take forward by regulators and the department. These are included in the recommendations below.

Recommendations for Ministers

- Consider further policy options for leveraging the national demand reduction target - such as demand reduction obligations, progress reporting, and reputational or financial penalties
- Require Ofwat to ensure regulatory targets, incentives and funding in price reviews support delivery of more collaborative water efficiency by wholesalers and retailers
- Set a clear Ministerial expectation that regulatory frameworks and wholesale company plans and actions will prioritise non-household water efficiency equally with household water efficiency

Recommendations for the sector (wholesale companies and Ofwat)

- Replace per capita consumption targets with megalitres per day in PR24
- Include dedicated water efficiency funding for businesses in the retail price review, the retail exit code review and PR24
- Include funding and targets for smart meter installation for business customers in PR24
- Create customer incentives for reduced consumption, for example through a water efficiency levy or by removing falling block tariffs
- Support Defra's Post Implementation Review of Retail Exit Codes to address structural challenges in the market which currently impact water efficiency
- Support wholesalers to take forward innovative tariffs to encourage water efficiency
- Develop wholesaler performance commitments for the business market encompassing water efficiency, tariff complexity, long unread meters, bills based on readings, wholesaler provision of market data and data quality metrics
- Consider common requirements for the business market on tariff structures, data quality and credit arrangements
- Adjust wholesaler charging structures to allow greater headroom for retailers
- Agree a national open data framework for the business market

3. Centre water efficiency in the climate crisis - net zero and adaptation

After space heating, heating water for taps and showers is the second largest source of greenhouse gas emissions in the home. The reduction in emissions from the water sector's commitment to net zero operational emissions by 2030 could be doubled if accompanied by

just a 10% reduction in hot water demand. Water efficiency is also essential in adaptation and climate justice across England - making the increasingly scarce water we do have available right across the country go as far as possible, for the environment, homes and businesses.

The government's net zero retrofit strategy for homes and other buildings offers the opportunity to achieve further, very cost-effective, reductions in both energy and water use by including water-saving measures (and certification) in such schemes. The benefits of taking a whole-house approach to retrofit that considers water alongside energy were highlighted in both the Climate Change Committee's 6th Carbon Budget, and the Construction Leadership Council's National Retrofit Strategy. The same principles apply to buildings.

Around 5-6% of total UK greenhouse gas emissions are from household water supply and use: 90% of these water-related emissions are from how we use water in the home for heating and washing, and the rest is from water companies supplying water and dealing with wastewater (only this last element is included in the water industry's net zero target). Reducing water demand reduces carbon emissions by minimising both treatment and pumping and the need for new costly carbon concrete infrastructure. Similarly, decarbonisation will impact water use - high carbon-emitting industry is also associated with large water usage. It was recently reported that just 15 firms emit 15% of UK carbon emissions - of these 15 firms, 10 are also high water users, accounting for 6% of total non-household consumption.

Recommendations for Ministers

- Use the new statutory demand target as a filter for all government policies, including on housing and economic growth and meeting carbon targets - requiring regulatory impact assessments to include water scarcity
- Include a new strategic priority for the water sector in the Strategic Policy Statement to Ofwat on addressing the climate emergency through both mitigation and adaptation
- Embed water efficiency in all energy efficiency and CO2 reduction schemes

Recommendations for the sector (wholesale companies and Ofwat)

- Include the long-term costs to customers and the environment of not acting in the costs assessment for PR24
- Ensure in PR24 that cost efficiencies don't impact more heavily on water efficiency due to its lower penalties and rewards, but reflect its wider contribution to customer priorities such as bills, climate change and the environment
- Undertake an independent audit after each price review and at the end of each price review period, on the impact on water efficiency against statutory and wider regulatory and policy ambition on water efficiency
- Default to doubling expenditure on water efficiency in PR24, otherwise justifying why this isn't possible
- Include the carbon impact of how their household and business customers use the water they provide in water sector net zero commitments
- Require companies in PR24 to set out the carbon impact of their entire business plan, including water efficiency interventions

- Provide more open, detailed and timely data on the carbon cost of water and sewerage treatment for business customers
- Develop a data improvement programme for the supply chain to support new carbon emission reporting requirements due to come into force from April 2021

4. Support a culture change in customer behaviour

Behaviour change will play a key role in reducing demand across both households and businesses, but many water company water efficiency campaigns are currently at the level of awareness-raising; very little evaluation exists of the water efficiency impact of particular campaign interventions; and a sector-wide increase in the use of behavioural science to underpin campaigns is limited.

Despite efforts to reverse the upward trend in water consumption in homes seen over the last few decades, significant reductions aren't yet being realised - even in the few years before Covid-19, household consumption had only plateaued, and during the pandemic household demand has risen to levels not seen for nearly 20 years, as water use shifted from the workplace to homes, driven by an increase in homeworking.

Customer surveys consistently show that a large number of household customers and micro businesses are unaware of the water scarcity challenge and are disconnected from their own water use (and its impact on the environment) - especially those who are unmetered. Timely consumption data, enriched with environmental information such as local river levels, can be collated and shared with customers as well as help target customer-side leakage and behaviour change campaigns. Customers have a range of different motivations for saving water, and these should be reflected in campaigns and engagement.

Smart water meters generate data which can be used to drive a water-saving culture as well as reduce leakage. New research[1] shows that a co-ordinated smart meter roll-out across England would yield a £1.73 benefit for every £1 spent, with a positive investment case sector-wide and for every water company area - and that people are highly receptive to installing them if they are provided for free. Indeed, customer views on priorities will be important, as ambition is raised in water efficiency to reflect the urgency and the added value. Customers tend to see more value when they know what they're paying for and appreciate the wider benefits they're receiving.

There is little information available on water efficiency when people buy products, and the homes that they buy or rent are generally not water-efficient. Even without the longer-term impact of Covid there are worrying signs that emerging trends such as longer, more frequent, showering and increased garden water use could counter efforts to reduce household demand. The anticipated savings from dual-flush toilets have been virtually wiped out by poorly-designed and poorly-installed models leaking, and by customer confusion over which button does what.

Recommendations for Ministers

- Set the demand target in the Environment Act at a level where it drives ambition, rather than reflecting current practice

[1] Research published November 2021 by Arqiva, Artesia, Frontier Economics, Waterwise

- Play a more active role in promoting water-saving for homes and businesses - endorsing independent and industry campaigns, linked to the new demand target and water label
- Support a smart metering roll-out for every home and business

Recommendations for the sector

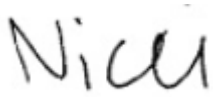
- Set out a roadmap of the policy and regulatory interventions required to support a halving of per capita consumption, and by when, and reflect this in business plans
- Move from awareness-raising to water efficiency campaigns which advance customer understanding and drive behaviour change
- Establish social science-led protocols and an independent framework for effective evaluation of behavioural change in terms of actual water saved - sharing this widely and replicating it across the sector
- Reflect in PR24 the need for campaigns to measure actual behaviour change on water-saving impact, and for this information to be shared for sector-wide learning
- Phase out installation of dumb meters[2]
- Set target dates for a smart meter for every business and home[3]
- Agree inter-operability and data standards for smart water meters, to underpin campaigns
- Establish a consistent approach for water use benchmarking by industry sectors to identify outlier consumption, inform end customers and drive behaviour change
- Scale up partnership UK-wide year-round water efficiency campaigns at national (UK) and water company level, including independent and industry voices, and invest sufficiently in these over time so they drive behaviour change, drawing on measured impact

I look forward to your responses to this comprehensive set of proposals - designed to ensure that we not only meet existing ambition (currently off-track) but also work towards the higher ambition needed to leave enough water in the environment and for people and businesses.

It would be helpful to receive a progress report from Ministers, regulators and the sector for the SWDRG's autumn 2022 meeting - virtually all of the recommendations can be absorbed into existing policy and regulatory work. For those few that cannot, the SWDRG may also be able to help co-ordinate, in a future iteration of the Group. There is currently no budget for the SWDRG, which the Group will also need to discuss.

As recommended by the Group, I will publish this letter tomorrow on the Waterwise website, accompanied by a press release.

Yours sincerely



Nicci Russell
Independent Chair, Senior Water Demand Reduction Group

[2] Also mentioned in section 1
[3] Also mentioned in section 1