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Secretary of State for Environment, Food & Rural Affairs
Water resources management plan consultation
Area 3D
Nobel House
17 Smith Square
London
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31 May 2018

Dear Secretary of State,

Bristol Water – draft water resources management plan 2019

Bristol Water published its draft water resources management plan 2019 on 8 March 2018 for consultation. This letter provides a summary of our assessment of the draft plan. It is our statutory consultation response, produced in accordance with our statutory duties and the Government's strategic policies and objectives for Ofwat. These views are without prejudice to any subsequent decisions that we may make at the next price review (PR19) in connection with the business plan that the company is scheduled to provide to us in September. Our assessment has considered:

- how adequately the draft plan follows the requirements of the water resources planning guideline and Defra's guiding principles for water resources planning; and
- how the draft plan helps achieve our vision of ensuring trust and confidence in the sector through the delivery of our key themes for PR19 of great customer service, affordable bills, resilience in the round and innovation.

Long term water resources planning is a key part of company business activities. We expect companies to integrate the development of their water resources management plans into their business plans which they submit to Ofwat. We also expect them to adopt the 'twin track' approach to improve water supply resilience through both increased supply and reduced demand. We will continue to work closely with Government and the other regulators in both England and Wales to ensure that a long term secure and sustainable supply of water is achieved.

Bristol Water supplies water to a population of approximately 1.2 million people across the eastern side of the Bristol Channel. Its water resources are planned on

the basis of a single integrated zone and it predicts a deficit in the future, without additional action to reduce demand or provide additional supplies. This means there would be insufficient water to maintain supply to customers in some severe drought conditions. The deficit is driven by the increasing demand and a reduction in the amount of water the company can take from the environment.

The Bristol Water plan demonstrates good practice in terms of the scale and breadth of its customer participation activities and there have been significant improvements in approach since the previous plan in 2014. While the majority of Bristol Water's plan is in line with our expectations and good practice, there are areas of the plan where we are not convinced, on the basis of the evidence provided, that the plan delivers in the best interests of customers. In particular:

- The level of ambition for demand management is limited in the medium to long term when compared with other companies. This needs to be considered further and justified in the final plan. For example:
    - Leakage reduction in the draft plan is 14% by 2025 and then stays flat for the remainder of the planning period. There is limited evidence customers support this level or that it reflects the evidence of the high importance that customers place upon leakage reduction.
    - Bristol Water has above industry average per capita consumption (PCC) throughout the planning period. The water efficiency options for households appear to be relatively unambitious with only minor falls in company average PCC over the planning period, from 141 l/h/d in 2020 to 127 l/h/d by 2045.
- Water trading options or third party options have not been selected in the preferred options within the draft plan, though the company intends to identify further trading options during the consultation period. In the final plan we expect the company to have considered whether earlier trading options could be beneficial. We note that the reduced export and potential import from Wessex Water both need further consideration, along with other potential trading and third party options.

Further details on these points are outlined in the annex to this letter alongside more detailed comments on different areas of the draft plan.

I look forward to seeing these points addressed in Bristol Water's statement of response and final plan.

Yours sincerely

David Black

Senior Director, PR19

Annex

In this annex we outline further details on the points raised in our main letter alongside more detailed comments on different areas of the draft plan. Our points reflect our assessment approach and cover:

1. **Plan building blocks:** The overall approach to the development of the draft plan in line with the technical guidance and broader resilience issues.
2. **Customer participation:** The type and quality of interaction with customers and the impact this has had on the draft plan formulation and proposals.
3. **Demand forecast:** How the company has considered the impacts of population growth, leakage and water efficiency in its demand forecast.
4. **Supply forecast:** How the company has considered climate change, abstraction licences changes and transfers in its supply forecast.
5. **Forecast uncertainty:** The robustness of the draft plan in accommodating uncertainties in the demand and supply forecasts.
6. **Supply-demand balance:** The robustness of the overall need for water, if any, and the scenario testing applied to this assessment.
7. **Options:** The approach taken to identifying and screening options for both supply and demand, including identification of trades and third party options.
8. **Decision making:** The decision making tools, preferred programme development process and accompanying assurance processes.
9. **National and regional considerations:** The interaction and consistency with national studies and regional groups (where relevant).

1. Plan building blocks

Bristol Water has adequately explained its approach to draft plan development and adopted methods and used data appropriate to the scale and complexity of its problem. However, the company needs to provide greater clarity on elements of both drought and non-drought resilience. In particular:

- The company has identified its intention to further investigate and confirm whether it is resilient to a 1-in-200 year drought. It appears from the initial assessment that the plan is resilient to this scenario, however, the company plans further analysis to confirm this. The results of this analysis and assurance of the result should be provided in the final plan.
- Bristol Water does not appear to have considered non-drought resilience in the development of the draft plan. For example, potential risks around the

Gloucester & Sharpness Canal are discussed in terms of impact on supply caused by climate change and the potential for restrictions in a drought. In the final plan Bristol Water should further clarify how this and other risks, such as flooding and freeze-thaw, impact its supply system.

2. Customer participation

Bristol Water has demonstrated a strong focus on customer engagement and the company has provided a clear summary of the outputs of its research. This includes the use of wide ranging techniques, including gamification using option 'top trump' cards. However, we have concerns about the explanation of levels of service and demand management solutions during this process. Further specific comments:

- The plan is well structured and easy to navigate and use of section summaries for each chapter help increase accessibility. The company has also produced a separate short non-technical summary document to enable customers and non-technical stakeholders to understand the most important aspects of the plan and to provide feedback.
- We welcome that Bristol Water has used a wide ranging customer consultation to inform its decision making and general engagement for business activities. The variety of methods used include focus groups, surveys, interviews, desk reviews, deliberative research, interactive online tools, experiments and outreach events.
- While customers appear to be satisfied with current levels of service, it is recognised that the lack of experience of a drought in recent memory may influence these opinions. Further considerations:
    - The company has levels of service for severe customer restrictions at the lower end of the industry, such as 1-in-100 year for level 4 restrictions, such as standpipes. In the final plan the company should provide evidence of customer understanding of the costs and benefits of further mitigation of risk, including whether comparative data with other companies was provided, and whether this impacts upon customer views.
    - As Bristol Water intends to further investigate its level of service with respect to emergency drought measures, the company should clarify in its final plan how the final stated level relates to its customer preferences.
- Customers appear to have been engaged on their option preferences to support plan development, identifying demand management through leakage reduction and water efficiency as a priority. However, it is unclear how the

customer research has influenced the preferred programme. This requires further clarity in the final plan.

- It is unclear if the bill impact of the proposed programme has been presented to customers and whether this had an impact on their views, or on the preferred plan. The final plan should clarify how the bill impact discussion has been presented to customers.
- The company's Customer Challenge Group (CCG), the Bristol Water Challenge Panel, has been involved in challenging the ongoing customer participation programme. The draft plan provides a description of this and we expect this to continue for the final plan.

3. Demand forecast

Bristol Water appears to have implemented an appropriate approach to demand forecast development. However, there are concerns about the approach taken for household demand forecasting and the lack of non-household engagement. In particular:

- Bristol Water uses trend-based forecasts to determine its household demand, which it notes are only slightly different to the local authority plan-based data. While the company indicate that further work to test scenarios with higher demand is planned, we expect the final plan to further justify the decision to adopt this approach.
- Bristol Water has developed a methodology that uses trend data based on historical usage to forecast non-household demand. However, it appears the company had limited engagement with large users or retailers. It should consider appropriate steps to enhance and validate this forecast, and explain the outcome of such consideration in the final plan.

4. Supply forecast

Bristol Water has adopted a satisfactory overall approach to supply forecast and accounted for both historic droughts and simulated events. However, in the final plan greater clarity is required on supply under different levels of service and the approach to operational losses. Further specific comments:

- The baseline supply forecast (deployable output) is 14 Ml/d (4%) lower than the total reported in the previous plan. This is due to a change in the severity of historic drought being planned for, to a 1-in-100 year drought event. However as noted in section 1, further work is being undertaken to test the 1-

in-200 year level and a clear explanation of the impact on supply should be presented in the final plan.

- Abstraction licence changes reduce the supply forecast by approximately 10 Ml/d by 2020. The draft plan incorporated the available information contained in Water Industry National Environment Programme 2 and the final plan should incorporate the next data release (WINEP3). We expect the final plan to explain any changes between these two releases and how the programme has changed as a consequence.
- There has been a significant reduction in outage allowance since the previous plan of 17 Ml/d to 5 Ml/d (1.5% of supply) which we welcome. This difference is caused due to assessment method change and the company has been able to reduce its projected rate of system outage due to forecast improvements in equipment reliability.
- Operational losses (sum of raw water transport and process losses) are around 9% of supply. This is significantly above the industry average of 1.6% and has increased since the previous plan where it was 1.7%. Greater clarity is required on the reasons for this increase and whether further steps could be taken to reduce operational losses in the short term.

5. Forecast uncertainty

Uncertainty is not a significant driver of the plan and the overall approach is in accordance with guidelines. The company has re-evaluated headroom since the previous plan which we welcome and note this has resulted in a significant reduction, particularly later in the planning period. For example the previous plan reported target headroom at around 14% in 2040 with the draft plan presenting 6%.

6. Supply-demand balance

Bristol Water's supply-demand balance profile is in line with the assumptions of the individual supply and demand components. It also appears to be consistent with the relevant guidance, subject to the concerns raised on individual components above.

7. Options

The company's options assessment process has considered both supply and demand-side options. However, greater clarity is required on the approach adopted to third party options, water trading and the long term ambition around demand management options. Further specific comments:

- The screening criteria used to develop the feasible list of options appear to be appropriate and in line with the guidance, with both evidence against the criteria and a rejection log included. However, it is unclear how screening was undertaken for generic third party options and this will require further explanation in the final plan.
- The preferred plan does not include any third party options. The third party options included in the appraisal for the draft plan are generic with no details of the proposing companies provided. In the final plan Bristol Water should provide clarity on its approach to third party engagement and further consider what it could do in order to promote these options.
- Bristol Water has held discussions with several other water companies regarding options for water trading and this is reflected in the draft plan. However, only options with Wessex Water were taken forward to the feasible option list. Further considerations:
    - Bristol Water's plan includes a reduction by 6 Ml/d of a bulk export to Wessex Water from 2043, but Wessex Water appear to have accounted for the reduction from 2020 onwards. The company should clarify this in the final plan and ensure there is alignment between both parties.
    - A feasible option presented involved a potable supply available from Wessex Water, providing a benefit of 10 Ml/d from 2023. This option is not included in the preferred plan and further clarification is required in the final plan for its rejection.
- The company has selected a lower level of leakage reduction compared with other companies; the draft plan suggests a 14% reduction by 2025 remaining at this level until 2045. Further considerations:
    - There are minor inconsistencies between the leakage reductions presented in the narrative and planning tables. The narrative suggests leakage reductions are achieved a year earlier than is suggested in the planning tables. This inconsistency should be addressed for the final plan.
    - Although starting at a comparatively good leakage rate of just less than 80 l/prop/d, post 2025 the draft plan suggests that the company does not have any leakage reduction ambition. This results in the company's relative performance falling and suggests there is scope for further leakage reduction. Greater clarity on long term leakage ambition is required in the final plan.
- The preferred plan forecasts levels of metering to increase by 6% to 62% in 2025 and rising to 84% by 2045. This is based on meter optants and change

of occupier metering and is derived from historical rates over the last few years.

- Water efficiency options are included in the draft plan, however, the company's comparatively high PCC indicates there is potential for further PCC reductions. Further considerations:
    - The company has forecast a high baseline average PCC of 141 l/h/d at 2020 in comparison with the industry average (136 l/h/d). Further, the lack of ambition in proposed reductions leads to the company's PCC remaining above industry average throughout the plan resulting in a PCC by 2045 of 127 l/h/d.
    - As noted in section 2 above, customers expressed a preference for water efficiency options and this does not appear to be fully reflected in the current draft plan. For the final plan we expect Bristol Water to consider further water efficiency options and the potential for more ambitious PCC reductions.
- We note that Cheddar 2 reservoir, which was included as a preferred option in the previous plan, is not included as a preferred option in this draft plan. Non-household demand was the key driver for this option in the previous plan and this has been tested as a scenario but it does not result in the reservoir being selected.

8. Decision making

Bristol Water has applied an advanced economics of balancing supply and demand (ESBD) approach which is consistent with its problem characterisation. However, the company should justify its decision to constrain the level of demand management measures selected in the preferred plan. In particular:

- Bristol Water has used extended analysis techniques, such as multi-criteria analysis, to support its final plan. The company states this has resulted in a best value plan. The company should ensure that it clearly highlights the metrics used and the differences between the presented best value plan and least cost alternative.
- From the evidence presented it is unclear whether the selected level of ambition in demand management is appropriate. Further considerations:
    - It appears the preferred option of a reduction in bulk export to Wessex Water, although late in the planning period, has a higher cost than other demand options in the feasible options list, including active leakage control. In the final plan Bristol Water should further justify the

overall demand management programme selected compared with other options.

  - As noted in section 7, the relatively high PCC and the company's relative performance on leakage suggests there is opportunity for further ambition. The final plan should clarify the selected levels of ambition are consistent with customer preferences and the approach taken by other companies.

- When carbon, environmental and social benefits are included in Bristol Water's chosen programme, the total cost is negative across the planning period. In the final plan the company should provide further evidence for the large environmental and social benefits and explain the impact on programme decision making.
- The draft plan does not make clear how, in its decision making, the company has accounted for potential operating cost savings of new sources of water compared with existing sources. The company should clarify this in its final plan.
- There is evidence of independent assurance of the draft plan and of engagement with the Bristol Water Board during the plan development and its approval.

9. National and regional considerations

Bristol Water has engaged and been involved in national research projects as well as local and regional groups. Further specific comments:

- Bristol Water has referenced the outputs of the Water UK national project and the draft plan sets out how this project influenced its plan.
- We welcome Bristol Water's participation in the recently formed West Country Water Resources Group which will help shape future water resources management plans.