Draft Drought Plan

Statement of response to public consultation

September 2021

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Document Control Sheet

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Final			13th Sept 2021
	Richard Price (Chief Operating Officer)	Patric Bulmer (Head of Water Resources & Environment).	

Contents

1 Introduction

This report is Bristol Water's Statement of Response (SoR) to the public consultation on our draft Drought Plan.

All water companies in England and Wales must produce a drought plan and update it every five years. We last published a drought plan in June 2018. We reviewed and updated the plan during 2020 and early 2021 and issued our draft drought plan for public consultation in June 2021. This document summarises the comments we received on the draft plan and how we have modified our plan as a result. The revised draft drought plan will be submitted to the Secretary of State by the end of September 2021 to support the Statement of Response. We expect we will be given approval to publish the final drought plan by the Secretary of State during 2022.

Drought Plans are produced as part of a statutory process. Under Section 39B and 39C of the Water Industry Act 1991, as amended by the Water Act 2003 water undertakers are required to prepare and maintain drought plans. The legislation also required us to consult with customers and stakeholders on our draft drought plan.

The drought plan must comply with the Drought Plan (England) Direction 2020, which came into force on 3 April 2020. Development of the drought plan was informed by the structured guidance issued by the Environment Agency, and formal pre-consultation meeting held with the Environment Agency and other key stakeholders.

The drought plan is an operational tactical manual detailing how we intend to manage a drought, what trigger levels can be used to identify when action is required, and what measures are available to support supplies when levels of service are compromised. It links strongly to our Water Resource Management Plan and our ongoing operational activities, as well as the newly developing regional plan via the West Country Water Resource Group. The Drought Plan sets out how the effects of a drought and associated drought actions will be communicated to our customers and takes account of the need to undertake environmental monitoring at any sites which could potentially be affected by implementation of our drought actions.

2 Consultation

It is a statutory requirement that we consult on our draft drought plan. The consultation provided customers and stakeholders with an opportunity to consider the proposals we set out in our draft drought plan in terms of our operational response to drought under our current level of service, and how this may affect customers, and provide us with any feedback and comments. Bristol Water values all the feedback on our draft drought plan and we have taken time to review all the comments received. This statement of response sets out how we

have taken on board the comments received and used them to develop our revised draft drought plan.

We published our draft drought plan and non-technical summary (along with appendices which included a Strategic Environmental Assessment, Habitats Regulations Assessment and Water Framework Directive assessment) for a five week public consultation period that ran from 8th June to 13th July 2021.

As part of this public consultation process we:

- Published our draft Drought Plan and all supporting documents on our website.
- Wrote to over 70 consultees – including regulators, other water companies, MPs, Councils and non-household retailers to let them know that the consultation had commenced.
- Implemented a dedicated online feedback questionnaire to support the drought plan consultation and encourage direct feedback from customers.
- Promoted the online questionnaire via our customer online panel, encouraging them to provide responses.
- Promoted our online questionnaire and the consultation via our company Facebook, Twitter and LinkedIn social media accounts.

A list of the respondents who provided representations on the draft drought plan (including the accompanying Strategic Environmental Assessment, Water Framework Directive Assessment and Habitats Regulations Assessments report) is provided in the table below. Through our customer engagement online questionnaire, we received 182 individual responses.

Name	Stakeholder Type
Bristol Water Challenge Panel	Stakeholders / Customers
Canal & River Trust	Stakeholder
Consumer Council for Water (CCW)	Customers
Environment Agency	Regulator/Statutory body
Historic England	Regulator/Statutory body
Natural England	Regulator/Statutory body
Draft drought plan online questionnaire (182 individual responses)	Customers

We have reviewed all the consultation responses and taken account of the comments made in producing our revised draft drought plan. This Statement of Response explains how we have considered the comments made and:

- Puts the consultation in the context of the overall drought plan development
- Reports on the comments received
- Provides a response to each comment
- Identifies areas of the revised draft drought plan that we have updated and why

- Explains the actions that we have taken or will be taking in response to the consultation comments
- If we have not made changes as a result of comments received, we explain why.

This Statement of Response provides a summary of the comments received and our response to them. This Statement of Response is being published on our website at www.bristolwater.co.uk, and everyone who responses via Defra has received notification of its publication.

3 Revising our draft Drought Plan

We have considered the consultation responses received on our draft drought plan and will update our plan in light of the comments received by the end of September 2021 and submit this to Defra to support this statement of response. Several changes will be made to our drought plan reflecting feedback from the public consultation.

The main areas where we will update our plan are:

- Moving the three new drought permits proposed in the draft drought plan into the extreme drought options category due to the infrequency with which they would be used. Removing three of the current extreme drought actions that are more complex to implement.
- Including additional clarity on the prioritisation of drought permit implementation and the circumstances under which the permits would be applies for.
- Set out the pre-application process within the main document for supply side drought permits.
- Providing additional information, clarity and alignment on the imports and exports to Wessex Water.
- Completing the required appropriate assessments on options where likely significant effects were concluded at Stage 1 HRA.

With these revisions made to our plan in light of the comments received, we believe our revised draft drought plan is compliant with latest guidance and meets the requirements of the Drought Plan (England) Direction 2020.

4 Consultation comments on our draft Drought Plan

We have carefully considered all the consultation responses received. The table in Appendix A sets out the consultation responses received from stakeholders, verbatim, and our direct responses to those comments, including any changes that we will make to our drought plan as a result of the comments received.

In addition Appendix B sets out the results of our online customer questionnaire survey in terms of summary statistics as well as the key themes drawn from the detailed comments

made and our response to them. Overall the customer feedback on the draft drought plan was positive, with the majority of customers saying that they understood the plan and that they thought it considered all the challenges we might face in a drought situation. There was a strong preference for encouraging water saving behaviours through pro-active demand management and leakage management.

5 Next steps

We genuinely appreciate the time taken by our customers, stakeholders and regulators in responding to our draft drought plan and we welcome the positive contributions and direction that has helped us to refine our drought plan. All the comments and representations have been taken into consideration in the preparation of our revised draft drought plan.

The next steps in the development of our drought plan are set out below:

- Publication of this Statement of Response on our website on 14th September and submission of the revised draft drought plan to the Secretary of State by the end of September 2021.
- Review of the Statement of Response by the Secretary of State.
- Directions from the Secretary of State to amend the drought plan in line with our Statement of Response or to make other amendments prior to final approval.
- Preparation of the final drought plan
- Checking of final drought plan against Secretary of State directions by the Environment Agency
- Publication of final Drought Plan during 2022.

6 Further information

Electronic copies of this Statement of Response are available from our website at www.bristolwater.co.uk

If you require any further information please contact:

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Appendix A

Stakeholder consultation responses

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
1	Bristol Water Challenge Panel	Non-Technical summary Page 3	A series of specific comments relating to the non-technical summary document were received and are set out below: • Page 3. Re maximum volumes of water and their control by EA. The summary should say that abstraction licences apply to Bristol Water as well as other licence holders. • Page 3. Who defines a 1-in-200-year period? Climate changes may be affecting this frequency, which is referenced in the redacted 2021 Drought Plan as well as the non-technical summary. • Page 3. 'We monitor the water resource situation' should read 'We monitor water resources' • Page 3. 46% of BW water supply comes from outside the BW supply area; does BW have arrangements in place to manage an foreseen reduction in the availability of this water from such causes as a drought outside the BW supply area and/or a collapse of the supply canal as has recently occurred? should these arrangements be included in this non technical summary?	The focus of the non-technical summary is on Bristol Water's management of water supply during a drought, so including comment about other licence holders in the introductory page would be confusing. (no change) The 1-in-200 year definition is a reference to the statistical probability of a drought event occurring. The lower the frequency the more severe the event. It is not a specified period of time. (no change) We are part of the River Severn working groups and regulation groups. We therefore maintain a good insight into the resource position from the Severn source. (no change)	Update Non-technical summary.
2	Bristol Water	Non-technical summary page 4	• Page 4 BW now has a Performance Commitment regarding Drought Plan	The PC relating to Risk of Severe Restrictions in a drought is not	

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
	Challenge Panel		Preparedness. this should be included in this non technical summary, particularly the fact 3that BW are not yet fully compliant with this P4C and what actions are being taken to ensure compliance. • Page 4 The use of the word 'zones' gives me the impression of a geographical area but i am not sure BW mean that. They sound more like management intervention levels rather than geographic areas. so the query will be to clarify what the DMZ really is.	appropriate to include within this document. It is a statistical assessment that is problematic due to Bristol Water only having one water resource zone. It is not reflective of the true resilience of the Bristol Water system. (no change) You are correct that the term zones refers to management intervention. We use the work 'zone' as it referenced an area on a reservoir storage graph within which actions can be implemented, rather than a specific trigger which the work 'level' implies. (no change)	
3	Bristol Water Challenge Panel	Non-technical summary page 5	• Page 5 the current status of the DMZ should be clearly stated on the Home page of the BW website. • Page 5. Define DMZ on chart (and on text page 4).	During a prolonged dry weather situation we would update the web site to include the water resource status, this is part of our communications strategy. (no change) We will update the reference to DMZ to demand management zones.	Update to table on page 5 of the non-technical summary
4	Bristol Water Challenge Panel	Non-technical summary page 6	• Page 6 It would help to explain why commercial car washers are still allowed but home car washing would not be. this is usually where most of the complaints arise during a drought.	Commercial car washes are still allowed as businesses do not come under the temporary use ban restrictions. We would want to support public services and the	Update to p6 NEUB text.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			• Page 6. There are usually exceptions to the usual domestic restrictions, eg vulnerable medical requirements, thus it would be good if this could be mentioned here to warn consumers. • Page 6 Could you include some examples of the sort of restriction would be under a NEUB? Also, the application should be clearly indicated on the BW website home page. • Page 6. The text regarding 'a programme of leakage management' makes it seem that in normal times leakage management is not important. Some qualification on Bristol Water's leakage performance would provide context. • Page 6. Does BW have its preparedness to implement its Drought Plan audited? this would cover the availability of applications for Drought orders etc. • Page 6. Reducing customer demand. A brief comment on BW's education programmes, community partnerships to reduce water usage where appropriate could provide context around what BW is normally doing to reduce water wastage while highlighting need for public health messages around hand washing and sanitising.	economy by allowing businesses who rely on water to continue to operate. This is why the restrictions on commercial use come later in a drought. The full list of activities restricted and exceptions to the restrictions will be included in the updated draft drought plan as an additional appendix. We can add information on the NEUB restrictions and also reference the code of practice we will be following on this. (update to p 6 NEUB) We will amend the text in paragraph 2 to emphasise our current leakage performance under the BAU scenario. (update to p6 para 2) The PC for risk of severe drought restrictions has been audited as part of the APR process. The availability of applications for drought orders is not part of this process. (no change) We will include additional information on page 6 setting out what we do as BAU in terms of education programmes community partnerships etc. (update to para 1 on p6)	Update to p6 para 1 water efficiency work. Update to p6 to include using a water butt in the 'in the garden' bullet point.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			• Page 6. In the garden - include the use of water butts to capture and store rainwater. • Page 6. Would it make sense to link the EA category levels (as seen in the chart on Page 5) to the Actions listed in the text?	We will add the use of water butts into the 'in the garden' bullet point under the ' reducing customer demand' heading on p6. The actions listed in the text are included in the table of actions on p5 (Actions column) and aligned with the EA category levels. (no change)	
5	Bristol Water Challenge Panel	Non-technical summary page 7	• Page 7. The running tap and 18 litres is not sufficient to explain what you mean (I imagine it is turn off the tap when brushing your teeth). • Page 7. Every time you flush . . . . could be interpreted as causing a public health issue. Why not suggest putting a device in the cistern instead? • Page 7. Add a water butt for watering garden plants. . . .	We will review the graphics on p7 in the light of this feedback and that received from our wider customer consultation.	Review graphics on p7
6	Bristol Water Challenge Panel	Non-technical summary page 8	• Page 8. You clarify the 'two main options' but then introduce 'Drought Permits', so are there 'three main options'? Please clarify. • Page 8. The order of paragraphs could be changed to express supply side issues, After the first paragraph, go to the text in 'Drought Permits'. Add a sentence that BW has agreements in place to move water supplies within the SW region. Then go to 'Firstly' adjusting	We reference the two main options that are available without the need for additional permissions, which are drought permits. We will update the text to make this point clearer.	Update text in first paragraph p8

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			the text to accommodate for the newly added sentence. Then go to 'Secondly'		
7	Bristol Water Challenge Panel	Non-technical summary page 9	• Page 9 Would it be possible to indicate to consumers when last did BW need to implement these Drought Actions? • Page 9 Please consider publishing the advice of the DMG on the BW website for consumers to view; similar to the current SAGE advice about Covid-19 is published. Also, the DMG is a totally BW internal group, it would aid transparency for there to be a 8consumer 'observer' [CCW, BWCP, EA,] present. • Page 9 How does BW monitor the effectiveness of its Drought Management Group and its Drought Communications Plan when they're in operation during a drought. This isn't perhaps a level of detail that need to go into the Drought Plan, but it currently suggests that they have these tools but that they are rigid and don't evolve to deal with a worsening drought situation • Page 9. I am unsure whether the title is correct. I think it is more like 'Balancing the public water supply with the needs of the Environment' or you can separate the two themes so that each has its own title. • Page 9. Blue text would be better saying something along the lines of the	Bristol water has not needed to apply for a drought permit or a drought order. We will update the text to make this clear. The drought management group is an internal Bristol Water group for the operational management of water supply during a drought situation. We would maintain contact with stakeholders including CCW, BWCP and EA as part of the wider stakeholder engagement set out in our Customer Communications section of the main drought plan document. We set out our approach to using an agile communications process that encompasses a flexible and adaptive communications plan in response to the ongoing drought situation in section 6.4 of our drought plan. Table 11 within the drought plan sets out the drought communications campaign and how our communications methods, techniques and messaging would evolve as the drought progressed in response to the ongoing situation. We will update the text on	Updates to p9 in the non-technical summary.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			first sentence in the first paragraph in black text. • Page 9. Communication. How long is 'prolonged dry weather'. Does it vary according to the season? Does it vary across the BW service area? As PCC decreases, how will this affect the timescale for decision-making? Some information on how you might assess when to form the Drought Management Group may be helpful. • Page 9. 'Ramped up' is not a useful expression. Please use plain English. • Page 9. How will BW inform consumers that a drought has ended and all restrictions are lifted? Or do you intend to have a gradual managed return to normal water supply? this should be included in the document.	Communication on page 9 to make reference to this approach. We will review the title of p9 in response to your comment and the first paragraph. The drought management group if formed when our reservoir storage drops below the trigger curve associated with the 'prolonged dry weather' drought management zone'. We will review and update the text in paragraph 4 on p9 to make this clearer. We will review and replace the term 'ramped up' The detail on when and how restrictions would be lifted at the end of a drought is included in section 8.1 of the main drought plan document. We will consider if it is useful to include some of this information in the non-technical summary	
8	Canal & River Trust	River Severn Drought Order	The Trust notes that section 3.2.3 of the draft Drought Plan refers to the River Severn Drought Order triggers, and the point during a drought at which the EA would seek to reduce the pumped abstraction made by the Trust at Gloucester Docks into the Gloucester &	Thank you for your comments and clearly stating your views on the proposed 300Ml/d limit to the abstraction at Gloucester dock. We have a project underway to better understand the hydrology of the Gloucester & Sharpness canal and	Update Section 3.2.3

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			Sharpness Canal. This is the subject of the River Severn Drought Order consultation that the EA undertook in 2013/14. At that time, the Trust made representations to the EA in relation to the impact that the RSDO may have on the effective operation of the canal, including the statutory duty to maintain navigation, the open port duty at Sharpness Docks and of course the Purton abstraction for public water supply, for which the Trust is the abstraction licence holder. Our understanding is that the RDSO remains in draft form, until the hydrological conditions require the EA to instigate the order, at which time the Trust may make further representations on the specific impact of the order on our operations. We note that Table 6 of the Bristol Water draft Drought Plan states "Canal & River Trust abstraction reductions enforced at Gloucester & Sharpness canal limiting abstraction that can be taken for the canal at Gloucester Dock to 300Mld when the flow in the River Severn at Deerhurst drops below 1200Ml/d." It should be noted that the Trust raised concerns with the Environment Agency that 300 Ml/d could pose a risk to the operation of the Gloucester and	thank you for the data and information you have provided to support this work. The outcome of this project will enable us to improve our modelling and understanding of the likely effects on water availability in the canal of the restrictions that may be imposed by a River Severn drought order. This work is ongoing, and will inform the development of our WRMP24, but will not be available for the publication of our final drought plan. We will amend the drought plan to include acknowledgement of your concerns regarding the risk that the 300Ml/d restriction under the River Severn Drought Order could pose to the canal operations. This response is also linked to response ref number 18 from EA regarding the River Severn Drought Order return period.	

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			Sharpness Canal and the Bristol Water abstraction it supports. If sufficient evidence is provided to show a higher abstraction is justified, then the 300 Ml/d limit would be reviewed. The Trust continues to work with Bristol Water to ensure that the potential impact of such a restriction on the ability to maintain a suitable supply to the Purton abstraction is fully understood, including the regulatory mechanism for any enforcement of the proposed restriction.		
9	Canal & River Trust	River Severn Drought Order	The Trust also notes that through recent work by the EA on the RSDO Environmental Report, the above stance relating to the cap on abstraction remains as per the 2013/14 work.	The updated Environment Agency River Severn Drought Order Environmental Report (working draft version 8 – Nov 2020) was provided to us by the Environment Agency on 18th June 2021, during the drought plan public consultation period. We will make reference to the latest document in the final drought plan, noting that nothing has changed with respect to the restrictions on the abstraction at Gloucester dock.	Update section 3.2.3
10	Canal & River Trust	River Severn Drought Order	The Trust can confirm we would take a very active role in the River Severn Drought Management Group as a key stakeholder during such an event, to ensure the impact of drought restrictions	Thank you for confirming this. Your role is noted in section 6.9 of the drought plan.	No change required

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			is carefully managed and minimised where possible.		
11	Consumer Council for Water	Overview	Overall we feel the approach set out in the draft drought plan is a good one and we particularly welcome the commitment to work closely with the other companies in the West Country Water Resources Group. We also welcome the work that has been put into making the document accessible, with the inclusion of a clear and well-presented non-technical summary. Additionally, the evidence of engagement with a wide range of stakeholders to contribute to the drafting of the plan is positive.	Thank you for the positive comments.	No change required
12	Consumer Council for Water	Customer views	Outside of the stakeholders consulted, how have changing customer views been included in the drafting of the plan? Has specific customer research been carried out since the WRMP 19 related research reference in the plan?	As part of our public consultation process we asked customers to provide their views on our draft drought plan via an online survey. This also went out via our online customer research panel. In total we had 182 respondents complete the online survey. The responses have been collated and assessed and are reported in the draft Drought Plan Research Customer views document in Appendix B. This reporting includes Bristol Water's response to any specific comments received from customers and how the feedback and views	Draft Drought Plan Statement of Response Appendix B

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				provided from this research have been used to develop our final drought plan.	
13	Consumer Council for Water	Vulnerable customers	While Bristol Water recognises the need to specifically engage and communicate with consumers in vulnerable circumstances and groups in the event of restrictions, through reference to the Priority Service Register, this mostly relates to the provision of information. More detail of the type of support offered, rather than just information could be added.	We will include additional detail on the type of support we will offer to priority customers in section 6.6 of our drought plan. This will include free customer supply pipe leakage repairs for vulnerable customers under our Leakstop campaign and a dedicated role of a private leak coordinator who helps support all customers through the leakage process to provide a tailored service to make the private repair as easy for customers as possible.	Update information in section 6.6
14	Consumer Council for Water	Vulnerable Non-household customers	Similarly, although communications is referenced in the plan, there could be more detail regarding how you intend to work with and support Non Household (NHH) customers that would be vulnerable and how you would work with Retailers. Are there specific strategies in place to prepare specific types of NHH customers for possible drought impacts?	Any vulnerable NHH customers are listed as such on our systems and so would be highlighted in the event of a drought. We would communicate with retailers via email, and telephone call to their account managers if required to ensure they are passing on any relevant information or updates to their customers. A severe weather task force group is in place within the business and Wholesale Services are provided with any updates from these meetings. These updates are communicated	Section 6.10

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
				to Retailers when needed, in line with the RWG Unplanned Events Good Practice Guide. We will review section 6.10 that considers communication with retailers and non-household customers and include additional information on how we will work with and support non-household customers that would be vulnerable.	
15	Consumer Council for Water	NHH customers and retailers drought resilience	Examples could be included of how you might work with NHH customers and retailers to help them mitigate the impact through improving their own resilience to drought.	We will update section 6.10 to include examples of how we work with NHH customers and retailers during a drought or heatwave situation. This includes asking retailers to put out messages to their customers in the affected area to be mindful of their usage an the times at which they use water, requesting they use storage during the day and draw off the network overnight when overall demand is lower. Any press releases will be also issued to the retailers to include in their communications and social media.	Section 6.10
16	Consumer Council for Water	Leakstop policy	How does the imminent change in Bristol Water's Leakstop policy affect the plan?	We launched a new Leakstop policy on 16th August 2021. This scheme will enable more customers	Section 4.2.2

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			Does it allow for improvements in tackling customer side leakage? How?	to qualify for the support provided by the Leakstop service and claim a subsidy to help with the repair of leaking customer supply pipes. This service is available to domestic homeowners only. We will update the information in our drought plan on this service to reflect the new policy. Customer side leakage is part of our ongoing water resource strategy. During a drought we would increase the publicity of our leakage support services to customers to keep leakage as low as possible.	
17	Consumer Council for Water	Exemptions to drought restrictions	The plan should provide greater detail to customers regarding specific exemptions to possible restrictions. The UKWIR Code of Practice is mentioned in the plan but the non-technical summary document and plan should clarify what these exemptions are – possibly developing the table on page five of the summary to do so.	On page 41 and 43 of the draft drought plan we state that we will honour the statutory exceptions and the discretionary universal exceptions set out in the Code of Practice. We did not explicitly reference the exceptions and will amend the plan to include the list from the Code of Practice to make it easier for customers to understand and find the information they require on these exemptions.	Include list of exceptions as an appendix and update to section 4.2.3 and 4.2.4 to reference this.
18	Environment Agency	River Severn Drought Order	Issue and evidence:	We will update the drought plan to include reference to the 1 in 50 year	Update section 3.2.3 of the

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		(Recommendation 1. Issue 1.1)	Section 3.2.3 of the Draft Drought Plan contains information on the Environment Agency's River Severn Drought Order and how it could impact Bristol Water's Gloucester & Sharpness Canal. Bristol Water has not provided an estimated return period for the order. The company do state in its Water Resources Management Plan that it would be unlikely to affect them in a 1:200-year drought but has not provided this assurance in the Draft Drought Plan. In addition, this seems in misalignment with the Environment Agency's estimated return period of 1:50-years. The company has not included information on how a drought order would affect its abstraction. It has not provided actions it would take as a result of the order being enacted. <u>Implications:</u> Without this information, we cannot assess whether the triggers and actions the company has outlined are appropriate. We cannot be confident that the company are able to maintain a security of supply. We cannot identify if the worked examples provided by the company are representative, particularly for the 1:500-year event. This as the company has not	return period of the EA River Severn drought order. The deployable output of the Gloucester & Sharpness canal is based on an assessment under the 1975/76 flow conditions. As part of the understanding of the deployable output of the Gloucester Sharpness canal for the development of our WRMP19 we carried out an assessment of the drought resilience of the canal supply under a 1 in 200 year drought event. This work concluded that it was highly likely that the estimated DO for the Gloucester & Sharpness canal source would be available during a 1 in 200 year drought event. We will include a statement within our drought plan to make this clear to customers and reference the work carried out for WRMP19. The assessments of the return period of the 1976 drought in the EA River Severn Drought Order Environmental Report (v8 Nov 2020) (p50) indicates that the return period of the 1976 drought in	drought plan (re: return periods and resilience). Update section 2.2 of the drought plan (re: contractual arrangements)

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			specified in its Water Resources Management Plan or Drought Plan if an event of this magnitude would lead to a drought order affecting them. <u>Information of changes required:</u> Bristol Water should look at the effect of the Drought Order being implemented every 1:50-years as per the Environment Agency's return period. The company should specify the return period within its statement of response. Bristol Water should work with the Canal & Rivers Trust to fully understand what impact the Drought Order would have on its abstraction and subsequent drought triggers. This is especially important given the company will need to show resilience to a 1:500-year event in its next Water Resources Management Plan. The company should consider if it needs to develop drought triggers and actions for the event of a Drought Order being enacted on the Severn. The company could consider using the river gauging station used to initiate the order to inform these new triggers.	the Lower Severn at the end of August was up to 1 in 100 year return period over 9 months and up to 1 in 200 year return period over 11 months. This is consistent with the assessment carried out to support our WRMP19, The DO of the Gloucester & Sharpness canal is based on the 1975/76 flow conditions, and therefore is resilient under a 1 in 200 year drought. We are in the process of reviewing and updating our inflows data and information. This includes working with the Canal & River Trust to better understand and model the water availability in the Gloucester & Sharpness Canal. This work will be completed to inform the development of our WRMP24 assessments which require resilience to a 1 in 500 year drought. We will update the drought plan to make reference to this ongoing work. In table 6 on page 31 of our draft drought plan we set out the actions we would take at the different stages of the River Severn Drought	

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				Order trigger levels. Due to the spatial variability of drought we do not feel it is appropriate to develop further drought triggers and actions relating to the River Severn Drought order, as response would be dependent on the ongoing water resource situation in the Bristol Water local area, which may be significantly different. If our improved understanding of the water availability in the canal as a result of our inflow review highlights an additional risk to supply previously not identified, then we will review this position and consider if it is appropriate to develop additional triggers based on this better understanding for our next drought plan update. We will also update the drought plan to include reference to the contract we have with the Canal and River Trust to supply Bristol Water from the Gloucester & Sharpness canal in section 2.2.	
19	Environment Agency	Supply side drought actions prioritisation (Recommendation	<u>Issue and evidence:</u> The company's Draft Drought Plan does not prioritise the six drought permit options presented in section 4.3. The	As suggested by the recommendation from the Environment Agency under 'issue 4.3' we will move the three new	Update sections 4.3.4, 4.3.5 and 4.3.6

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		2. Issue 2.1 - Directions 3(c) and 3(f))	draft plan appears to present that the trigger for initiating the application process is the same for all six permit options. The company has also anecdotally told us that it would seek to apply for the three Mendip reservoir drought permits at the same time, due to how it operates its system. The company does not appear to have used outcomes of its Environmental Assessment Reports and Strategic Environmental Assessment to inform it supply side action sequencing. The Drought Plan Direction 3c states: "A water undertaker, in its Drought Plan, must address the following matters— [...] (c) how the sequencing of measures has been designed to limit impacts on the customers and the environment;" <u>Implications:</u> It is not clear to customers and regulators which order the company would seek to apply for its drought permit options. We cannot be assured that the company would not apply for all six at the same time. There is a potential risk to the environment as the company has not demonstrated that it would prioritise the	drought permit options to be extreme drought actions due to the infrequency with which they will be required. These options will not therefore need to be included in the sequencing required to meet the Direction requirements, although we will provide some indicative sequencing of the extreme drought actions based on the information available. In our draft plan we set out in section 4.1 that we would always try to adopt the options with the least environmental effects first, focusing on demand management and leakage before implementing supply side measures. This principle is repeated at the beginning of section 4.3. Table 7 sets out the drought actions available and the order of implementation in the context of the drought management zones and EA drought action category. This shows that demand side actions would be implemented in advance of supply side drought permits.	

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			least environmentally damaging options first. In addition, the ambiguous prioritisation order does not support the need for the Drought Plan to be a clear tactical plan. <u>Information changes required:</u> The company should amend the plan to provide a sequence of implementation for its permit options and demonstrate that the least damaging options would be implemented first. It should show how the outcomes of the Environmental Assessment Reports and Strategic Environmental Assessment has informed this order. Should the company wish to retain flexibility around the implementation order within its plan, the company should provide a preferred order and outline the situations in which this order would change. This could be achieved through additional worked examples. Bristol Water should provide additional evidence to show that applying for all three Mendip reservoir permits simultaneously is more favourable for the environment, than changing its system operation and applying for the permits sequentially. This will help ensure compliance with Direction 3c.	Our reservoirs are managed as a group, or one storage volume, and we aim to draw them down together. They all hold environmental designations, which means they would all benefit from water being retained within the reservoirs as a result of the drought permits. In terms of the environmental effects of the permits the assessments have indicated that each of the permits would result in a major-moderate effect on the downstream environment as a result of implementation, without mitigation. The Blagdon reservoir permit is a summer only permit, whereas the Chew and Cheddar Ponds permits are both summer and winter permits. As highlighted in section 4.3 of our drought plan, each drought is different and we would aim to take a flexible approach to the timing and use of the supply side permits in order to be able to respond appropriately to the specific drought conditions being experienced. To provide additional clarity on how we will prioritise the drought permit implementation we	

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				will add additional details to sections 4.3.4, 4.3.5 and 4.3.6 setting out the circumstances under which the permits would be applied for (winter refill or summer support) and providing clarity under which circumstances we would apply for all three permits simultaneously.	
20	Environment Agency	Extreme drought management actions prioritisation (Recommendation 2. Issue 2.2)	Issue and evidence: Bristol Water has presented nine extreme drought actions which could be implemented to avoid Level 4 restrictions, section 4.4. Two of the actions are demand side and the remaining seven are supply side. As in Recommendation 1.1, the company has not prioritised these actions. As above, the drought directions outline the need for sequencing of measures. The Drought Plan directions also apply to extreme drought management options. Implications: It is not clear to customers and regulators which order the company would seek to apply for its drought permit options. The company has not demonstrated that it would prioritise the least environmentally damaging options first. As above, the ambiguous prioritisation order does not support the need for the Drought Plan to be a clear tactical plan.	In our draft plan we set out in section 4.1 that we would always try to adopt the options with the least environmental effects first, focusing on demand management and leakage before implementing supply side measures. This principle is repeated at the beginning of section 4.3. We would maintain this principle when implementing the extreme drought management actions, prioritising demand management options first before taking more water from the environment. We will update section 4.4 to make this clear to customers. As suggested by the recommendation from the Environment Agency under 'issue 4.3' we will move the three new drought permit options to be	Update Section 4.4.

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			Information or changes required: The company should amend the plan to prioritise its extreme drought management actions. This priority order should consider the environmental impacts and how certain the company is of time to implement the action. Bristol Water should update its plan to show that it has left enough time to undertake all the required steps for its extreme drought permits or orders applications. This should include time to undertake all the required environmental assessments.	extreme drought actions due to the infrequency with which they will be required. We will therefore include these in section 4.4 and use the environmental assessment information developed for these options to inform a prioritisation order for the supply side extreme drought management actions. In addition we will use an estimate of the time required to implement the extreme drought options, including addressing any environmental assessment requirements to inform the indicative priority order. Section 4.4 will be updated to clearly show the indicative priority order for the extreme drought management actions.	
21	Environment Agency	Supply side drought action timings (Recommendation 2 issue 2.3) (Direction 3(f)	Issue and evidence: Bristol Water has presented six drought permit options within its draft Drought Plan. Table 7 in the plan outlines the actions the company would take in each of its Drought Management Zones. However, it is unclear in the table at what point Bristol Water would initiate pre-application steps with the Environment Agency and other regulators. The company also do not provide this	To support the development of our drought plan and being 'application ready' for our drought permits, we implemented a draft drought permit application exercise. Engagement on this process was included as part of the pre-consultation with the Environment Agency. The draft drought permit application was included as Appendix D in the draft drought plan. Figure S.1 in	Update table 7 to include the pre-application process and update Sections 4.3.4, 4.3.5 and 4.3.6 to include the likely timing of the pre-application process.

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			information in section 4.3, details on each permit option. The Drought Plan Direction 3f states: "A water undertaker, in its Drought Plan, must address the following matters— [...] (f) The pre-application steps agreed to ensure that the water company is able to make any necessary applications in a timely manner to those bodies responsible for granting permits, orders and any other authorisations during the onset, duration and abatement of all droughts covered by its Drought Plan;" <u>Implications:</u> The lack of clarity on when Bristol Water would begin its drought permit pre-application process does not provide assurance that the company would act in a timely manner. Customers and regulators cannot be assured that the company has accounted for the full time required to undertake the drought permit application process. If the company does not engage with us early in the application process, there is a potential that it could cause delays and pose a risk to security of supply. <u>Information or changes required:</u> Bristol Water should update its plan to clearly show when the company would	Appendix D sets out the triggers for the pre-application process as part of this exercise and demonstrates the time frame under which the application would be made. This exercise demonstrated that enough time has been allowed to undertake all the required steps for a drought permit application. Each drought is different and the specific timing of the process is likely to vary to reflect the current circumstances when a drought occurs. We will update our drought plan to set out this pre-application process within the main document for the supply side drought permits	

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			initiate pre-application steps with regulators. The plan should clearly demonstrate that the company has left enough time to undertake all required steps for a drought permit application. This will help ensure compliance with Direction 3f.		
22	Environment Agency	Environmental Assessment Reports (Recommendation 3. Issue 3.1 Direction 3(g) issue 3.1)	Issue and evidence: Bristol Water has presented six drought permit options within its plan. Bristol Water last provided Environmental Assessment Reports for the three Mendip reservoir actions in 2019. Updated Environmental Assessment Reports for these permit options are expected before the Final Plan is received. The three new permit sites included within the draft Drought Plan do not have Environmental Assessment Reports. The company therefore do not have a monitoring or mitigation plan in place. In section, 4.3 of its plan Bristol Water do say it is committed to producing these. Bristol Water's Strategic Environmental Assessment report contains generic information on mitigation measures. The lack of information is particularly relevant for actions identified as having likely significant impacts. The Drought Plan Direction 3g states:	The Environmental Assessment Reports for the three Mendip reservoir drought permit options have now been updated with respect to EA comments (those received in 2019 and more recently in 2021), as well as baseline data collected in 2020. These will be issued before the final drought plan. In the final plan we will move these three new drought permit options under the extreme drought actions category. They will replace three of the current extreme drought actions that are more complex to implement: Abstraction from the River Avon at Baltic Wharf; Temporary de-salination on Bristol Channel; and Grey water effluent reuse from Wessex Water Avonmouth water recycling centre.	Updates to the SEA, HRA and WFD reports

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			"A water undertaker, in its Drought Plan, must address the following matters— […] (g) the measures that will be used to monitor, prevent and mitigate any adverse effect on the environment resulting from the implementation of drought management actions;" <u>Implications:</u> Without this information, we cannot be sure that the drought permit options will not impact the environment, mitigation measures have been identified or that the company is drought permit application ready. A drought permit or order is highly unlikely to be granted for a site with likely significant environmental impacts without the implementation of proven mitigation measures. This could lead to a possible security of supply issue. Without this information we cannot make an assessment on whether we agree with any proposed permit implementation order. <u>Information or changes required:</u> Bristol Water should ensure that the updated Mendip reservoirs Environmental Assessment Reports, expected before the final Drought Plan, takes account of the Environment Agency comments captured during the 2019 update.	We will add high level environmental assessment information regarding each of these actions in an appendix in each of the SEA, HRA and WFD reports. This will be a "light touch" approach and will set out the triggers for carrying out more detailed assessment and data collation should an extreme drought arise and the possible need for any of these measures becomes evident. We will also set out the data requirements necessary to carry out the more detailed assessment should the need arise. We will include a narrative description of the approach to more detailed assessment if the applicable drought trigger is crossed. We will update the SEA and HRA reports to reflect the final version of the EARs as necessary and including updating the mitigation Section in the SEA.	

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			Bristol Water should outline a programme of work to produce Environmental Assessment Reports for the three new permit sites as part of its statement of response. This would provide assurance to regulators and customers of its commitment to this work. We look forward to working with Bristol Water as it develops these. This would help it comply with Direction 3g. Bristol Water should ensure specific mitigation measures identified in its Environmental Assessment Reports are integrated into its Strategic Environmental Assessment. The company should provide an updated Strategic Environmental Assessment once all Environmental Assessment Reports and Habitats Regulation Assessment Appropriate Assessments (Issue 3.2) are completed, this should be included in its programme of work requested above.		
23	Environment Agency	Habitats Regulation Assessment Appropriate Assessment (Recommendation 3 Issue 3.2)	<u>Issue and evidence:</u> Bristol Water's Habitats Regulation Assessment screening of its draft Drought Plan indicated that Honeyhurst and Rodney Stoke (Well Head), Chelvey Well, Alderley, River Axe and Blagdon supply-side actions have likely significant	Appropriate Assessments (AA) have been carried out on options where LSE were concluded at Stage 1 HRA. AAs have been carried out for Blagdon and Honeyhurst Well (and also Chew and Cheddar) supply-side actions.	Update of HRA to include the Appropriate Assessment Update the SEA to integrate the

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			effects on European sites. The company has not completed the Appropriate Assessment stage of the Habitats Regulation Assessment for these sites. <u>Implications:</u> Without this information, we cannot be sure what the drought permit options impact on the environment will be or that the company is drought permit application ready. This could lead to a possible security of supply issue. Without this information we cannot make an assessment on whether we agree with any proposed permit implementation order. <u>Information or changes required:</u> Bristol Water should outline a programme of work to produce Habitats Regulation Assessment Appropriate Assessment as part of its statement of response. This would provide assurance to regulators and customers of its commitment to this work. We look forward to working with Bristol Water as it develops this. Bristol Water should ensure the outcomes of the Habitats Regulation Appropriate Assessment are integrated into its Strategic Environmental Assessment. The company should provide an updated Strategic	AAs have not been undertaken for Chelvey Well, Alderley, River Axe supply-side actions, as explained in response ref no. 20 we will move these three under the extreme drought actions category. The AAs will appear in the Habitats Regulation Assessment (HRA) documentation accompanying the updated draft drought plan which will be issued by the end of September as agreed. We will provide an updated Strategic Environmental Assessment (SEA) that integrates the outcomes of the HRA AAs. The updated SEA will accompany the updated draft drought plan which will be issued by the end of September as agreed.	outcomes of the HRA Appropriate Assessments.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			Environmental Assessment once all Environmental Assessment Reports (Issue 5.1) and Habitats Regulation Assessment Appropriate Assessments are completed, this should be included in its programme of work requested above.		
24	Environment Agency	Extreme drought management actions (Recommendation 3 Issue 3.3)	Issue and evidence: Bristol Waters draft Drought Plan outlines seven supply side actions. Bristol Water has outlined which designated sites could be impacted by the action. However, the environmental assessment of the action is not extensive enough. Extreme drought actions must comply with all relevant environmental legislation. Implications: Without this information, we cannot assess what the potential impact of the drought action on the environment would be. We also cannot be assured that the company has accounted for the full length of time to investigate and implement these drought actions and is therefore acting in a timely manner. Information or changes required: The company should revise its draft plan to include further information in its environmental assessments of extreme drought actions. This work may help with	In the final plan we will move the three new drought permit options under the extreme drought actions category. They will replace three of the current extreme drought actions that are more complex to implement: Abstraction from the River Avon at Baltic Wharf; Temporary de-salination on Bristol Channel; and Grey water effluent reuse from Wessex Water Avonmouth water recycling centre. We will add high level environmental assessment information regarding each of these actions in an appendix in each of the SEA, HRA and WFD reports. This will be a "light touch" approach and will set out the triggers for carrying out more detailed assessment and data collation should an extreme drought arise and the possible need for any of these measures becomes	Update to Appendix of SEA, HRA and WFD reports

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			the sequencing recommendation in Recommendation 1.2 above. As Bristol Water has identified some of its extreme drought management actions impact designated sites, the company should undertake a light touch Habitats Regulation Assessment. For actions which are an extension of its "normal" drought permits, the company should use existing information to inform its assessment. For other sites, the company should make use of what data it has. The Drought Plan should contain information on when the company would need to start collecting data and what the trigger for this would be.	evident. We will also set out the data requirements necessary to carry out the more detailed assessment should the need arise. We will include a narrative description of the approach to more detailed assessment if the applicable drought trigger is crossed.	
25	Environment Agency	Bulk Supplies (Recommendation 4 Issue 4.1)	Issue and evidence: Bristol Water outline its bulk supply agreement to Wessex Water in section 4.3.2. During pre-consultation with the company, we raised the need for the two companies to ensure they are presenting consistent information. However, there is remaining inconsistency in the minimum amount of water Bristol Water would export in a drought. Specifically, Bristol Water refer to the potential of dropping the export to 0 Ml/d which is not reflected in Wessex Water's plan.	In preparing our draft drought plan Bristol Water worked closely with Wessex Water in ensure consistency in the modelled drought scenarios used to test the plans and the assumptions included in these scenarios in terms of the bulk transfers between the companies. This work demonstrated that even under the 1-in-500 extreme drought scenario a bulk supply of water to Wessex was maintained. It is therefore very unlikely that the bulk supply would	Updates to section 4.3.2

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			Section 4.3.2 also mentions that Bristol Water has some other small imports and exports with Wessex Water. The company does not provide information on these transfers. Bristol Water outline a new bulk supply agreement with Wessex Water in section 3.2.2. The transfer is initiated when groundwater levels fall below trigger curves. The company does not provide information on the operation of the transfer during a drought. This is also linked to Drought Plan Direction 3e. Which states: "A water undertaker, in its Drought Plan, must address the following matters— [...] (e) The permits, orders and any other authorisations that the water undertaker expects to need in order to implement the drought management measures in its Drought Plan including mitigation and prevention measures;" <u>Implications:</u> In a drought event the changes to the bulk supply agreement should be consistent and transparent. This to allow both companies to plan appropriate actions in a timely manner and provide clarity to its customers.	need to be reduced to zero in the event of a drought. Wessex Water will acknowledge that there is a possibility of the bulk transfer from Bristol to Wessex being reduced to zero during a drought in their updated draft drought plan, but it is agreed that this is highly unlikely based on the modelling assessments carried out. In Section 4.3.2 we summarise the small imports and exports to/from Wessex Water on the periphery of our system. We have discussed the status of these transfers in a drought with Wessex Water. Given the small volumes of these transfers relative to overall water into supply in the Bristol Water Resource Zone there is no drought operational benefit of reducing the transfers and so there is no expectation that these will be reduced in the event of drought. We will provide a summary table setting out these transfers in section 4.3.2 of our revised draft drought plan.	

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			The lack of clarity on the import and export volumes for Bristol Water's other bulk supplies means we cannot be assured of consistency between the companies plans. The lack of clarity on how Bristol Water's new import from Wessex Water means customers cannot be assured that Bristol Water would continue to receive water during a drought. Customers cannot be assured the companies would undertake actions in a timely manner to maintain security of supply. <u>Information or changes required:</u> Bristol Water should work with Wessex Water to ensure it are fully consistent in bulk supply volumes to Bath during a drought. The companies should provide regulators assurance that contract negotiations are progressing, and that security of supply will not be compromised. Bristol Water should outline more information on its other bulk transfers with water companies and ensure both companies plans are consistent. Bristol Water should update its plan to provide assurance that a drought would not impact its new bulk supply arrangement in Malmsbury with Wessex	The contract agreed for the Malmesbury transfer from Wessex Water to Bristol Water is explicitly related to mitigating the effects of low groundwater levels in the area to protect the environment during dry weather and drought. This is set out in section 3.2.2 of our draft drought plan. We will update the draft drought plan to include reference to this transfer and the contract in section 4.3.2 to make it clear that this would be maintained during a drought situation.	

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			Water. This will assist with compliance with Drought Plan Direction 3e.		
26	Environment Agency	Supply other sectors (Recommendation 4 Issue 4.2)	Issue and evidence: In section 4.3.1, Bristol Water outline that its final plan will include information on how the company will support other sectors in the event of a drought. Implications: Supporting other sectors during a drought is important to ensure good relationships and keeping all customers supplied. It also enables Bristol Water to demonstrate it are operating as a region. Information or changes required: Bristol Water should ensure it include outcomes of the work with the West Country Water Resources on other sector water use in its final plan. The company's final plan should outline what actions it would take to support other sectors.	The WCWRG project looking at demand from other sectors is anticipated to be complete in Autumn 2021. We will update the final plan to include the outputs from this work and set out the actions we will take to support other sectors during a drought situation.	Update section 4.3.1 in final drought plan
27	Environment Agency	Groundwater and additional hydrometric information (Improvement 1 Issue 1.1)	Issue and evidence: In section 3 of its draft Drought Plan Bristol Water outline the hydrometric information it uses to monitor its resource position. Bristol water refer to these as drought indicators. However, reservoir storage is the only metric for which control curves are	Bristol Water's system is a highly integrated conjunctive use system. This means that we operate as one water resource zone and have the flexibility to be able to move water around the zone to where it is needed. Our groundwater sources provide just 15% of our licenced	Updates to section 3.1 and 3.2

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			provided and for which triggers are based on. It is unclear from the Draft Drought Plan how the other hydrometric information is used to make drought action decisions. In addition, our pre-consultation letter asked Bristol Water to ensure that its triggers considered all its source types. <u>Implications:</u> It is unclear to customers and to regulators how Bristol Water would utilise all hydrometric information to make drought action decisions. The draft plan does not detail at what level these additional drought indicators would lead to concern for Bristol Water. It is unclear whether the company would act if one of these drought indicators fell outside acceptable levels, but reservoir storage remained satisfactory. <u>Information or changes required:</u> Bristol Water should update its plan to provide clarity on how it would use additional hydrometric information to inform its decision making on drought actions. The plan should show what action the company would take should one of these additional drought indicators fell outside acceptable levels.	resource and are therefore not the primary focus of the operational triggers used to manage the system. We continually monitor and manage the storage in our Mendip reservoirs to reflect the ongoing water resource position, be that a wet or a dry situation, and balance the use of the Mendip storage with that from the Gloucester & Sharpness canal accordingly. The Mendip reservoirs are therefore the focus of our drought triggers and the management decisions relating to water resources across the water resource zone. This is set out in section 3.2.1. We have also set out the groundwater trigger and associated actions to manager groundwater levels in the Malmesbury area during dry weather and drought in section 3.2.2 and the triggers likely to affect the source from the Gloucester & Sharpness canal source as a result of the River Severn drought order in section 3.2.3. We will include some additional text in section 3.2 explaining the reasons why our	

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			The company should provide clarity on whether it has considered drought triggers for all source types. Bristol Water note in its 2019 Water Resources Management Plan that it will be reviewing its reservoir control curves in its 2024 Water Resources Management Plan. The company should consider reviewing the use of additional hydrometric information when it does this. Bristol Water should ensure it updates its Drought Plan to reflect the outcomes of the work. We look forward to engaging with the company on this work.	triggers largely focus on the Mendip reservoir storage. The hydrometric information identified as drought indicators in section 3.1 of the drought plan is used to monitoring the resource position on a daily basis, not just during a dry weather/ drought situation. For rainfall, river flow and groundwater levels, the Environment Agency monthly water situation reports set out whether rainfall, river flows and groundwater levels are normal, higher or lower than normal on a descriptive scale of exceptionally low to exceptionally high. We review these indicators in the context of this grading to inform our decision making when managing the water resources across the supply system. We will update the relevant sections in section 3.1 to make reference to the EA graded descriptions of the drought indicators in the context of our drought management process. We still plan to review our reservoir control curves as part of the	

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				development of our 2024 Water Resource Management Plan. This work is unlikely to be completed in time to inform the final Drought Plan, but we will include a commitment to update the information in our drought plan once this is completed if appropriate.	
28	Environment Agency	Environmental stress and other sector triggers (Improvement 1 Issue 1.2)	Issue and evidence: In section 3.1.6 of the draft Drought Plan, Bristol Water outline that it would work with the Environment Agency and where appropriate identify opportunities to support the environment if it becomes under stress. It is positive that the company has included this within its plan but it is unclear how Bristol Water would identify an environmental drought and what opportunities it would take. Implications: Whilst it is positive that the company has acknowledged willingness to undertake actions during an environmental drought, it is unclear what types of actions these would be. Information or changes required: We would welcome the opportunity to work with Bristol Water to help with the trigger of an environmental drought and	The focus of our drought plan is to maintain security of supply to our customers and the water resource we have available to do that. We would look to the Environment Agency to determine the onset of an environmental drought. This is likely to occur before the water supply position is affected. We will work with EA to support the environment where possible in an environmental drought situation, be this via communication messaging to customers or through supply side actions. These actions would be identified in the context of the specific environmental stresses being experienced. We will include some additional text within section 3.1.6 to explain this position.	Update to section 3.1.6

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			to identify which actions the company could take to support the environment.		
29	Environment Agency	Start and end of drought triggers (Improvement 1 Issue 1.3)	Issue and evidence: The company does not clearly explain the trigger(s) that mark the start and the end of a drought. The Water Company Drought Plan (WCDP) guidance states that Drought Plans should include triggers for the start and end of a drought event (Section 3.2) Implications: It is unclear to customers and regulators when Bristol Water would classify themselves as in a drought. It is unclear at what point the company would be out of a drought. This does not support the need for the plan to be a clear tactical plan. The company must be able to clearly identify all stages of a drought in order to implement drought actions appropriately. Information or changes required: The company should include the clarity on the trigger(s) it will use to mark the start and the end of a drought using what it thinks are the most appropriate drought indicators.	The drought management zones set out in table 5 indicate when the drought would start and end. The drought management zones in this table align with the reservoir control curve zones set out in Figure 2. Due to the conjunctive nature of our system (as set out in response ref no. 27) the focus of our drought triggers is on the combined storage of the Mendip reservoirs. A drought would start when we entered drought management zone 4 and implemented the EA level 2 restrictions (TUBs). Prior to this is it prolonged dry weather management. A drought would end when we returned to normal operation in drought management zone 2. We will update the text in section 3.2 to make this clear to customers and regulators.	Update section 3.2
30	Environment Agency	Unused source (improvement 2 Issue 2.1)	Issue and evidence: Bristol Water plan to use an unused source as its first supply side action. The	Thank you for your comments on this and we agree with the approach you have set out. As you	Update to section 4.3.3

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			source would be subject to a Water Framework Directive No Deterioration investigation prior to use and is listed for investigation under Water Industry National Framework Programme (WINEP). Implications: Without the completed investigation, we cannot know what the environmental impacts of using the source would be. It is possible that the investigation could lead to a licence change. Should this be the case, Bristol Water may need to access the water through a drought permit. It is possible that the outcome of the investigation is that the environmental impact of using the source is greater than using drought permit options listed in the plan. It may therefore not be in the interest of the environment to prioritise this source first. Information or changes required: The company should provide a programme of for the investigation with its statement of response. This will provide assurance to regulators and customers that the company will have the completed the relevant investigation prior to the source use, and that the environment is protected.	note, the source is currently under WINEP investigation. It is unlikely that this investigation will be completed prior to the publication of the updated drought plan, but all the information available from the investigation has been included in the drought plan environmental assessments carried out to support the drought plan. It should be noted that although this is listed as one of the first supply side actions to be implemented on the principle that it is utilising existing licenced sources (as per the guidance), the lead time for getting it into supply is 6 months in order to get the required infrastructure in place. This would also provide enough time to compete any additional environmental assessment and monitoring to supplement the existing data sets. We will update section 4.3.3 to include the WINEP programme of work for this source and that the drought plan will be updated if the investigation finds that abstraction from this source would cause deterioration.	

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			If this unused licence were to cause deterioration, then it should be revoked. If this water was required during a drought, the company should use the drought permit approach, as stated in section 4.2 of the Guidelines. The company should ensure it updates its drought plan if the investigation finds that abstracting from this source would cause deterioration.		
31	Environment Agency	Drought Plan action categorisation (Improvement 3 Issue 3.1)	<u>Issue and evidence:</u> Bristol Water use both the Environment Agency's level 1 to 4 drought action categorisation and its own level 1 to 6 Drought Management Zones, throughout its plan. The government expectations state the expectation for companies to use the Environment Agency's level 1 to 4 categorisation and stresses the importance of using consistent language. <u>Implications:</u> The use of two different drought levels throughout Bristol Water's Draft Drought Plan is confusing to customers and regulators. It adds a layer of unnecessary complexity. <u>Information or changes required:</u> The company should consider renaming its Drought Management Zones 1 and 2 as 0a and 0b. This would enable the	The drought management zones used in our drought plan align with the operational control curves we currently use on the Mendip reservoirs. We have set out in the drought plan how these align to the Environment Agency's level 1 to 4 categorisation. Renaming our drought management zones for the existing reservoir control curves as suggested will be confusing to both our operational staff and our management teams who are familiar with and successfully operate the system using the existing naming mechanism. We propose that when our reservoir curves are reviewed and updated for the WRMP24 we will commit to doing this using the	Check references to drought management zones and EA drought action categories.

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			company to rename its Drought Management Zones 3 to 6 in alignment with the Environment Agency's level 1 to 4. This would improve readability and clarity.	terminology set out in the Environment Agency's level 1 to 4 categorisation. This provides a good opportunity to introduce the new curves and new categorisation to the operation staff and management team as part of a consistent change. We will carry out an additional check of the drought plan document to ensure that all the terms used to reference the drought management zones/ EA categories are correct.	
32	Environment Agency	Levels of Service (Improvement 3 Issue 3.2)	Issue and evidence: Bristol Water's Draft Drought Plan presents a Level of Service table which is consistent with its 2019 Water Resources Management Plan. This Level of Service indicates the company would need emergency drought orders for droughts of 1 in 200-year magnitude. However, in the Executive Summary of its Draft Drought Plan the company says that it could avoid the need for Level 4 restrictions with current demand and the drought actions implemented. This seems inconsistent with the 2019 Water Resources Management Plan (Section 16.2.1).	There is no change to Bristol Water's levels of service. Under the WRMP19 guidance we were required to demonstrate that our systems were resilient to a 1 in 200 year drought without implementing level 4 restrictions, Our deployable output was therefore derived using a 1 in 200 year drought severity with the assumption of TUBs being implemented. We then provided information in WRP table 10 to show the additional yield that could be achieved if drought orders and	Update to Drought Vulnerability section of Executive summary.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			Implications: Levels of Service within Bristol Water's Draft Drought Plan are presented in a confusing way. It is not clear to regulators or to customers how frequently Bristol Water would be implementing Level 4 restrictions. Information or changes required: The company should provide clarity on whether it has done additional modelling since its 2019 Water Resources Management Plan which has led to a change in its actual Levels of Service. The company should specify an actual Level of Service for requiring emergency drought orders within its final Drought Plan. This defined Level of Service could be a "greater than..".	drought permits were implemented. These were presented as part of the drought plan which goes beyond the WRMP baseline assessments. For the drought plan we were asked to test our system against more extreme droughts than the 1 in 200 year drought. When we carried out this assessment we included all our drought actions (specifically bringing disused licences back into supply, and reducing bulk supplies) which were not included in the deployable output assessment used for the WRMP19. In addition, the work carried out for the drought vulnerability assessment shows that there is only a small difference in percentage of LTA rainfall associated with a 1 in 200 year drought and a 1 in 500 year drought, and even less between a 1 in 500 and a 1 in 1000 year drought. Therefore with a relatively small change in rainfall deficit and additional drought options being	

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
				included the modelling suggested that it would be resilient to the type of 1 in 500 year drought assessed as part of our drought plan testing. We will be implementing a more detailed assessment as part of the development of our WRMP24 to understand the deployable output of our system under a 1 in 500 scenario. This will use the whole historic record and stochastic assessment tools. It will therefore provide a much greater understanding of the true resilience of the system in the longer term. Until this is completed we would not want to change our levels of service. We will provide some additional text in the Executive summary (drought vulnerability section) to clarify the position in terms of the drought scenarios modelled in the context of our levels of service.	
33	Environment Agency	Heatwave and high outage example (Improvement 4 Issue 4.1)	Issue and evidence: Bristol Water has not presented a heatwave or high outage worked example. During pre-consultation the company stated that these types of	We set out in table 7 of the drought plan that we would work to minimise reductions in supply capability from outage and review the planned outage program of	Update Appendix B scenario modelling to

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			events would not impact its water supplies, due to the nature of its system. <u>Implications:</u> Without this information in the plan, customers cannot be assured the company could cope with a heatwave and/or high outage event. <u>Information or changes required:</u> The company should demonstrate to and provide assurance to its customers that a heatwave and/or high outage would not cause any supply problems. Its plan should provide assurance that during these types of event the company would still seek to minimise outage and control demands. The company could present its 2018 reservoir control curves as this would demonstrate its resilience to a heatwave event.	work when we enter a prolonged dry weather situation. We will update the scenario assessments in Appendix B to include these actions within the scenario as an operational response to a drought situation. In July 2021 the Met Office issued its first ever amber extreme heat warning. This covered the West Country. Bristol Water also experienced a significant mains burst incident just as the heatwave was starting. This incident was successfully managed by quick response and good communications with customers and retailers, both in the local area affected by the incident and on a wider scale across the supply area to keep the peak demands down. We will add an additional example to Appendix B to include the both 2021 experience of a short sharp heatwave and burst incident, and also additional information on the effects of the prolonged 2018 heatwave on the Bristol Water	include outage actions. Add an additional heatwave example to Appendix B.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
				network and water resource position.	
34	Environment Agency	Long duration drought example (Improvement 4 issue 4.2)	Issue and evidence: The company's Draft Drought Plan presents two worked examples, neither of which appear to cover an event which covers two dry winters. Given a large proportion of Bristol Water's resource is reservoir storage, winter recharge is vitally important. Implications Without this information, customers and regulators cannot understand what would happen in the event of a long-term drought. It does not provide assurance that the Draft Drought Plan would work under a drought of this type. Information or changes required: Bristol Water should consider including a drought which covers two dry winters to demonstrate its resilience and which actions the company would take.	We will update Appendix B to include a 24 month drought event scenario with 65% LTA rainfall from our drought library – this is likely to be between a 1-in-500 and 1-in-1000 year return period event.	Additional drought scenario to be modelled and presented in Appendix B
35	Environment Agency	Drought permit example (Improvement 4 - Issue 4.3)	Issue and evidence: Bristol Water has demonstrated that it would be able to avoid drought permits in all the examples presented. However, this means the company cannot show how it would implement the drought permit. Implications Without an example showing the company using a drought permit, we	To support the development of our draft drought plan we implemented a drought permit application exercise to help demonstrate our 'permit ready' status. This exercise presented a drought scenario under which a permit would be applied for and set out the process for implementing drought actions and	Additional drought scenario to be modelled and presented in Appendix B

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			cannot be assured the company has left sufficient time to implement them. It is confusing why Bristol Water has included three new drought permit options in its plan as this demonstrates it does not need them more frequently than 1:500-year. <u>Information or changes required:</u> The company should identify a drought for which it would require a permit. The company should present this as a worked example to show how it would implement the permit(s). The company should consider whether its three new drought permit options are needed or whether they would be more suited to being an extreme drought action. This is linked to Recommendation 2.2.	the pre-application and application process for the Chew Reservoir drought permit. This exercise was presented in Appendix D of the draft drought plan. In modelling a 24 month drought to address improvement 4 (issue 4.2) we may identify the need to implement drought permits. This work will therefore provide an additional example of how permits would be implemented. This will be included within the updated Appendix B. We will move the three new drought permit options to being extreme drought actions as suggested. See changes proposed in item reference no 20 (recommendation 2.2)	
36	Environment Agency	Temporary water restrictions (Improvement 5 Issue 5.1)	<u>Issue and evidence:</u> In section 4.2.3 of the draft Drought Plan, Bristol Water outline that it would follow the code of practice (UKWIR 2013) and make exemptions if it were to implement water restrictions. The Drought Plan does not provide customer with details of what these exemptions would be.	On page 41 and 43 of the draft drought plan we state that we will honour the statutory exceptions and the discretionary universal exceptions set out in the Code of Practice. We did not explicitly reference the exceptions and will amend the plan to include the list from the Code of Practice to make it	Include the exceptions list from the Code of Practice as an additional Appendix.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			Bristol Water also do not appear to allow for maximum timescales to implement its restrictions. It refers to minimum timescales in temporary use restrictions and provides a range of timescales in its non-essential use bans. Implications Without information on what exemptions the company would make for water use restrictions, it is unclear to customers which activities would be covered by the restriction. By not allowing for maximum timescales, regulators and customers cannot be assured that the company would act in a timely manner. Customers and regulators cannot be assured that the company has accounted for the full time required to implement a water use restriction. Information or changes required: Bristol Water should provide further information on the exemptions it would make when implementing water use restrictions. This information should be provided as an appendix. Bristol Water should ensure it has allowed for full timescales for the implementation of water use restrictions.	easier for customers to understand and find the information they require on these exemptions. In terms of the time allowed for implementation of TUBs and the non-essential use ban drought order, this has been tested via the scenarios we modelled and is set out in appendix B. We consider the timescales allowed appropriate and achievable should a drought occur.	
37	Environment Agency	NAVs and retailers	Issue and evidence: Section 6.10 outlines that Bristol Water intend to communicate with Retailers	As set out in section 6.10 we will communicate with retailers as per the RWG Unplanned Events Good	Section 6.10

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
		(Improvement 6 Issue 6.2)	during a drought. The plan does not provide details of how it will work with retailers to reduce the demand of non-household customers. The draft plan also does not cover how it will work with NAVs to ensure all households receive communications. Implications The lack of information on how Bristol Water will engage and work with Retailers and NAVs does not provide assurance that the company will be able to communicate in a timely manner. There is a risk that communications would be delayed. Information or changes required: Bristol Water should work with Retailers and NAVs to ensure communications reach the full population served by Bristol Water. The statement of response should show how the company will do this.	Practice Guidance. We will include additional information in section 6.10 setting out the type of communication used and how the relevant populations are reached to make it clear to customers how this process works. We will also include additional information in section 6.10 on how we propose to communicate with NAVs to ensure that the whole population is reached.	
38	Environment Agency	Effectiveness review (Improvement 6 Issue 6.3)	Issue and evidence: Bristol Water do not commit to an effectiveness review in either its communication section (section 6) or its end of drought section (section 8). Implications Failure to review the effectiveness of communications could hamper the company in the event of a future drought. We cannot be assured that Bristol Water	A review of the effectiveness of communications would be included in the post drought review process and the lessons learned report. We will update the list of information included in this report in Section 8.2 to reflect this.	Update section 8.2

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			would always seek to use the best communication methods to engage with its whole customer base. Information or changes required: The company should include information on how it would review the effectiveness of its communications. This could be achieved by including it in the list of items the company would review in section 8 of its plan.		
39	Environment Agency	Supply side extreme drought actions (Improvement 7 Issue 7.1)	Issue and evidence: Bristol Water has outlined that it would require Temporary Licences for four of its extreme drought actions. Implications Temporary Licences can only be applied for on one occasion and are only granted for 28 days. The review process for a temporary licence has different timescales to drought permits and orders and it may take longer. Given the environmental implications these abstractions could cause; it is unlikely the Environment Agency would provide consent. Consequently leading to significant delays in gaining permission to access the water. Information or changes required: Bristol Water should reassess the permissions it would require for its extreme drought actions. The company	We will review the extreme drought actions in sections 4.4.5 and 4.4.6 and permissions required will be changed to drought permits for the re-instatement of disused sources.	Update sections 4.4.5 and 4.4.6

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			should change permissions required from Temporary Licences to drought permit or drought orders.		
40	Environment Agency	Hydrological Matrix (Improvement 8 Issue 8.1)	Issue and evidence: Bristol Water appear to use a hydrological matrix to justify risks as minor/negligible etc in its ecological assessments. Implications The hydrological matrix is a useful screening tool to frame ecological assessment within. However, it shouldn't be used to determine site specific risks to the environment and/or define such risks as minor/moderate/major etc. Information or changes required: Bristol Water should assess whether the approach used is suitable for each individual site. The company should work with the local area teams to review and discuss the technical detail of individual drought permits and ensure the results from these discussions are included in subsequent permit updates.	Yes, consistent with many other water companies in England, Bristol Water use a hydrological matrix as part of the approach to environmental assessment set out in the Environmental Assessment supplement to the Drought Plan Guideline (DPG). The DPG identifies an initial hydrological step between the *identification of supply side actions* and the *identification of key features of the environment which are likely to be affected by these changes*. In the DPG the step is referred to as *set out the likely changes to the level/flow regime due to this* [supply side] *action*. Within the features assessment set out in the DPG we use the hydrological matrix approach to identify the zone of influence, to establish reaches of rivers with similar magnitude of hydrological effect, and to characterise the type and magnitude of hydrological effect of the drought action (in comparison to without the drought action during an ongoing	No change required

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
				environmental drought). Our consequent assessment of features (e.g. fish, aquatic macroinvertebrates) uses this hydrological matrix, together with a range of other hydrological, hydromorphological and water quality change information in order to support the features assessment. With previous review from EA, we have included significant additional hydrological information into the physical environmental assessment – e.g. time series hydrographs with/without drought action, flow accretion profiling to indicate change along the water course. This is also used with bespoke hydraulic survey data to provide information on wetted area and velocity changes with flow change to inform change in habitat quality. All of the supplementary hydrological and hydromorphological information is used within the features assessment. We note that the magnitude of hydrological effect identified from the matrix is not transferred directly	

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
				as the significance of the features assessment. We will continue to work with the local EA Area teams to review, for each individual drought action, that the hydrological assessment matrix provides sufficient confidence in the downstream extent of impact on features from drought actions.	
41	Historic England	Pipeline route for supply side option	My only comment relates to the R24R Well supply augmentation option and related 4.2km pipeline. Should this proceed the Strategic Environmental Assessment Environmental Report notes the potential adverse heritage impacts. As we are not sure of the route of any future potential pipeline, and hence where the impacts may occur, it would be reassuring to appreciate how any potential harm would be minimised to accord with national planning policy for the historic environment and its associated legislation.	If this option proceeds, Bristol Water will engage with Historic England to discuss the proposed route once further design work has been carried out to discuss any potential adverse heritage risks and any mitigation measures, including where feasible re-routing of the pipeline to avoid adverse effects in accordance with national planning policy.	No change required
42	Natural England	Habitats Regulations Assessment (HRA) – relevant sites	Natural England is satisfied that all the relevant Habitat sites and their interest features have been identified correctly.	Thank you for confirming this, no further response is required.	No change required

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
43	Natural England	HRA – in combination and cumulative effects	We are satisfied that all likely significant effects have been identified for drought options as they stand alone but we are concerned that there is potential for in combination and cumulative effects that may have an adverse effect on the integrity of the River Severn SAC/Ramsar which have not been identified. The River Severn is an important migratory route from and to the Severn Estuary SAC/Ramsar, the interest features of which include a number of priority fish species, namely Atlantic Salmon, river and sea lamprey, twaite shad and European eel. The extent to which possible in combination and cumulative impacts on these features have been assessed is unclear. Whilst the HRA screening report includes a methodology for consideration of in combination effects we can find no detail of the assessment. The HRA states that all in combination effects with future plans or projects are difficult to screen at this stage, but that there will be further assessment for each option before implementation. There is, however, a cumulative assessment in the SEA stating that in combination and cumulative effects have been considered	Further consideration of in-combination effects has been undertaken. There will be no in-combination effects associated with these Drought Options. For in-combination effects, to occur there must be a discernible impact alone to act in-combination. The impact pathway is connectivity for migratory fish; however, the River Axe, Congresbury Yeo and River Chew all have impassable barriers present under low flow conditions (without the implementation of the drought options). These barriers are likely to be impassable during the months of upstream migration (February- June) for European Eel which sever connectivity and therefore, habitats upstream are inaccessible and do not provide functionally linked habitat. Similarly, salmonid migrations (both upstream and downstream) are limited due to the presence of impassable barriers under low flow conditions and therefore, habitats upstream are inaccessible and do not provide functionally linked habitat. The implementation of the drought plan will not change the	Update final HRA document to include map of the barriers assessment.

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			against multiple options, baseline data, current issues and neighbouring companies drought options, concluding that there will be no likely in combination or cumulative effects that may exacerbate the already identified like significant effects. Natural England does not agree with this conclusion based on the evidence provided. We are concerned that there is potential for in combination effects on the migratory fish interests of the Severn Estuary SAC/Ramsar associated with the Bristol Water drought permits and existing abstractions, especially given that these options could be to be implemented together as they follow the same drought trigger. Further to this, we have been unable to rule out the possibility that further interactions may occur when the River Severn drought order is in place, which allows a continuous 300 Ml/d abstraction at Gloucester Dock when the rivers flow rate is below 1200 Ml/d. Severn Trent Water have four drought options requiring drought permits for increased abstractions on the river as well as one requiring a drought order allowing it to continue abstracting at low flows. United Utilities have a drought	current status, it will remain impassable. Looking forward at future potential, there is no evidence of any plans/projects to rectify these barriers within the next AMP cycle, coinciding with the five year period of this drought plan. Therefore, the Drought Options will not have any impact on future potential either. The map of the barriers assessment will be provided as an appendix to the final HRA documentation.	

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			permit option reducing compensation flow to the River Vyrnwy which is functionally linked to the Severn Estuary SAC as a spawning tributary and nursery for juvenile salmon. Possible in combination and cumulative effects associated with drought permit options, existing abstraction licences and the drought plans of neighbouring companies must be thoroughly assessed through HRA before the final drought plan is produced.		
44	Natural England	HRA – Appropriate Assessment	Appropriate assessments have not been carried out for options where likely significant effects cannot be excluded on objective evidence, and the dDP states that this assessment will appear in the final Drought Plan. Potential mitigation requirements for supply side options, including the recommissioning of Well Head and the River Axe license variation (relevant to possible adverse effects on integrity for the North Somerset and Mendip Bats SAC and Mendip Limestone Grasslands SAC) have been suggested but it is difficult to comment on these in advance of an appropriate assessment. The HRA states that Natural England will be consulted on this proposed mitigation during Spring 2021 but we have no formal record of this occurring.	Appropriate Assessments (AA) have now been carried out on options where LSE were concluded at Stage 1 HRA and will appear in the final HRA documentation accompanying the final drought plan. Consultation was undertaken with Natural England on 25 March 2021, where NE confirmed it was satisfied with our approach to the assessment of the AA. A note of the key points discussed at the meeting provided to NE on 31st March 2021 This approach updates the initial consideration within the draft drought plan.	Appropriate Assessments will be included with the final drought plan

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
45	Natural England	HRA – conservation objectives at Habitats sites	The HRA has not had regard to whether a relevant Habitats site is failing its conservation objectives with respect to relevant attributes such water supply, water quality and flow, geomorphology or on populations of protected species.	Information on site status in respect to its Conservation Objectives will be included and made explicit where they have been taken into account.	HRA to be updated
46	Natural England	HRA – monitoring proposals	Table 4.2 in the HRA includes some proposals for monitoring of potentially impacted Habitats sites but based on the currently available information it is not possible to thoroughly assess their adequacy.	The table includes a preliminary assessment of what mitigation and monitoring would be considered during AA. The AA's have since been drafted and consultation has been undertaken. The AA fully assesses the need for monitoring, which is detailed within the AA to accompany the final drought plan. Therefore, Table 4.2 will be revised accordingly.	Update table 4.2 in the HRA and publish the Appropriate Assessment Report.
47	Natural England	SEA - General	The SEA followed correct procedure including consultation with Natural England during the scoping report stage. Impacts upon high value receptors have been set as major adverse in the scoping methodology and the outcomes of the SEA and HRA are consistent with each other. The SEA appears to have influenced the plan options' selection and the phasing of drought plan options generally focuses on the use of least damaging options first.	Thank you for your comment.	No change required
48	Natural England	SEA – Impacts on relevant nature	However, the detail of the SEA is lacking in some areas. It does not consider all the	The SSSIs and their designated features at Blagdon and Chew	Update SEA as required and

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
		conservation receptors	possible impacts on all relevant nature conservation receptors such as SSSIs and priority habitats. For example, Blagdon and Chew Valley lake reservoirs are SSSIs but there is no mention of the potential positive or negative impacts which the dDP and the drought options within it may have. It is noted that the 1 in 500 year drought scenario, which has been tested, should prevent the combined storage from entering DMZ 5. However, we question whether drawdown mediated effects on the SSSI reservoirs may still occur, for example through exacerbation of possible water quality problems. Natural England appreciates that Bristol Water conducted a very useful research project in PR14 of the possible effects of reservoir drawdown on the plant communities of Blagdon Lake SSSI though this does not appear to have been taken into account in the SEA.	Valley Reservoirs were identified as receptors and effects assessed accordingly in the SEA assessment tables presented in Appendix D. The assessments will be reviewed regarding whether drawdown mediated effects on the SSSI reservoirs may still occur, for example through exacerbation of possible water quality problems. In respect to Blagdon Reservoir, the SEA Appendix D (assessment tables) considers the effects on the SSSI macrophyte community and it indicates that it could experience beneficial effects as a result of water levels being held higher for longer. The Blagdon drawdown study regarding plant communities of Blagdon Lake SSSI will be referenced. .	reference the Blagdon drawdown study.
49	Natural England	SEA - impacts	The possible impacts we have highlighted in Section 1.1 above, are also relevant to the River Teme SSSI for which Twaite Shad is an interest feature.	Please see the response to the response Ref no. 43 above.	No further change required
50	Natural England	SEA – Chelvey Well drought permit	Natural England is also concerned that the new supply option for a variation in license at the Chelvey Well has potential	For the purposes of the WINEP investigation referred to we have considered this and have been	No change

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			for an adverse impact on the Tickenham, Nailsea and Kenn Moors SSSI. There is an ongoing AMP7 investigation to assess the impact the existing abstraction at Chelvey Well has on the River Kenn and ultimately Tickenham, Nailsea and Kenn Moor SSSI, and we advise that this investigation is referred to in the final plan.	advised with agreement from NE that the River Kenn does not supply water to the Kenn Moor (meeting with EA, North Somerset Levels IDB and Natural England (Mark Taylor) on 15/12/20). It is primarily supplied by springs to the south around Claverham. This drought action will be moved to the extreme drought management actions in the updated plan flowing input from the Environment Agency's consultation response	
51	Natural England	SEA – SSSI impact assessment	We advise that the SEA should have separate section to specifically assess impacts to SSSIs.	The review of the potential for impacts to SSSIs is integrated to the methodology and assessment framework in line with the national guidance. The methodology and assessment framework were consulted on via the SEA Scoping Report. The SEA identifies relevant SSSIs, receptors and potential for impacts which is detailed in the SEA assessment tables presented in Appendix D and summarised in the Environmental Report as appropriate.	No change
52	Natural England	SEA – missing information	We cannot comment on whether the options in the plan have been sufficiently	All the appendices were published on our web site for the public	No change

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			well-evidenced as there is no data in the SEA to suggest that it has. All the appendices from the SEA which Natural England have received appear to be missing, including the Consultee Responses to the Scope Report, the Environmental Baseline and the assessment matrices. The monitoring plan superficially appears to be adequate, but again, this is difficult to comment on with the information provided.	consultation process including the consultee responses, the scoping report, the environmental baseline and the assessment matrices. We contacted Natural England to make them aware of this following receipt of their consultation response and have not received any further input on this issue.	
53	Natural England	SEA – Protected landscapes	The SEA has looked at landscape generally and protected landscapes in particular, taking into account benefits and adverse impacts to the Mendip Hills and Cotswolds AONBs. Natural England are satisfied that all the relevant protected landscapes in the dDP area been correctly identified and all the potential impacts on dDP options on protected landscapes been correctly identified. The mitigation plan includes an adequate methodology although there are no specific details for how any of the adverse impacts identified will be addressed.	Most of the drought options with adverse impacts on protected landscapes relate to the temporary and reversible effects of lower river levels for which mitigation measures were considered but no realistic options identified, thereby resulting in the residual effects presented in the assessment tables (Appendix D). The Honeyhurst Well is the only option where some construction work would be needed. Potential, temporary adverse effects on visual amenity are identified. As identified in Section 6.2 of the SEA Environmental Report, mitigation measures have been an integral	Update SEA environmental report (mitigation section)

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
				part of the SEA process and considered in the residual effects assessment including appropriate screening of the construction works for this option. Bristol Water will work closely with Natural England and the planning authorities. We will make this clearer in the mitigation section of the SEA Environmental Report.	
54	Natural England	SEA - Biodiversity	The SEA has partially considered the impacts to biodiversity but it is not clear how the assessment has met the objectives and answered the questions and key issues posed in the methodology that they have proposed. The methodology of the SEA states an objective for an assessment of impacts on habitats and species of principal importance for the conservation of biodiversity is to be carried out but there is no evidence of this in the assessment. The potential impacts on priority habitats have therefore not been identified, nor has it taken into account the duties to restore priority	Appraisal framework assessment tables have been completed for each drought measure and are presented in full in Appendix D. These tables present the residual effects assessment against each SEA objective for each option including the Biodiversity, fauna and flora objectives. At this stage we don't believe any further update/information is required.	No change
55	Natural England	SEA – Climate change	Whilst we acknowledge that climate change has been incorporated into the hydrological modelling supporting the drought plan, we are unclear how the dDP takes into account the effects of	The approach set out in our drought plan focuses on reducing demand as priority before taking more water from the environment. It therefore ensures that water is	No change

Ref No.	From	Related to	Comment	Bristol Water response	Changes made to revised draft Drought Plan
			climate change with respect to habitats and species, and their resilience to drought situations.	left in the environment for wildlife as long as possible during a drought situation. We are committed to supporting the environment and wildlife wherever possible during a drought and this is set out in section 3.1.6 in environmental stress. This is part of the overarching approach to adapting to climate change and developing an improved environment for the West Country region as a whole.	
56	Natural England	SEA – Protected species	Natural England is broadly satisfied that the monitoring and mitigation plan for the appropriate assessment of the HRA does consider relevant protected species. Bristol Water should comply with the requirements set out in section 2.2.5 of Annex 2.	Your comments are noted	No change required
57	Natural England	Water Framework Directive Assessment	Natural England do not feel it is appropriate to comment on this section as WFD is a matter for the Environment Agency.	Your comments are noted	No change required

Appendix B

Customer consultation responses

draft Drought Plan Research

Customer views

8th June - 13th July 2021

bristolwater.co.uk

Overview

This survey was administrated internally by the Customer Research and Engagement Manager. It sought feedback on the draft Drought Plan (Drought Plan 2022) during the public consultation period.

Respondents were asked to read either the Non-Technical Summary or the full draft Drought Plan and then respond to the questionnaire. The consultation was open for 5 weeks from 8th June until midnight on 13th July 2021.

A total of 182 respondents completed the survey. 165 respondents were from the Bristol Water Online Customer Panel. 17 respondents came to the survey directly from the website.

As soon as responses were completed, they were sent directly to:

- Water.resources@defra.gov.uk
- Water.Resources@bristolwater.co.uk

The Online Customer Panel members were incentivised to participate by the inclusion of a prize draw for two respondents to win cash prizes of £200 each. The online survey took between 10-15 minutes to complete.

The results of the survey are presented below. The quantitative statistics are provided first, followed by coded 'key themes' from the open response option.

Summary

A summary of the main quantitative findings is presented in the table below.

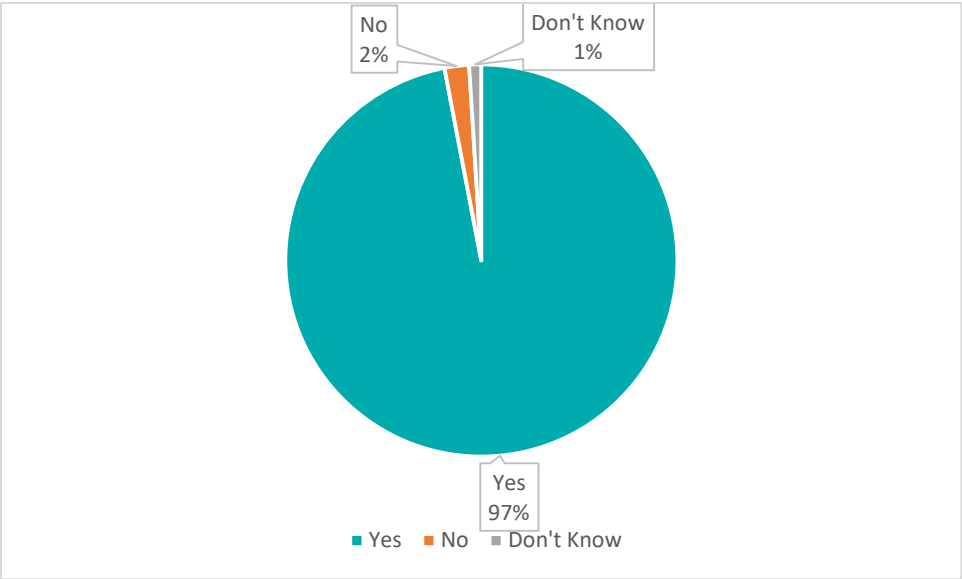
Question number	Question topic	Yes	No	Don't know
Q1a	Understand content	96%	2%	1%
Q2a	Considers all challenges	80%	7%	11%
Q3a	Considers all the measures to take	80%	11%	8%
Q4a	Right balance between risk and uncertainty	87%	5%	7%
Q5a	Right balance customer measures	85%	4%	9%
Q6a	Phasing restrictions appropriate	87%	3%	9%
Q7a	Support drought permits	65%	13%	23%
Q8a	Concerns about implementation of restrictions	20%	74%	7%
Q9a	Support communications campaign	80%	4%	15%
Q10a	Measures appropriate in extreme drought	82%	1%	16%
Q11	Any specific concerns	12%	81%	6%

Main Findings

Details about your organisation

Type of organisation	Number
County/District/Unitary Authority/Regional Assembly	2
Government Agency/Statutory Body	1
Member of public	160
Parish/Town Council	1
Private Sector	4
Other (please specify below)	3
DNS	11
Total	182

Question 1a: Did you understand the content of our draft Drought Plan, and if not, what areas would you like to see clarified?



A total of 179 responses were collected for the first question with 174 (97%) respondents stating that they did understand the content of the draft Drought Plan. Three respondents (2%) said they did not understand the content of the draft plan and two (1%) did not know. The most common themes of the open response comments were that the plan needed more detail on a number of issues (10), such as leak management and customer prioritisation, and that the plan was easy to follow, read and understand (8).

Question 1b: Any additional comments?

Response theme	Count	Percentage	Response Code
Needs more detail	10	26%	4
Easy to follow/read/understand	8	21%	6
Comprehensive	5	13%	5
Wording/grammar suggestions/did not understand phrase	4	11%	2
Good use of graphics	3	8%	8
Too complicated	2	5%	9
Too much information/repetitive	2	5%	3
Need for more reservoirs	1	3%	7
Public should be made aware now of future potential drought	1	3%	11
Sensible and balanced	1	3%	1
Good to keep public informed	1	3%	10

Need more detail on:	Count	Response code
enhanced leak management	2	4.3
customer priorities (e.g. importance placed on different types of customers/between household and business)	2	4.5
additional demand needs (e.g. housing)	1	4.1
strategies that aid the environment more (e.g. mowing)	1	4.2
additional water saving methods	1	4.4
% of demand reduction that can be achieved by each measure	1	4.6
what would happen in an extreme drought	1	4.7
the environmental impact	1	4.8

Verbatim comments received to Question 1b			
Response number	**Response**	**Response code**	**Bristol Water response**
1	None it seemed very sensible and balanced	1	Thank you for your comment
2	Generally well written, but some text could be made easier for reading, use of small columns i find not so easy as text full page width.	2	We will take presentation and visibility into consideration in our final publication
3	There was considerable repetition which made the report over-wordy but it was undoubtedly comprehensive and obviously informed the various interested parties.	3	Thank you for your comment
4	I didn't feel it dealt with the additional demand from the massive increase in housing. Every week one reads of more plans to build homes. There has been no increase in storage to meet these demands. I feel that one day demand will outstrip supply.	4.1	Our long term strategy for managing supply and demand is set out in our Water Resource Management Plan (WRMP). Using the forecasts set out in this plan we develop our water resource strategy to ensure a secure supply of water is available into the future. Our WRMP is available on our website: https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
5	I was glad to see you mention mowing a bit higher but truthfully, we need to be persuading people to stop mowing altogether. Not only because we are having a climate crisis which has seen bees and other pollinators numbers fall and meadow flowers and grasses would serve them far better than cropped lawns, but also because the temperature of the ground itself is so much higher when there is no protection from the sun. I think as a water company, you could do more to drive that message home	4.2	Thank you for your comments. As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site: https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community

	and encourage people who must have lawns to use grey water from their homes to water them. I was reassured that in a drought - however we define that - you have strategies to modify use and conserve resources, but I do feel we have to do more to conserve those resources before we reach crisis point.		This work forms part of our ongoing water resource management strategy.
6	The water savings that customers can do was a good page of info, but the enhanced leak management merited only a brief paragraph.	4.3	We will add some additional information into the Non-Technical summary on our leakage work both under normal conditions and during dry weather and drought.
7	- I would phrase it "what are your responsibilities" instead of "what you can do to help". - I don't know what is meant by 'surface water abstactions' in "The Mendip Reservoirs and associated surface water abstractions" - "The Mendip Reservoirs are also important habitats for wildlife, and this is reflected in their environmental designations the sites hold." should read 'in the environmental designations the sites hold' or 'in their environmental designations'. - It is The Environment Agency (not Environmental Agency) "Although each drought is different, we can still identify different types of drought. The Environmental Agency identifies three main types of drought which may occur separately or together: " - To support better not "what we can do to better support..." - We have developed specific drought 'triggers' .. I don't think you mean this. You mean warnings. A trigger will create a	2	Thank you for your comments. We will review our Non-Technical summary and make changes where appropriate.

drought - a warning will alert you that a drought is imminent.
- "These drought management zones are summarised in the table, next page, with the associated drought actions." (should read on the next page).
- "We will also work closely with businesses/non-household customers and their Retailers from ...." I don't know what that entire paragraph means or to what it refers - regardless of it's meaninglessness - retailers does not warrant a capital letter.
- " NAVs (New Appointments and Variations)" I don't know what that means and therefore don't know if this applies to me.
- "(Defra) for a Drought Order to further restrict water" should read to restrict further.
- ". In some cases, the Government may decide to hold ..." government is not a proper noun - it does not need a capital G.
- "use of supply-side actions ..." this is industry specific jargon - it means nothing to me.
- "disused licensed sources " - I don't know what you mean by this - you have enough room on this page to explain it in one sentence.
-" a multi-year drought" - I don't know what you mean by this - you have enough room on this page to explain it in one sentence.
-" abstractions licences under which we operate. This could involve reducing the compensation flows" - more industry specific jargon, meaningless to me.
- "The decision to grant a Drought Permit sits with the Environment Agency and we will work alongside them" should

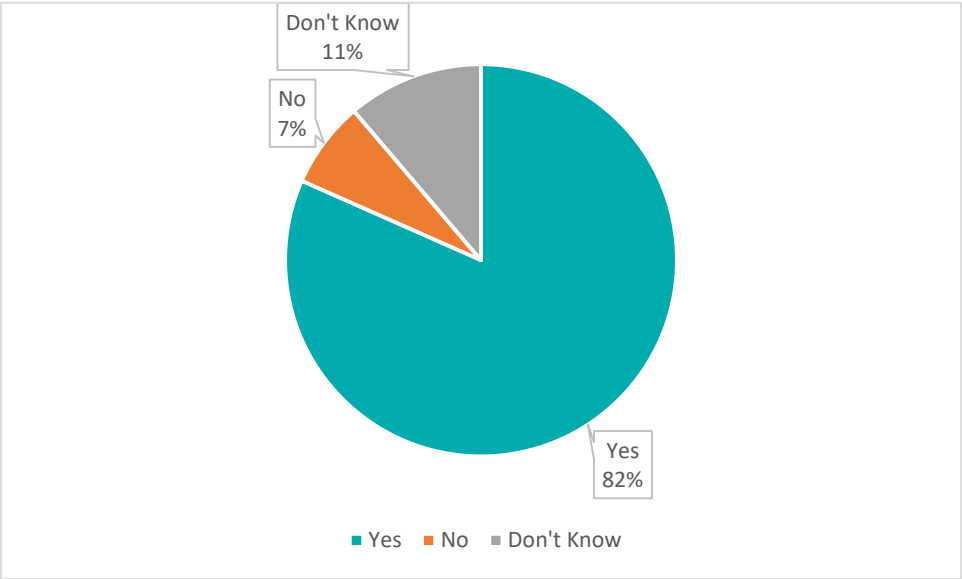
	read 'we will work alongside it'. There is only one Environment Agency and you are stating that you will work with it - not EA and another agency - which would be 'them'. - "consists of expert representatives from departments across the business, that have the required knowledge .. " should read 'who have the required knowledge' if the expert representatives are people. - "As part of the drought planning process, we carried out a strategic environmental assessment (SEA) to assess the potential effects of our drought actions... " do you mean drought response actions? - "will work with the Environment Agency to further assess the.... " to assess further		
8	add use of water butts for those who may wish to water a vegetable patch/garden	4.4	We will update the Non-Technical summary to include the use of water butts.
9	I think it covers all aspecxts well.	5	Thank you for your comment
10	Very straightforward and comprehensive. Easy to follow.	5	Thank you for your comment
11	Very clear and easy to read and understand	6	Thank you for your comment
12	There were one or two mentions that assumed a knowledge of the industry that had casual mention without a full explanation - such as NAVS? Although the letters were explained what a NAV is remains a mystery!	2	We will update the Non-technical summary to include an explanation of what a NAV is.
13	as we have plenty of rain in the West more reservoirs would be helpful. Also for wildlife and recreational facilities.	7	Reservoir development is considered as part of the water resource planning options assessment process

			in our Water Resource Management Plan. Details of this can be found on our website: https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
14	Loved the pictures and what i can do as an individual to save water. Got slightly lost in the heavily written parts of the document and skimmed through it.	8/9	Thank you for your comments
15	a bit overwhelming with detail in places	3	Thank you for your comments
16	Certainly you must put more focus on "leak management". There always seems to be problems on Cleeve Park Road BS16	4.3	We will add some additional information into the Non-Technical summary on our leakage work both under normal conditions and during dry weather and drought.
17	Good to keep public informed	10	Thank you for your comments
18	It is adequate. I could not see that customer priority was dealt with. Is a farmer more important than a care home Are old people living alone more important than families etc.	4.5	We will add more information on the temporary use ban and non-essential use ban exception categories in our updated drought plan. We will also include more information in Section 6.6 on Priority Services.
19	Really clear	6	Thank you for your comments
20	Do you think it may be time to pre-empt the public by making them aware of the plans make just incase of a drought, even if it is suggested that should we now not start reducing our individual water requirements per household that 1/ a hosepipe ban may be needed, 2/ Limits put on monthly usage and higher charges or penalties my be occurred and also even a small	11	Thank you for your comments. As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site:

	reward for members of the public who report a suspected water leak with payment when the leak is fixed and resolved.		https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
21	Quite involved, which it should be, but easy to understand	6	Thank you for your comments
22	More detail about % demand reduction can be achieved by each of the measures.	4.6	The detail on the assumed demand reductions that can be achieved is included in the main drought plan text – Section 4.2
23	Very clear and written in plain English	6	Thank you for your comments
24	It was really interesting to see the steps in the process, however I was unclear what what happen in a extreme drought.	4.7	We will add some text to Section 4.4 to better explain the extreme drought scenario
25	Weston-Super-Mare should be entered as Weston-super-Mare. Is it necessary to duplicate the 'reducing customer demand' information (bullet points and graphics)?	2	Thank you for your comments, the graphics on customer demand have been included by means of an example of the communications and messaging we would use to promote demand saving.
26	Quite complicated	9	Thank you for your comments
27	It was comprehensive if rather worrying - just in case we have bad drought.	5	Thank you for your comments
28	Comprehensive and well thought through.	5	Thank you for your comments
29	It's all straightforward and makes sense	6	Thank you for your comments
30	Seems to focus primarily on private consumers rather than commercial. Would be interesting to understand the statistics around usage and if that focus is correct.	4.5	Non-household or commercial demand currently represents 20% of the total water consumed by customers (domestic and commercial), with the remaining 80% being consumed by domestic customers.

31	Details of the environmental impact, you say changes in water flowed back into or taken from rivers but not the impact that this may have	4.8	We have carried out extensive environmental assessment of our drought plan and the options presented within it. A summary of this work is included in section 5 of the main report, and further details are available in the Strategic Environmental Assessment and the Habitats Regulations Assessment that accompany the plan. All of these documents are available on our website.
32	Very clear, quite long, especially easy to scan the things customers can do with the graphics.	6/8	Thank you for your comments
33	This is a clear draft plan	6	Thank you for your comments
34	Very detailed, easy to understand, well laid out	6	Thank you for your comments
35	seems very comprehensive	5	Thank you for your comments
36	Nice graphics to show water use, also enjoyed reading the breakdown of where the water is drawn from.	8	Thank you for your comments

Question 2a: Do you feel that our draft Plan considers all the challenges you think we will encounter when managing a drought?



A total of 179 responses were collected for the second question with 146 (82%) respondents stating that they thought the draft Plan considered all the challenges we may encounter. Thirteen respondents (7%) said they did not think the plan considered all the challenges and twenty (11%) did not know. The most common additional challenges reported by respondents were the impact of societal behaviour (4), such as increased housing and washing of cars, and the climate emergency declared in Bristol (4).

Question 2b: Any additional comments?

Response theme	Count	Percentage	Response code
Good plan	6	14%	4
Impact of behaviour change (e.g., more housing, washing of cars, tourists)	4	10%	10
Climate emergency	4	10%	6
Supply for vulnerable customers	3	7%	7
Explanation of restrictions	3	7%	12
Population growth	2	5%	14
Proactive approach to water conservation	2	5%	1
Lack of customer cooperation	2	5%	22

Pre-emptive leak management	2	5%	8
Layout suggestion	2	5%	9
Trigger imbalanced with implementation	1	2%	2
Loss of Sharpness Canal	1	2%	3
Management of interested parties	1	2%	5
New resources that could be developed	1	2%	11
EA drought levels	1	2%	15
Should not happen if companies act correctly	1	2%	16
Winter droughts should be considered	1	2%	17
Increase abstraction to maintain reservoir levels	1	2%	19
Use of meteorology to better understand droughts	1	2%	20
More detail on non-household customers	1	2%	21
Impossible to be able to predict and plan	1	2%	13
Don't know	1	2%	18

Verbatim comments received to Question 2b

Response number	Response	Response code	Bristol Water response
1	I would like to see a proactive approach to encouraging everyone to conserve water. I believe it would be in everyone's interest to implement the actions outlined in Reducing Customer Demand at all times. Furthermore, I would like to see you encouraging the use of Tubs instead of sprinklers and hosepipes for both gardens and such chores as car washing.	1	Thank you for your comments. As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site: https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
2	The plan has several points where the trigger is probability of level-4 drought within six weeks whereas the time needed for implementation is acknowledged to be of the order of six months. This presages a period of twenty weeks during which the public are likely to suffer level-4 restrictions. Should not the trigger be much nearer to the implementation threshold? Is there not merit in reframing to imminence of level-3 conditions? It is acknowledged that the reinstatements mentioned in section 4.4 are for plants not used for a considerable time and so re-establishment may not be possible. Just as the UK government took action to purchase many millions of vaccines before they were known to exist, is there not a case for determining now the viability of reuse of these plants? In particular the Bristol Channel is likely to be a major source of	2	Thank you for your comments. As a result of the stakeholder consultation on our draft drought plan, we have decided to remove desalination from the extreme drought management options list, as well as 2 of the other options that had significant uncertainty associated with them and would take a long time to implement. We will also move some of our new drought permit options into the extreme drought management category due to the infrequency with which they are likely to be used.

	water – but desalination is a major process. We will need to know if it will work! Given that water quality is higher in the outer reaches of the Bristol Channel, is there a case for desalination downstream and pumping back up to the Bristol area. Clearly a transmission agreement with South West Water would be needed but Bristol water could commission a desalination plant in Northern Devon. There is, of course, precedent for water transmission from the Dwr Cymru area to England and so hurdles can be overcome - if the planning/implementation is started sooner.		
3	I couldn't find any plans for dealing with the loss of the Sharpness canal. For example a major breach or a serious contractual disagreement	3	The loss of the Sharpness canal under the scenarios mentioned would not be the cause of a drought situation but are ongoing operational risks. We assess these type of risks to supply as part of our long term water resource management planning process. We last published our water resource management plan in 2019 and this is available on our website. https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
4	Logical and straightforward	4	Thank you for your comments.
5	There are many interested parties involved so the management of a drought will clearly be a complex issue.	5	Thank you for your comments.
6	In a house I recently saw built in France rainwater and water from dishwasher and washing machine are collected in an underground tank and used to flush the loo and water the garden. Grants to implement this in UK would represent huge water savings	1	This type of demand management option is considered as part of our longer-term water resource planning strategy. We last published our water resource management plan in 2019 and this is

			available on our website. https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
7	The plan assumes droughts to be regular occurrences that can be planned for as 1 in 15, 1 in 33 and 1 in 200 year periods. It doesn't consider the climate emergency that we are currently facing.	6	We recognise that climate change will result in us experiencing drought more frequently. This plan sets out how we will manage and respond to drought should it occur today, and will be reviewed and updated every 5 years. We take account of climate change and the effects it will have on water supply in our long term wate resource management planning process. We last published our water resource management plan in 2019 and this is available on our website. https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
8	Are there contingencies for the vulnerable to ensure they have sufficient water for their needs? I'm concerned that in difficult situations those with the loudest voices are better at accessing resources than those with the greatest needs.	7	Yes the support for the vulnerable during a drought will be to make sure they have access to the water they need. We will update section 6.6 of our drought plan to include more information on what help we would provide to vulnerable customers.
9	A measurable commitment to fixing leaks and replacing old pipelines / preemptive leak management would be good to see.	8	Our ongoing leakage strategy is set out in our Business Plan (https://www.bristolwater.co.uk/about-us/our-plans/for-all/) and our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/). We deliver industry leading levels of leakage reduction through targeted

			investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further.
10	The plan doesn't offer or suggest what support customers on your PSR list may need.	7	We will update section 6.6 of our drought plan to include more information on what help we would provide to Priority Service Register customers.
11	There is a lot of white space - I would think you could very easily reduce the booklet to 10. I would make page 7 the outside back cover. Advertisers pay a premium for space on outside back and you have hidden really useful / eye catching info on page 7.	9	Thank you for your comments.
12	As the demand for water is significantly increased in modern times (more housing, appliances, power washing of cars etc) I think it needs to be recognised in the documanet that drought conditions will have a bigger, quickier impact on water supplies than in previous periods of drought. I would like to see more information about how Bristol Water will communicate the need to reduce usage, increase leak management etc at an earlier stage if it appears we may be heading for drought conditions.	10	To support the drought plan development we have carried out a series of modelling to look at what would happen if a severe drought occurred today with our current infrastructure and customer demands. This modelling was used to test the timing of the drought actions we have said we will implement and confirm that we would have enough time to respond appropriately to the drought situation. Details of this modelling work are available in Appendix B of the drought plan.
13	Does not really cover any potential new resources that could be used/developed.	11	This is covered by our water resource management plan which sets out the long term strategy for maintaining a secure water supply. We last published our water resource management plan in

			2019 and this is available on our website. https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
14	Is the fact that the area is a holiday destination taken into account and that dry weather can lead to an influx of additional water users that are often less likely to want to comply with local water saving actions.	10	We monitor customer demand closely and have used the demand we would expect to see from customers during a dry year to assess the drought risk. We have also used demand information from the 2018 heatwave to inform our assessments. This occurred over the summer period, and so would have included any effects from holiday population.
15	Further steps could be implemented,	12	We are always open to suggestions in terms of what additional steps we should consider including in our drought plan.
16	Very comprehensive but only a fool would claim to know everything that might happen	13	Agreed. The modelling we have carried out is indicative only and intended to provide assurance that we have adequate measured in place. You are correct that we are unable to predict the future.
17	You have most experience of this. Rainfall is clearly the most important factor although social practices (such as frequent hand-washing, that would have been hard to predict in the past) will also need to be considered	10	Thank you for your comments.
18	Given the increasing unpredictability of our weather patterns, along with expectations of increased global warming, then the plan presents a here and now situation, and, unless I've missed a trick, does not address the much longer term considerations, including an increasing population within the defined region and beyond	6/14	This is covered by our water resource management plan which sets out the long term strategy for maintaining a secure water supply and includes assessments of population forecasts and climate change. We last published our water resource

			management plan in 2019 and this is available on our website. https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
19	With climate changes, changing lifestyle choices eg hot tubs and growing population I am concerned that there will be more shortages of water than planned for.	6/10/14	The longer term changes to water use habits and climate change are covered by our water resource management plan which sets out the long term strategy for maintaining a secure water supply. We last published our water resource management plan in 2019 and this is available on our website. https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
20	It would be good to see some details about the expected probabilities of the four EA drought levels until 2027 and beyond; whether they're expected to occur more or less frequently; and how BW is adapting to any expected changes.	15	Our levels of service align with the EA drought levels. This indicated the likely return period associated with each of the actions under the drought levels and is set out in table 1 of the drought plan. Under our current level of service restrictions such as temporary use bans (TUBS) (EA Level 2) would occur 1 in every 15 years on average, non-essential use ban drought orders would occur 1 in every 33 years on average (EA Level 3) and emergency drought orders (EA Level 4) would occur 1 in every 200 years on average at the most, and are likely to be less frequent than this.
21	Leakage is a necessary point to address even more	8	Our ongoing leakage strategy is set out in our Business Plan (https://www.bristolwater.co.uk/about-us/our-plans/for-all/) and our water resource management plan

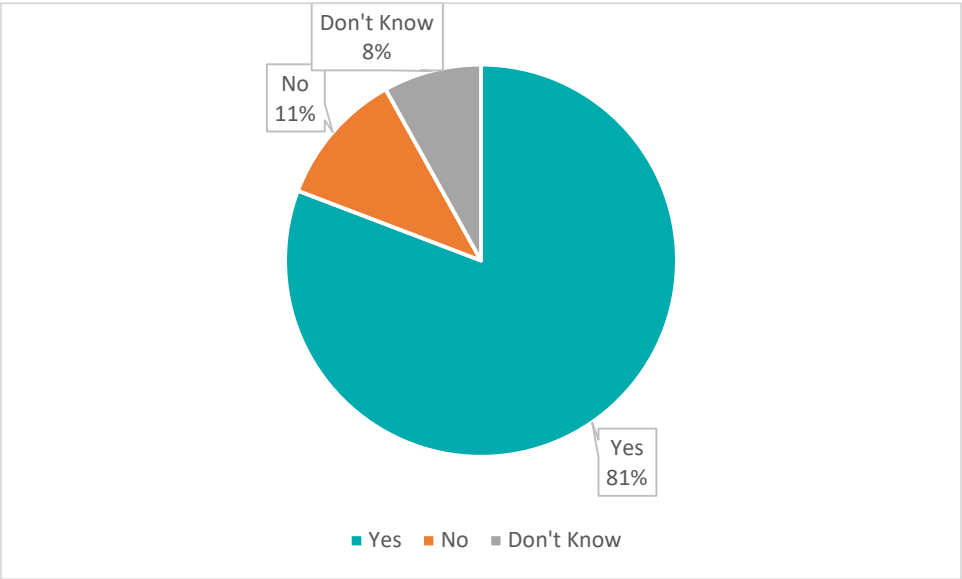
			(https://www.bristolwater.co.uk/about-us/our-plans/water-resources/). We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further.
22	I think it would be beneficial to know what restrictions will happen to users, e.g. if daily, how long would they be in place etc	12	The length of time customer restrictions would be in place would depend on the type of drought we experience, so it is not possible to provide a set figure on this. We carried out some modelling to test our drought plan and this is presented in Appendix B. This shows how long the temporary use bans would be in place under each of the scenarios modelled and the timing of the other restrictions should they be required.
23	Yes, but you should be doing everything to avoid getting to a serious situation, we have enough rainfall in this country never to be in a drought situation if "Water Companies" got their act together.	16	We review and update our position on an ongoing basis. We are also developing regional plans that look at water resource management across all water users/abstractors within the West Country. This work is constantly looking to maintain and increase the resilience of our systems.
24	Well explained	4	Thank you for your comments.

25	This is assuming a drought in Spring or Summer not one with frozen water and bursting pipes.. The risk of this may be low but should be considered.	17	We will be updating our modelling scenarios in Appendix B to include a dry winter scenario. Winter is a critical time for our resources as it is when our reservoirs refill in order to maintain supplies throughout the drier summer period. If reservoir storage isn't replenished enough this could have implications for summer water availability.
26	It seems clear to me but as a member of the public I don't know if areas were missed.	18	Thank you for your comments.
27	Challenges yes, but again I think that the public should be aware of what would happen should a drought occur, restricted use and penalties etc.	12	Thank you for your comments.
28	It's impossible to say what circumstances would crop up during a drought but I think you have covered most things	4	Thank you for your comments.
29	Rather than getting to a dry summer season and taking action, water companies should significantly increase abstraction from River Severn as soon as river levels are projected to rise to fill your 4 reservoirs. I have never seen the reservoirs full to capacity even after months of rain.	19	Water from the River Severn is not used to directly fill our reservoirs in the Mendips. It is treated and goes directly into the supply network. Due to the integrated nature of our supply network, we are able to prioritise use of water from the River Severn to meet customer demand and this reduces the pressure on the amount of water we need to abstract from our reservoirs. This is part of the operational strategy used during a drought.
30	Add a table of comtents	9	There is a contents table in the full drought plan document, the non-technical summary is not intended to be a formal report.

31	Very clearly presented.	4	Thank you for your comments.
32	Does not seem to look at how metrology has improved and this knowledge could be used to predict when the drought is likely to end so the water can be managed to its maximum	20	In the main drought plan report we set out the drought indicators we use and this includes weather forecasting. In section 3.1.5 we discuss the work we have been involved in to support the development of a web-based forecasting tool to analyse rainfall forecasts and give users the opportunity to explore how accurately these forecasts can predict potential upcoming droughts based on historical performance.
33	there is an enormous amount of information in dealing with residential customers and very little about what your plans are for retail, commercial and industrial customers (assuming you have some)	21	In our updated drought plan we will provide some additional information about how we will work with retailers and their customers during a drought situation and the actions we will take to support them.
34	It doesn't factor in those people who argue they pay for it and no one will tell us what to do, etc. Is there a legal enforcement?	22	Yes, legal enforcement for TUBS and drought orders does exist under the Water Industry Act 1991 and the Water Resource Act 1991. Anyone found guilty of breaching a TUB can be fined up to Level 3 (an amount of £1000 under the standard scale of fines for summary offences in the Criminal Justice Act 1982 section 32). Offender under drought order restrictions are liable to a fine not exceeding the statutory maximum (which is an amount of up to £5000). Conviction on indictment renders an offender liable to a fine with no specified upper limit.

35	Perhaps making clearer references to the current relevant laws so that anyone who considers a dispute or a legal challenge to any action taken can see which laws apply and the company is acting within its legal powers.	23	Details of the legal mechanism for TUBS is provided in section 4.2.3 of the main drought plan document.
36	As far as I can see as a layperson!	4	Thank you for your comments.
37	frequency of draught action might need revision to reflect likely effects of climate change	6	We review and update our drought plan every 5 years. This review process will enable any changes as a result of climate change to be accounted for.
38	What contingency plans for people who need to shower daily due to skin issues like psoriasis?	7	If you are a vulnerable customer in any way you can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services
39	Most people today are far too selfish to manage water use. During covid-19 we have seen many people ignoring rules, there will be many who will not reduce their water usage.	22	Thank you for your comments.
40	The plan considers all the challenges which might be encountered in my opinion	4	Thank you for your comments

Question 3a: Do you feel the draft Plan considers all the measures we should take?



A total of 180 responses were collected for question three with 145 (81%) respondents stating that they thought the draft Plan considered all the measures Bristol Water should take. Twenty respondents (11%) said they thought the draft Plan did not consider all the measures and fifteen (8%) did not know. The most common theme of the open response comments was that there should be a proactive approach to encouraging customers to engage with water saving behaviours prior to any drought situation (7).

Question 3b: Any additional comments?

Response theme	Count	Percentage	Response code
Encourage water saving behaviour	7	24%	3
Leak management	3	10%	2
Enforcement of measures	2	7%	6
Needs to cover a longer period/sustained periods of drought	2	7%	7
New resources that could be developed	2	7%	11
Focus on non-household usage	2	7%	13
Include penalties for misuse during droughts	1	3%	1
Education on impacts of climate change	2	7%	5
Protection of vunerable customers	1	3%	8

Mandatory water meters	1	3%	9
Reduction in water pressure during drought	1	3%	10
Compulsory closure of businesses that cannot prove recycling of water (e.g., car washing businesses)	1	3%	12
Don't know	2	7%	4
All measures considered	2	7%	14

Verbatim comments received to Question 3b

Response number	Response	Response code	Bristol Water response
1	It may be useful to remind users of the penalties for misuse during droughts	1	Legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act 1991. Anyone found guilty of breaching a TUB can be fined up to Level 3 (an amount of £1000 under the standard scale of fines for summary offences in the Criminal Justice Act 1982 section 32). Offender under drought order restrictions are liable to a fine not exceeding the statutory maximum (which is an amount of up to £5000). Conviction on indictment renders an offender liable to a fine with no specified upper limit.
2	The amount of water lost through leaks hasn't been mentioned, only leakage management - which doesn't give a sense of the amount of water lost. In recent droughts, in the area we previously lived, it became apparent that lack of repairs contributed to a huge water loss. So much so that water was brought in by tankers to top up reservoirs. Publicising these issues and steps that you have taken to mitigate them would be useful to the consumer, particularly when there is a great emphasis on the customer to reduce the amount of water they use.	2	Our ongoing leakage strategy is set out in our Business Plan (https://www.bristolwater.co.uk/about-us/our-plans/for-all/) and our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/). We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further. The drought plan sets out the actions we would take in a drought in addition to our normal activity. Increasing leakage reduction still further is one of these actions.

3	Could you request customers to wash up by hand rather than dish washer, and re wear clothes that aren't dirty / spot wipe marks rather than machine wash them?	3	Thank you for your comments. As part of our water efficiency campaign and agile communications process we will provide customers with the latest water saving tips and ideas appropriate to the drought situation we are in. This will enhance our work we already carry out on water efficiency.
4	I repeat I would like to see a proactive approach to encouraging everyone to conserve water. I believe it would be in everyone's interest to implement the actions outlined in Reducing Customer Demand at all times. Furthermore, I would like to see you encouraging the use of Tubs instead of sprinklers and hosepipes for both gardens and such chores as car washing."	3	Thank you for your comments. As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site: https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
5	I am unaware of all the measures in the draft plan as I have not read the detail.	4	Thank you for your comments
6	More promoted on how to reduce usage of water and better understanding among the public about the impacts of climate change on water supply. Interested in enhanced leakage protection but shouldn't this be increased anyway to improve the network?	3/5	As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site: https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction

			activities, continues to see us reduce leakage levels further. The drought plan sets out the actions we would take in a drought in addition to our normal activity. Increasing leakage reduction still further is one of these actions.
7	Enforcement of restrictions like car washing and watering lawns is a problem. Ididn't see any proposals to deal with this.	6	This is not explicitly stated in the drought plan, but legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act 1991. Anyone found guilty of breaching a TUB can be fined up to Level 3 (an amount of £1000 under the standard scale of fines for summary offences in the Criminal Justice Act 1982 section 32). Offender under drought order restrictions are liable to a fine not exceeding the statutory maximum (which is an amount of up to £5000). Conviction on indictment renders an offender liable to a fine with no specified upper limit.
8	The plan needs to cover a longer period and eventualities in the event of sustained periods of drought.	7	We will be updating our modelling scenarios in Appendix B to include a longer drought with a dry winter scenario to test the plan against a sustained period of drought.
9	Encourage people to collect water like in water butts. Encourage innovation in technology to reuse water.	3	We will update the Non-Technical summary to include the use of water butts. This would be one of the water efficiency messages we use during a dry weather situation.
10	I wish I had more time to study it but this is a challenging time for me personally. I do worry about my community, and society in general, in the case of shortages of basic utilities - I'm sorry to say that what I witnessed last year at the beginning of lockdown horrified me. Peoples behaviour was appalling - I	8	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site:

	saw bullying and aggression in supermarkets as people grabbed at any items they thought would be in short supply and I found a 92 year old lady crying by my car in a car park at Ashton Gate having walked from Sainsburys and tried all the shops to get toilet roll. She'd had a pack in her trolley but some young woman took it out when the store ran out. Large men piled trolley after trolley high with them and woudn't part with even one. Luckily, I had a four pack in my boot and gave her two of them but that behaviour worsened as the pandemic and the shortages unfolded - can you imagine what would happen to the vulnerable if that attitude accompanied a drought? We are not the compassionate society we once were so I really want to ensure that companies like yours have a contingency to protect those most vulnerable to disruptions to their supply.		https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services
11	It's probably out of your remit, but water meters ought to be mandatory by now.	9	Our water metering strategy is set out in our Business Plan (https://www.bristolwater.co.uk/about-us/our-plans/for-all/) and our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/. In July 2021 the Environment Agency issued a report setting out the determination of areas of water stress. This is used to inform whether water companies should be able to consider the option of charging by metered volume for all customers. Bristol Water was not identified as a company in a seriously water stressed area for the purposes of metering.

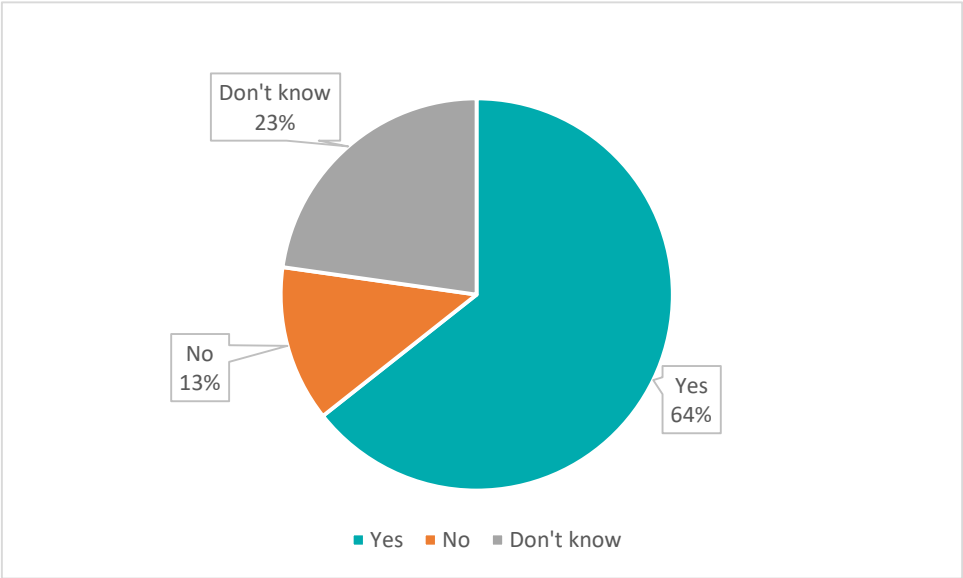
			(https://www.gov.uk/government/publications/water-stressed-areas-2021-classification)
12	can you reduce water pressure during a drought generally, it might be a way of reminding people each time they turn on the tap that water is in shorter supply ?	10	We are required by Ofwat maintain a minimum standard of water pressure to our customers. This standard is a level of service indicator (known as DG2). This requires ten meters head of pressure, at the external stop tap, at a flow of nine litres per minute. Lowering pressure below this standard would break our level of service obligations. That is why pressure reduction below the level of service standard has been included as an extreme drought management action. Pressure reduction also has implications for the fire service and their use of water for fire fighting.
13	Does not really cover any potential new resources that could be used/developed.	11	The development of new resources is covered in our long term water resource strategy set out in our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
14	It is difficult to plan for something which would happen so seldom, even taking into account the effects of climate change.	5	Thank you for your comments
15	Compulsory closure of carwash businesses that cannot prove they recycle the water used.	12	A non-essential use drought order will restrict the use of mechanical vehicle washers. Washers that recycle the water they use and thus use less than 23 litres per wash are suggested as a discretionary concessional exception in the UKWIR code of practice

			(https://www.water.org.uk/guidance/managing-through-drought-code-of-practice-and-guidance-for-water-companies-on-water-use-restrictions-2013/)
16	I think there should be more education about use of water before we get to drought situation . Particularly the use of hose pipes etc. As it was so long ago that these were banned. I think public opinion may have changed now and see water as a resource rather than limitless supply.	3	As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site: https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
17	Suggesting to customers to re-use water at every opportunity, IE, recycling washing up / bath water for garden plants, Make more use of water butts,	3	We will update the Non-Technical summary to include the use of water butts. This would be one of the water efficiency messages we use during a dry weather situation.
18	Everything seems logical and reasonable although I wonder whether any other potential sources could be considered - eg additional reservoirs, or a scientific means of extracting / condensing water from the air	11	The development of new resources is covered in our long term water resource strategy set out in our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
19	The "Yes" above has a caveat - it addresses the here and now - not the longer term challenges that will almost certainly arise	7	Our long term water resource strategy set out in our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
20	Leak management could be much better.	2	We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further.

			The drought plan sets out the actions we would take in a drought in addition to our normal activity. Increasing leakage reduction still further is one of these actions.
21	Over-emphasis on domestic usage rather than industrial use	13	Non-household or commercial demand currently represents 20% of the total water consumed by customers (domestic and commercial), with the remaining 80% being consumed by domestic customers. In our updated drought plan we will provide some additional information about how we will work with retailers and their customers during a drought situation and the actions we will take to support them.
22	A lot of advice on how to save water is old info or just repetitive from pervious plans... Or perhaps people need reminding... Not really sure	3	Thank you for your comments
23	That all depends on the severity of the drought. I cannot comment on this because we are not in a drought now and I am not a water expert.	4	Thank you for your comments
24	Again, I'm not an expert - this looks very simple to me	14	Thank you for your comments
25	How will the water restrictions be monitored, say someone is watering their garden.	6	We do not have a formal procedure set out for monitoring the compliance with a temporary use ban, However, legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act 1991. Anyone found guilty of breaching a TUB can be fined up to Level 3 (an amount of £1000 under the standard scale of fines for summary offences in the Criminal Justice Act 1982 section 32). Offender under

			drought order restrictions are liable to a fine not exceeding the statutory maximum (which is an amount of up to £5000). Conviction on indictment renders an offender liable to a fine with no specified upper limit.
26	Difficult to comment unless there is more information around commercial use and what restrictions or recommendations might be placed on those organisations.	13	In our updated drought plan we will provide some additional information about how we will work with retailers and their customers during a drought situation and the actions we will take to support them.
27	You need to document your current leakage rate and the forecast in reduction. You ask people who pay you to reduce their usage whilst they are paying for water that never reaches them even when there is no drought!	2	Our leakage performance against our leakage target is reported each year as part of our annual reporting process and is available on our website: https://www.bristolwater.co.uk/performancefor2020-21
28	I think all measures to be taken are fully considered in the draft plan	14	Thank you for your comments

Question 4a: Does our draft Plan strike the right balance between risk and uncertainty, based on triggers we propose for drought action?



A total of 181 responses were collected for question four with 159 (88%) respondents stating that they thought the draft Plan struck the right balance between risk and uncertainty. Ten respondents (6%) said they thought the draft Plan did not strike the right balance and twelve (7%) did not know. There was no standout theme to the open response comments, with respondent suggesting a variety of extra considerations that should be taken.

Question 4b: Any additional comments?

Response theme	Count	Percentage	Response code
Good plan	4	22%	4
Use of meteorology to predict droughts	2	11%	5
Should always be under review	2	11%	1
Definition of timescales	1	6%	12
Encourage water saving	1	6%	2
Leak management	1	6%	3
Too technical to comment	1	6%	7
More use of water meters/charges to those not metered	1	6%	8

More information on daily limits during drought levels	1	6%	9
Reservoirs should be run to maximum capacity	1	6%	11
Concern over viability of customer actions	1	6%	13
Lack of contingency strategies	1	6%	6
Should not be necessary	1	6%	10

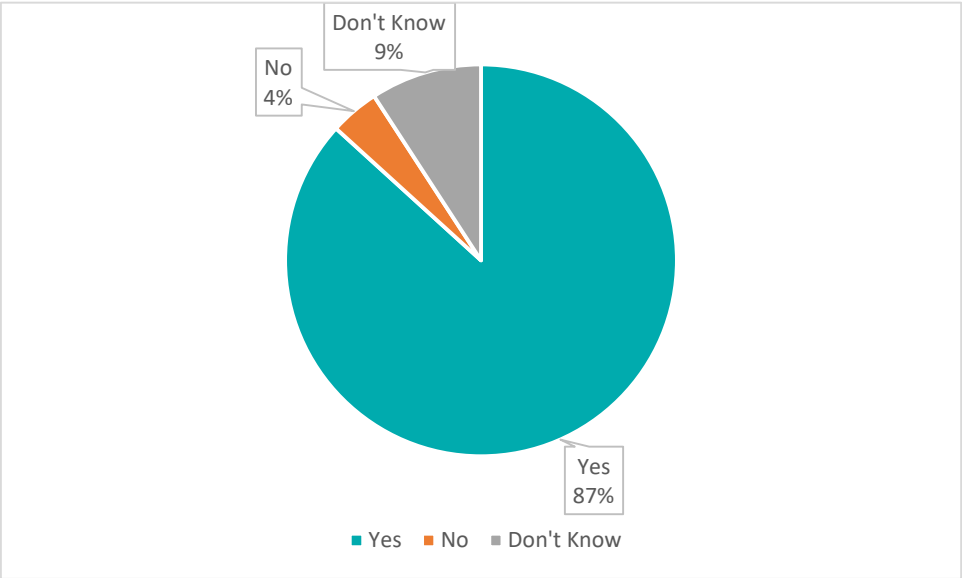
Verbatim comments received to Question 4b			
Response number	Response	Response code	Bristol Water response
1	You should always keep the level of risk under review in the light of changing water use patterns eg new housing and business development	1	Our long term water resource strategy is presented in our water resource management plan. This is reviewed and updated every 5 years in the context of the latest data and information available on population growth, water use habits, business requirements, and supply availability. It is available on our website: https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
2	If you were to actively encourage the preservation of water and take more proactive steps to carry out regular maintenance of your pipelines leakages would be greatly reduced rather than acting when a leak is reported.	2/3	As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site: https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further. The drought plan sets out the actions we would take in a drought in addition to our normal activity. Increasing leakage reduction still further is one of these actions.
3	In prolonged dry weather it is proposed to review availability of any mothballed/emergency sources. This availability should be known already - making an ANNUAL review less onerous than having to	1	Some of our disused licenced sources have been retained in order to potentially provide additional resource should it be required during a drought situation. We would have to carry out some engineering work in order to bring these sources back into supply, and this is what

	undertake such a review only when dry weather is "prolonged". Is there a definition of "prolonged"? Certainly it will always be necessary to confirm availability of any "emergency" sources during dry weather periods – especially sources under control of other water authorities.		is being referred to when we say 'review availability'. The term 'prolonged dry weather' is used to describe a situation whereby drought conditions could be developing, but we are not yet in a drought situation because if there was a change in the weather then the resource position would move back to normal. The length of this period would be variable depending on the specific resource circumstances at the time.
4	It mainly appears to be very well thought out	4	Thank you for your comment
5	Major heatwaves in 2003, 2006, 2013, and 2018, were all discretely solar driven, they are a cause of climate change cannot be made more likely by rising CO2 forcing, and are predictable at great range. I predicted the heat of August 2020 at over a year ahead. https://www.linkedin.com/pulse/major-heat-cold-waves-driven-key-heliocentric-alignments-ulric-lyons/	5	Thank you for the interesting reference. In the main drought plan report we set out the drought indicators we use and this includes weather forecasting. In section 3.1.5 we discuss the work we have been involved in to support the development of a web-based forecasting tool to analyse rainfall forecasts and give users the opportunity to explore how accurately these forecasts can predict potential upcoming droughts based on historical performance.
6	As stated, there may be a lack of some contingency strategies in some areas	6	Thank you for your comment
7	Way too technical an evaluation of risk and uncertainty to comment.	7	Noted
8	I would like more emphasis on the public's role. Where people have water meters I assume/hope there is a reduction in use but those without may need more incentives/charges year round.	8	As we have not implemented a temporary use ban in recent times, it is difficult to gauge what the public response would be to this and how much water would be saved, We would use our communications strategy to maintain the water efficiency messaging and keep customers informed of their role in managing the drought situation.

9	You mention daily average is 276Ml. What is the expected daily maximum demand and what are the daily supply limits during the four drought levels?	9	Appendix B in the drought plan set out the modelling assessments we carried out to test our drought plan. This assessment used a demand of 330 Ml/d as a forecast dry year demand, and 340 Ml/d to represent the demands we experienced during the 2018 heatwave.
10	It's OK but you should not be getting to the stage where drastic measures are necessary.	10	Our drought plan sets out what we would do if a drought did occur and takes this process through to include what we would do in a very severe drought situation. We have not implemented any customer restrictions in over 30 years – the last hosepipe ban was in 1990. In the longer term we are being asked to manage our resources such that we are resilient to a 1 in 500 year drought situation. This will be included in our water resource management plan update for 2024.
11	Should run reservoirs much closer to maximum capacity.	11	We aim to refill the Mendip reservoirs each year by the beginning of April in time for the summer drawdown period. This is part of our normal operational strategy for managing our water resources.
12	Does not show how metrology will be reviewed daily to judge whether restrictions should be tightened or relaxed	5	Section 3.1 of our drought plan sets out the drought indicators we would use to monitor the drought situation. This includes weather forecasts and rainfall/river flow data and information. We will update the plan to make it clearer to customers how this information would be used.
13	what are your timescales? How long does it take to decide there is a drought and implementing the actions	12	We have tested our drought plan via a modelling exercise. This work is presented in Appendix B of the main drought plan and shows on a week by week basis how the drought actions would be implemented in response to the resource situation.
14	A little concerned about comment on modern lavatories - I know to my cost and from advice from Bristol Water that older houses which are further	13	The advice on toilets in the non-technical summary references older style toilets that have a larger cistern capacity. A displacement

	away from main sewerage can suffer blockages through not enough water being passed along the pipes.		device can be inserted in the cistern to reduce the capacity of the cistern and bring it in line with modern toilets.
15	As drought is a natural occurrence, the draft plan ensures the right balance based on the triggers proposed for action against drought	4	Thank you for your comment
16	One person will always be more risk averse to the next but personally I think it strikes the correct balance	4	Thank you for your comment
17	I felt it struck the right tone for me - as you say, droughts can be unpredictable but the plan seems reassuring without making any concrete promises (which is realistic)	4	Thank you for your comment

Question 5a: Do you think the draft Plan strikes the right balance between customer measures and actions that might affect the environment?



A total of 179 responses were collected for question five with 155 (87%) respondents stating that they thought the draft Plan struck the right balance between customer measures and actions. Eight respondents (4%) said they thought the draft Plan did not strike the right balance and sixteen (9%) did not know. The most common themes of the open response comments were that there should be a proactive approach to encouraging customers to engage with water saving behaviours prior to any drought situation (8) and the long-term environmental consequences need to be considered (6).

Question 5b: Any additional comments?

Response theme	Count	Percentage	Response code
Proactive demand reduction	8	29%	2
Need to consider long-term environmental consequences	6	21%	10
Earlier introduction of TUBS	2	7%	4
Reduce flow to homes	1	4%	1
Leak management	1	4%	3
Public support should be good	1	4%	5
Management of interested parties will be complex	1	4%	8
Lack of public cooperation	1	4%	11

Plan for sudden loss of water source	1	4%	12
Experts should make the decision	1	4%	6
Rainfall forecast	1	4%	7
Good plan	2	7%	9
Format suggestion	1	4%	13
Don't know	1	4%	14

Verbatim comments received to Question 5b			
Response number	Response	Response code	Bristol Water response
1	Could you reduce water flow to customer homes so customers automatically use less water?	1	We are required by Ofwat maintain a minimum standard of water pressure to our customers. This standard is a level of service indicator (known as DG2). This requires ten meters head of pressure, at the external stop tap, at a flow of nine litres per minute. Lowering pressure below this standard would break our level of service obligations. That is why pressure reduction below the level of service standard has been included as an extreme drought management action. Pressure reduction also has implications for the fire service and their use of water for fire fighting.
2	See above with regard to an active strategy to reduce water demand and prevention of wastage through leakages.	2/3	As part of our work with the community we have an ongoing water efficiency campaign to encourage customers to use the water they need, but not to waste it. The latest information on our campaigns and support for customers can be found on our web site: https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further. The drought plan sets out the

			actions we would take in a drought in addition to our normal activity. Increasing leakage reduction still further is one of these actions.
3	The balance should be towards demand reduction rather than putting supply at risk.	2	We are committed to prioritising demand reduction over taking more water from the environment. This is set out in section 4 of our main drought plan document.
4	We should all be reducing our consumption anyway eg turning tap off for toothbrushing - good to keep reminding us of this. Would be happy with earlier introduction of TUBS if poor compliance with voluntary measures	2/4	Thank you for your comments. Our ongoing water efficiency work helps to support customers to reduce their demand on a daily basis. Details of our latest campaigns are available on our website. https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
5	As your record on hose pipe bans is very good I think the public would support you should you need one	5	Thank you for your comments
6	This is a judgement water professionals need to make.	6	Noted
7	UK rainfall has on average increased with the warm phase of the North Atlantic since 1995, the next cold phase won't be until from the mid 2030's.	7	Thank you for this observation. Section 3.1 of our drought plan sets out the drought indicators we would use to monitor the drought situation. This includes weather forecasts and rainfall/river flow data and information.
8	Again, with so many interested parties, management and agreement of remedial actions will be complex.	8	Noted – Section 6 of our main drought plan document identifies the stakeholder groups and customers we will be engaging with as a drought progresses.
9	Just right	9	Thank you for your comments
10	Measures in an emergency need to take account of long term consequences, so reductions and bans on	10	We are committed to prioritising demand reduction over taking more water from the environment. This is set out in section 4 of our main drought plan document.

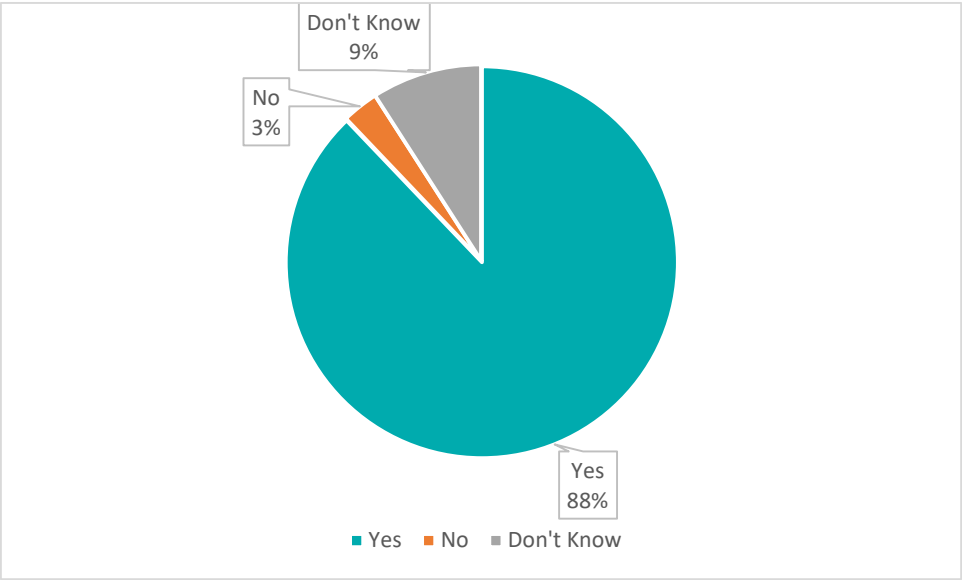
	personal use would be a better strategy - the environment is struggling enough already.		
11	It wasn't entirely clear to me what sort of checks are carried out beforehand to understand impacts on the environment. What sort of areas are likely to be impacted? Rivers? Water aquifers? Lakes?	10	We have an extensive programme of environmental monitoring in place to support our drought plan. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out. In addition, we also implemented a Strategic Environmental Assessment and a Habitats Regulations Assessment to support the drought plan. All these documents are available on our website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
12	I think actions that affect the environment should be an absolute last resort.	10	We are committed to prioritising demand reduction over taking more water from the environment. This is set out in section 4 of our main drought plan document.
13	Without a knowledge of environmental science, I can't really comment	10	Thank you for your comments
14	In my experience the public will not be guided. Rules and restrictions about everything are regarded as being for everyone else not for every individual.	11	Thank you for your comments
15	I think the emphasis should be on customers reducing water usage, not only in times of drought but in their everyday water usage. Educating the public that water is not an endless cheap resource would encourage them to be more careful in its use. By not having to make sweeping	2	We are committed to prioritising demand reduction over taking more water from the environment. This is set out in section 4 of our main drought plan document. Our ongoing water efficiency work helps to support customers to reduce their demand on a daily basis to change behaviours for the long term. Details of our latest campaigns are available on our website.

	reductions in times of drought it would be an easier adjustment for people to make.		https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
16	I think that there should be more information on actions which could seriously affect the environment and wildlife, particularly around the reservoirs and aquifers.	10	We have an extensive programme of environmental monitoring in place to support our drought plan. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out. In addition, we also implemented a Strategic Environmental Assessment and a Habitats Regulations Assessment to support the drought plan. All these documents are available on our website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
17	I think the customer has some responsibility to use water wisely.	2	Thank you for your comments
18	I think if the customers can be made to feel that their actions have a direct impact on preventing stricter bans being implemented and they have some control in the situation, the water company will be able to manage other actions, that don't have a personal impact to customers, but are nevertheless important to protect the environment	2	Thank you for your comments. We are committed to prioritising demand reduction over taking more water from the environment. This is set out in section 4 of our main drought plan document. Our communications strategy will focus on attempting to reduce customer demand without having to implement formal restrictions wherever possible.
19	Possibly putting a ban on watering gardens earlier when an approaching Drought	4	Our communications strategy will focus on attempting to reduce customer demand without having to implement formal restrictions wherever possible. We would ask customers to limit their garden watering in response to a drought situation, and encourage the use of water butts as part of our ongoing water efficiency messaging.

20	Presumably you have a sparate disaster plan if one of your water sources suddenly stops... Pollution etc	12	Yes this is covered under our incident management procedures and is outside the remit of the drought plan.
21	The info graphic page should repeat the numbers of saved water from the text e.g. 18 litres if you dont run the tap when brishing teeth. Als ois this a per brush figure/week?	13	We will review the graphics in the non-technical summary to make sure they are clear.
22	i think a more focus on customer and company measures over environmental solutions. Also encouraging more customers to prepare such as rainwater collection in non drought times.	2	Our communications strategy will focus on attempting to reduce customer demand without having to implement formal restrictions wherever possible. We encourage the use of water butts as part of our ongoing water efficiency messaging.
23	public should be better informed in general and made aware of everyones individual responsibility of managing water supply and demand	2	Our ongoing water efficiency work and education programmes help to support customers to reduce their demand on a daily basis to change behaviours for the long term. Details of our latest campaigns are available on our website. https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
24	I am not clear about how each aspect is weighted when making decisions.	14	We are committed to prioritising demand reduction over taking more water from the environment. This is set out in section 4 of our main drought plan document.
25	I understand the impact on users but the environmental impact is not clear.	10	We have an extensive programme of environmental monitoring in place to support our drought plan. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out. In addition, we also implemented a Strategic Environmental Assessment and a Habitats Regulations Assessment to support the drought plan. All these documents are available on our

			website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
26	The draft plan considers customer and environment very well	9	Thank you for your comments

Question 6a: Do you think the proposed phasing of restrictions in this draft Plan is appropriate?



A total of 180 responses were collected for question six with 158 (88%) respondents stating that they thought the phasing of restrictions were appropriate. Five respondents (3%) said they thought the phasing was not appropriate and seventeen (9%) did not know. The most common themes of the open response comments, other than the phasing being appropriate (6) were that the phasing should be more urgent (5) and stricter (4).

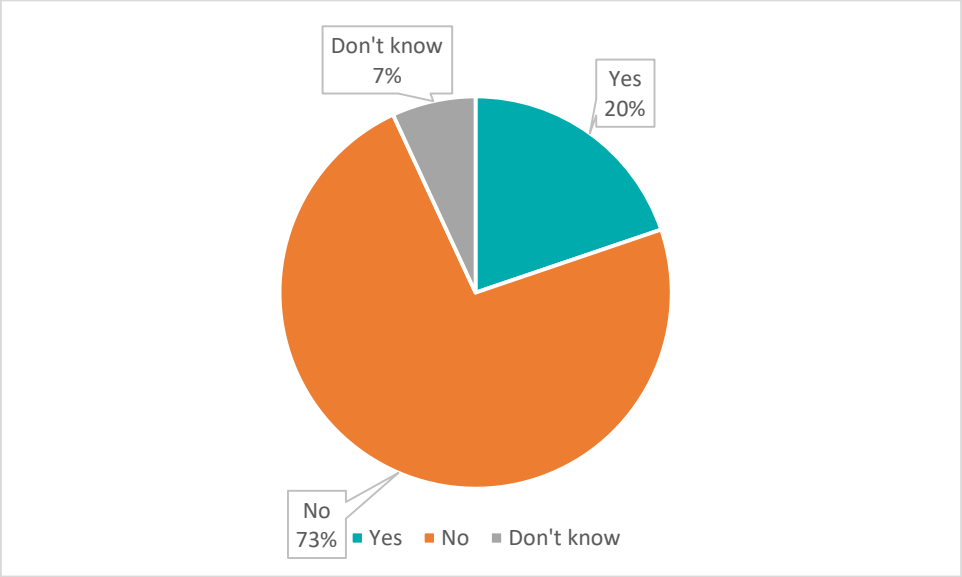
Question 6b: Any additional comments?

Response theme	Count	Percentage	Response code
Phasing is appropriate	6	29%	8
Should be more urgent	5	24%	2
Should be stronger/more radical	4	19%	1
Demand reduction	2	10%	3
Ensure emergency supplies in advance of need	1	5%	4
Leak management	1	5%	5
TUBS should be implemented at a lower level	1	5%	6
Depends on length/severity of drought	1	5%	7

Verbatim comments received to Question 6b			
Response number	Response	Response code	Bristol Water response
1	But don't be afraid of radical actions if warranted	1	Thank you for your comments
2	I believe you should act more precipitously and with a greater degree of urgency.	1/2	Thank you for your comments
3	The phrase "phasing of restrictions" is not totally clear. The outline of four levels should provide a good cornerstone for the strategy but honing of their detail *may* be required. The philosophy should be a partnership between demand reduction and ensuring that reserve supplies are available in advance of need.	3/4	The detail of the process for implementing restrictions is provided in the main drought plan report (section 4 and section 6), a modelled example to test the drought plan is also provided in Appendix B. All this information is available on our website: https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
4	was it the duke of Edinburgh said using a gallon of potable water to flush away a pint of wee represented a huge waste of resources.	3	Noted
5	To obviate the scenario described where frail 92 year old women are pitted against 20 stone men for basic human needs like food and water and sanitary items, I'd bring restrictions in as soon as possible and try and avert drastic shortages	2	Thank you for your comments
6	Leak management has to be highest priority.	5	Additional leakage actions would be implemented as one of the first drought actions. This is over and above our already industry leading leakage management work. Section 4 in the main drought plan report sets out how we would prioritise enhanced leakage actions during

			prolonged dry weather and drought situations in advance of other actions.
7	TUBS could be effected at a lower alarm level in my opinion as the general public impression of water is that it is an infinite commodity which can be wasted without concern!	6	Thank you for your comments
8	Surely this depends of the length and severity of the drought, the phasing proposals seem to be sensible but in practice...?	7	Thank you for your comments
9	As long as decisions can be take quickly and actions communicated quickly.	8	Thank you for your comments
10	Start early so the user is not shocked.	2	Thank you for your comments
11	Yes it gives everyone a chance to adapt to the circumstances.	8	Thank you for your comments
12	Cutting hard and fast is often better than many cuts (bit like HR)	1/2	Thank you for your comments
13	We should all take responsibility for saving water as explained in the plan and not just in a drought situation.	3	Thank you for your comments
14	If the phasing is based on need, risk and circumstances and not on arbitrary dates and political motives.	8	Phasing and prioritising is based on our expert understanding of our water supply system and customer demand and an assessment of drought risk and response.
15	It's done step by step and isn't too abrupt in one go	8	Thank you for your comments
16	I think it should be implemented sooner and stricter.	1/2	Thank you for your comments
17	The phasing of restrictions is very fair	8	Thank you for your comments
18	Difficult measures/decisions need to be taken in such situations	8	Thank you for your comments

Question 7a: Do you support using drought permits to abstract additional water from the environment as an option?



A total of 182 responses were collected for question seven with 118 (65%) respondents stating that they supported using drought permits to abstract additional water. Twenty-three respondents (13%) said they did not support this use of permits and forty-one (23%) did not know. The most common themes of the open response comments were that these permits should only be used in an extreme situation and as a last resort (21) but that the environmental impact should be considered first (11). Eleven respondents stated that they did not know enough in order to make a decision on this.

Question 7b: Any additional comments?

Response theme	Count	Percentage	Response code
If in extreme situations/last resort	21	28%	4
Should consider the environmental impact	11	15%	1
I don't know enough	11	15%	3
Right option	9	12%	7
Against due to environmental impact	6	8%	6
Education on demand reduction	5	7%	8
Better planning	4	5%	10
Acceptable in the short term	2	3%	2

Leak management	2	3%	12
Should better control supplies	1	1%	5
Much tougher enforcement on demand reduction	1	1%	9
Desalination plants should be used	1	1%	11

Verbatim comments received to Question 7b			
Response number	Response	Response code	Bristol Water response
1	Better than dying of thirst but post drought action should be properly considered to help Mother Nature remedy the damage	1	Our environmental assessment work on our supply side options sets out the mitigation measured we would put in place to support the environment. These are set out in Appendix C of our drought plan.
2	It appears that this measure would be used in extremis and therefore is acceptable as a short term solution	2	Thank you for your comments
3	increased understanding of the environmental effects of supply side drought permits should lead to using drought permits to abstract LESS water from the environment. The countryside needs to thrive too. Abstraction should be permitted in times of plenty so that reservoirs can be filled well in advance of drought periods.	1	We have an extensive programme of environmental monitoring in place to support our drought plan and increase our understanding of the environmental effects of our proposals. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out. In addition, we also implemented a Strategic Environmental Assessment and a Habitats Regulations Assessment to support the drought plan. All these documents are available on our website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
4	The environment is more important	1	Thank you for your comments
5	I don't feel I have enough knowledge of the pro's and cons	3	Thank you for your comments
6	I do, providing it is a rare event and widely explained	4	Thank you for your comments
7	better control of supplies	5	Thank you for your comments

8	If necessary to supply drinking water, then it must be done.	4	Thank you for your comments
9	Drastic situations require drastic measures to be taken to lessen detrimental issues.	4	Thank you for your comments
10	As long as these are last measures they are acceptable	4	Thank you for your comments
11	Although I value greatly wildlife, at the end of the day human life is of greater importance	4	Thank you for your comments
12	It is one of the most important issues of the day.	4	Thank you for your comments
13	We interfere with the entire ecosystem when we do this. It should be an absolute last resort - nature is not responding quickly to these changes	4	Thank you for your comments
14	I do not agree with further impacting the environment for temporary gain. It is very short sighted. What actions are taken afterwards to ensure such measures are counteracted?	6	Our environmental assessment work on our supply side options sets out the mitigation measured we would put in place to support the environment. These are set out in Appendix C of our drought plan.
15	I hate seeing the environment being deprioritised.	1	We have an extensive programme of environmental monitoring in place to support our drought plan. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out. In addition, we also implemented a Strategic Environmental Assessment and a Habitats Regulations Assessment to support the drought plan. All these documents are available on our website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/

16	Again hard to say without more in depth knowledge of the subject. Maybe producing the data that informs your decisions if a drought occurs might mitigate customers fears on this	3	We have an extensive programme of environmental monitoring in place to support our drought plan. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out. In addition, we also implemented a Strategic Environmental Assessment and a Habitats Regulations Assessment to support the drought plan. All these documents are available on our website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
17	It seems the right option	7	Thank you for your comments
18	These are appropriate when there is a genuine supply shortage, as that has negative impacts to us humans, and farm animals etc that rely on the water supply, so a balance with the natural environment's needs where we share is required. But education of consumers must remain high priority to reduce demand	4/8	Thank you for your comments
19	Environment under enough stress, we need more people to stop wasting water	6	Thank you for your comments
20	MUCH tougher enforcement on hosepipe use for gardening / car washing/ paddling pool filling / hot tubs/ industrial window cleaning all year around preferable to ever more reliance on ever more dwindling natural resources. Wildlife/ environment are MUCH more important to me than someone's sparkly car or someone's kids having a paddling	9	We are committed to prioritising demand reduction over taking more water from the environment. This is set out in section 4 of our main drought plan document.

	pool for 3No Response mins - which is probably the entire use it will receive after gallons of water are wasted in filling it.		
21	It is important that Public water supply needs to be maintained in some form at all times	7	Thank you for your comments
22	Those seeking permits will have a better overview of where the water can be extracted with least harm and there always has to be the balance between caring for the environment and keeping people hydrated and clean	1	Thank you for your comments
23	So long as it doesn't cause permanent or critical damage	4	Thank you for your comments
24	The environment is a delicate balance and additional artificial changes in availablity (given that it will already be withstanding the impact of drought) may have long term impacts which (in my view) are not justified and are being made just so that the public can maintain a sense of "normality" in their water useage.	6	We have an extensive programme of environmental monitoring in place to support our drought plan and increase our understanding of the environmental effects of our proposals. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out. We are committed to prioritising demand reduction over taking more water from the environment.
25	I would need to know more information on what the environmental effects of supply side drought permits would entail.	1	Our environmental assessment work on our supply side options sets out the mitigation measured we would put in place to support the environment. These are set out in Appendix C of our drought plan.
26	There has to be balance between human use and the environment, this balance can only be calculated at the time of the drought when all the facts can be looked at in full.	1	Thank you for your comments
27	I am concerned about environmental issues but it is difficult to know how to strike a balance.	1	Thank you for your comments

28	don't fully understand the question - "abstract"?	3	'Abstract' is the term we use for taking water out of the environment i.e. from a river or a reservoir. We will update any future question to use clearer terminology.
29	More important to protect the environment than to allow use of hose and sprinklers.	6	We are committed to prioritising demand reduction over taking more water from the environment.
30	These can't be knee jerk actions so appropriate planning and assessment can take place before being enacted.	10	We have an extensive programme of environmental monitoring in place to support our drought plan and increase our understanding of the environmental effects of our proposals. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out.
31	I think this should be a last resort. This has long term effects on nature.	4	We are committed to prioritising demand reduction over taking more water from the environment.
32	We are an island, why can't we make use of the oceons surrounding us , are there any substantial desalination plants in operation, ?	11	There are no desalination plants currently in operation in the Bristol Water area. This resource option would be considered as part of our long term water resource management strategy as set out in our water resource management plan.
33	As a final alternative our need for water trumps environmental objections	4	Thank you for your comments
34	I have insufficient technical experience in this aspect and rely on the "wisdom" of those in both the public and private sectors who are paid handsomely to address these matters.	3	Thank you for your comments
35	If there is a drought that is so severe that additional water needs to be abstracted presumably the source of the further water will also be reduced and abstraction could cause	6	We have an extensive programme of environmental monitoring in place to support our drought plan and increase our understanding of the environmental effects of our proposals. Section 5 of the main drought plan documents

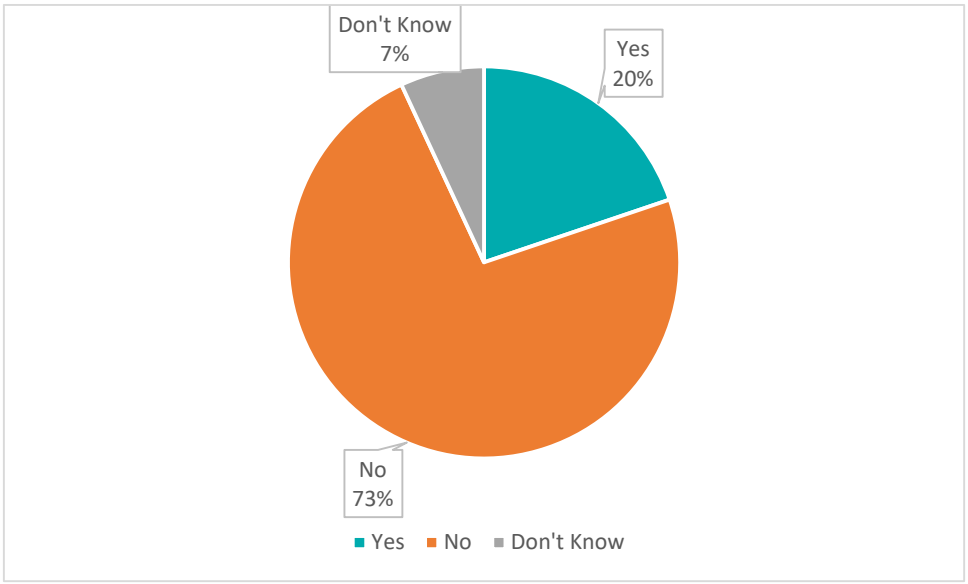
	problems for the environment. Very much against this proposal.		sets out the environmental assessment of our drought plan and the actions we propose to carry out.
36	You need this option	7	Thank you for your comments
37	The public need to understand their role in reducing usage before this happens.	8	Our ongoing water efficiency work and education programmes help to support customers to reduce their demand on a daily basis to change behaviours for the long term. Details of our latest campaigns are available on our website. https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
38	I'd prefer more sustained efforts (in addition to emergency measures) to reduce demand and reduce leaks and wastage.	8/12	We are committed to prioritising demand reduction including increased leakage reduction, over taking more water from the environment. This is set out in section 4 of our main drought plan document.
39	if necessary	4	Thank you for your comments
40	I think I need more information to agree to this	3	Thank you for your comments
41	It depends on the source extracted from. Demand should be lowered first, especially industrial consumers and hose pipe users.	8	We are committed to prioritising demand reduction including increased leakage reduction, over taking more water from the environment. This is set out in section 4 of our main drought plan document.
42	I would like the environmental section to be more inclusive - ie with diagrams for each point, to make it easier to read.	1	We will review the environment section of the non-technical summary to see if this can be made clearer/improved
43	it would give you additional options	4	Thank you for your comments
44	A necessary action	7	Thank you for your comments
45	Its nice you have increased your understanding but slightly worrying that you had not realised that reserves are just that.	10	Thank you for your comments

	Once they are gone they are gone. Political pressure to do silly things will increase in an emergency and without exact guidance people panic?		
46	yes I fully agree	7	Thank you for your comments
47	Water is life. I'm sure that it would be in exceptional circumstances that this would be the case but in order to survive then you would have to take from the environment but I think that harder education for the public is needed as they generally think that water is always there and it won't be. !!	4	Our ongoing water efficiency work and education programmes help to support customers to reduce their demand on a daily basis to change behaviours for the long term. Details of our latest campaigns are available on our website. https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
48	It is proportionate	7	Thank you for your comments
49	It makes sense	7	Thank you for your comments
50	This should be last resort	4	Thank you for your comments
51	If you were more proactive about storage you would not to trade environment for supply side drought permits	10	We aim to refill the Mendip reservoirs each year by the beginning of April in time for the summer drawdown period. This is part of our normal operational strategy for managing our water resources.
52	we cannot simply keep raiding the environment...people will just have to learn to cope.	6	Thank you for your comments
53	I don't know enough about the environmental impacts to comment.	1	Thank you for your comments
54	provided its done with care and is not causing other problems	4	Thank you for your comments
55	In general I think it is reasonable providing all other options have failed	4	Thank you for your comments

56	Safe drinking water is a necessity, and nature has the amazing ability to regenerate at a later date.	7	Thank you for your comments
57	It sounds drastic but if you work with the Environment Agency then hopefully the least damage to the environment will be done.	4	Thank you for your comments
58	Again this must be an apolitical decision but also not done for commercial gain to help a different region. Bristol Water area must come first.	10	Thank you for your comments
59	Seems reasonable	7	Thank you for your comments
60	i dont know enough on this issue to give a solid answer	3	Thank you for your comments
61	I'm not sure really	3	Thank you for your comments
62	I think more can be done on the human end before moving to environmental impacts.	8	We are committed to prioritising demand reduction including increased leakage reduction, over taking more water from the environment. This is set out in section 4 of our main drought plan document.
63	A drought is a water emergency and as such there has to be contingency measures to deal with the situation.	4	Thank you for your comments
64	necessary as last resort but needs better planning for uncertain future climate effects	4	Thank you for your comments
65	Seems like robbing Peter to pay Paul. I am not clear about the impact of any specific abstractions.	3	We have an extensive programme of environmental monitoring in place to support our drought plan and increase our understanding of the environmental effects of our proposals. Section 5 of the main drought plan documents sets out the environmental assessment of our drought plan and the actions we propose to carry out.

66	I worry of the effects on the environment if you don't use the permits.	1	Thank you for your comments
67	Not sure what water sources you would use	3	The proposed drought permit to take additional water from the environment are set out in section 4.3 of the main drought plan document.
68	Not enough expertise in the subject, don't know cons.	3	Thank you for your comments
69	Need to know more to understand the impact.	3	Thank you for your comments
70	As long as this is done with a great deal of care and consideration over the shortest time scale possible it is perfectly acceptable	2/4	Thank you for your comments
71	I don't think you should be permitted to extract ground water until you've demonstrated a year on year reduction in leak losses	12	Our ongoing leakage strategy is set out in our Business Plan (https://www.bristolwater.co.uk/about-us/our-plans/for-all/) and our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/). We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further.

Question 8a: Do you have concerns about the implementation of drought restrictions?



A total of 182 responses were collected for question eight with 134 (74%) respondents stating that they did not have concerns about the implementation of drought restrictions. Thirty-six respondents (20%) said they did have concerns and twelve (7%) did not know. The most common concerns reported were a lack of compliance from the public to restrictions (5), the environmental impact (3), ensuring supply to vulnerable customers (3) and that these restrictions need to be effective, concise and implemented early (3).

Question 8b: If you are concerned, please provide details.

Response theme	Count	Percentage	Response code
Compliance	5	17%	1
Environmental impact	3	10%	7
Supply to vulnerable customers	3	10%	10
Needs to be concise, effective and early	3	10%	13
How to enforce restrictions	2	7%	4
Multi-agency support/action is needed in advance	2	7%	6
At risk of becoming commercialised	2	7%	14
Concern regarding restrictions	2	7%	12
Insufficient explanation of what constitutes non-essential usage	2	7%	11

Should utilise learnings from COVID/Behavioural psychology to communicate with customers	1	3%	2
Based on historical performance	1	3%	3
Not being able to maintain personal hygiene	1	3%	5
Industry/farmers would struggle to operate	1	3%	8
Erratic and more frequent droughts than planned for	1	3%	9

Verbatim comments received to Question 8b			
Response number	Responses	Response code	Bristol Water response
1	Compliance	1	Our demand saving assumptions are based on previous water industry experience of implementing drought restrictions. This will include an allowance for non-compliance.
2	Public reaction to the coronavirus pandemic has demonstrated the importance of having good messaging and behaviour if the public are ask to comply with requests from government or other authorities. Water companies should consut behavioural psychologists to assist with creation and development of a PR plan for use in drought periods.	2	Thank you for your comments, we will consider this interesting opportunity.
3	This is based on your historical performance	3	Our assessments use the historical hydrological information, under today's conditions to try to assess what would happen if the drought re-occurred today.
4	Not sure how this is enforced.	4	Legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act 1991.
5	Worried about not being able to stay clean or wash enough	5	Maintaining water supply for basic hygiene requirements is a top priority.
6	Timely contact with stakeholder groups is needed to ensure support and any multi-agency response is actioned.	6	Our stakeholder engagement proposals are set out in Section 6 of our main drought plan document.

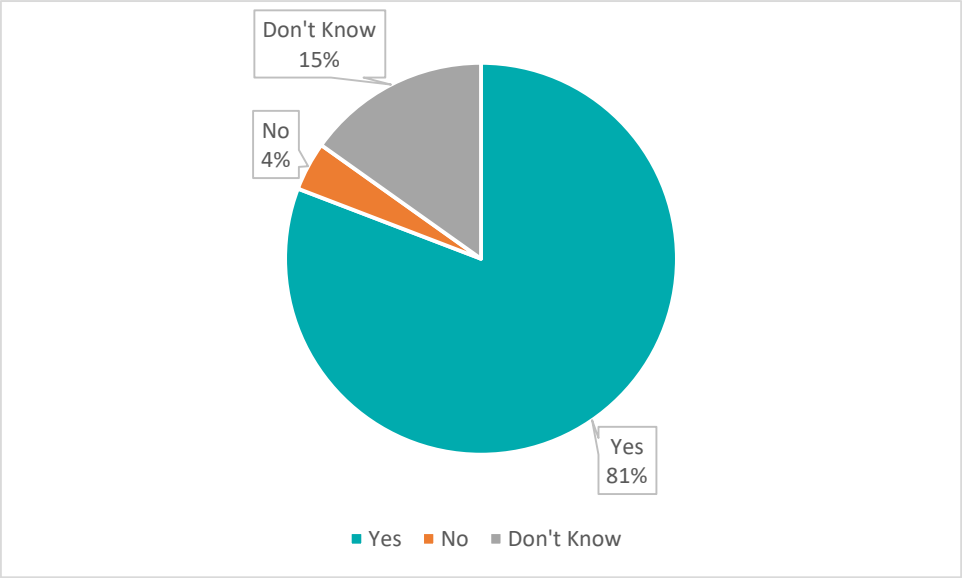
7	Members of the public care about rights - not responsibilities. Some will not respect restrictions.	1	Your comments are noted
8	I have concerns but it is more about the impact on the environment than on peoples daily lives. I remember the drought of 1976 and although water restriction was unpleasant we all survived, even if we were smellier, drove dirty cars and had brown lawns. We even had water bowsers at one point and that wasn't the end of the world. People should prioritise the environment over personal usage in times of drought.	7	Thank you for your comments
9	My main concern would be impact on the environment, but I think that people are now more environmentally aware so decisions would be made taking this into account.	7	Thank you for your comments
10	How are they enforced?	4	Legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act 1991.
11	Industry farmers, would have diffiiculty operating with too many restrictions,	8	Non-essential use ban restrictions effect industry. These will be implemented after the initial temporary use ban customer restrictions.
12	For those of us that will perhaps grudgingly comply, there will be armies of people who will NOT comply. There needs to be a robust compliance inspectorate, not necessarily aimed at individual householders, but especially at the big, wasteful users of water.	1	Legal enforcement for TUBS and drought orders does exist under the Water Industry Act 1991 and the Water Resource Act 1991). Offender under drought order restrictions are liable to a fine not exceeding the statutory maximum (which is an amount of up to £5000).
13	More extreme weather and unpredictable weather seems to be increasing in the UK so my concern is erratic and more frequent	9	Our long term water resource planning process includes detailed assessments of the effects of climate change on our resources. This information will inform our long term

	droughts may occur then are planned for here on past predictions.		water resource strategy and understanding of our system resilience to climate change. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/).
14	Damage to the natural environment	7	Our environmental assessment work on our supply side options sets out the mitigation measured we would put in place to support the environment. These are set out in Appendix C of our drought plan.
15	I never think the great British public are totally good in implementing restrictions. Perhaps more diagrams - ie how much does a bath use? How much does an average garden take to water? Set out in terms we can understand, not in litres only, but in “one swimming pool worth” etc.	1	Thank you for your comments, we will take this into account when we review the non-technical summary.
16	We are a disabled household, as we know from experience, when you are disabled you are "last in the queue" and easily forgotten.	10	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services
17	People who are careful all the time will be penalised to a greater extent than the profligate The poor will subsidize the rich	1	Thank you for your comments
18	Concerns would be for the elderly and infirm who may struggle to understand or be scared of not getting the water they need.	10	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident.

			Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services
19	Insufficient explanation of what constitutes non-essential usage	11	We will update the drought plan appendix to include information on the non-essential use categories as set out in the Water UK code of practice (2013) https://www.water.org.uk/guidance/managing-through-drought-code-of-practice-and-guidance-for-water-companies-on-water-use-restrictions-2013/
20	Anyone would be concerned about water restrictions	12	Thank you for your comments
21	Decision making must be concise and effective when required Need specific quantitative measures to decide when the drought plan needs initiating and react quickly	13	Section 3.1 of our drought plan sets out the drought indicators we would use to monitor the drought situation. This includes weather forecasts and rainfall/river flow data and information. We will update the plan to make it clearer to customers how this information would be used in identifying the onset of drought.
22	It has to be done, if done well and early it should minimise impact, leaving late causes bigger issues	13	Thank you for your comments
23	It sounds rather frightening and fingers it's not necessary.	12	Thank you for your comments
24	A dwindling resource becomes a premium and ripe for singular commercial and political motives, rather than serving its local customers.	14	Thank you for your comments
25	Need to make sure they're appropriate and fair	13	Thank you for your comments

26	water might become a more scares and thus more valuable resource. needs clear holistic approach	14	Our long term water resource planning process includes detailed assessments of the effects of climate change on our resources. This information will inform our long term water resource strategy and understanding of our system resilience to climate change. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/).
27	What provision for people who's health means they need high volumes of water usage at all times.	10	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services
28	impact on homeowners -	11	Maintaining water supply for basic hygiene requirements is a top priority. We have an extensive communications plan with household customer set out in section 6 of our main drought plan report.
29	It will have a significant impact on how the Local Authority operates. Support will be needed to be provided to residents.	6	We will engage directly with Local Authorities as part of the drought management process. This is set out in Section 6 of the main drought plan document.

Question 9a: Do you think the proposed communications campaign will keep customers informed of the resource position, and helping them to reduce water use in response to a drought situation?



A total of 181 responses were collected for question nine with 146 (81%) respondents stating that they thought the proposed communications campaign would keep customers informed. Seven respondents (4%) said they thought they would not keep customer informed and twenty-eight (15%) did not know. The most common themes of the open response comments were that the respondents could not find the proposed communications campaign in the non-technical summary (9) and that the public will not comply with restrictions (6).

Question 9b: Any additional comments?

Response theme	Count	Percentage	Response code
Could not find table 11	9		9
Public compliance	6		8
Good plan	5		11
Awareness of digitally excluded/too much reliance on social media	3		6
Make penalties for misuse clear	2		1
Focus on water as a valuable resource/demand reduction	2		10

More frequent communication via social media	1	13
Education at schools	1	2
Separate water for drinking/agricultural use	1	3
Mandatory water meters	1	4
Use of leakstop	1	5
Does not convey urgency	1	7
Use 'real-life' examples to convey messages	1	12
More transparency in terms of legal requirements and powers	1	14
Local authority involvement at an early stage	1	15

Verbatim comments received to Question 9b

Response number	Response	Response code	Bristol Water response
1	Make clear the penalties for misuse	1	Legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act 1991. Anyone found guilty of breaching a TUB can be fined up to Level 3 (an amount of £1000 under the standard scale of fines for summary offences in the Criminal Justice Act 1982 section 32). Offender under drought order restrictions are liable to a fine not exceeding the statutory maximum (which is an amount of up to £5000). Conviction on indictment renders an offender liable to a fine with no specified upper limit.
2	Maybe info sessions at schools would be helpful	2	Our ongoing water efficiency work and education programmes help to support customers to reduce their demand on a daily basis to change behaviours for the long term. Details of our latest campaigns are available on our website. https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
3	Could you separate water out so only water for consumption is treated to drinking water quality and that for agricultural etc use is treated to a less high level so saving environmental impact?	3	This option is something we would consider as part of our long term water resource strategy within our water resource management plan due to the complexity of implementation. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/).

4	Installation of water meters for everyone will alert people to the cost of water and encourage users to conserve water. An annual statement on the use of water compared to the previous year and, perhaps, a three year average might discourage people from being profligate in their usage.	4	Our current bills for metered customers provide a year-on-year comparison of water consumption. Our water metering strategy is set out in our Business Plan (https://www.bristolwater.co.uk/about-us/our-plans/for-all/) and our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/. In July 2021 the Environment Agency issued a report setting out the determination of areas of water stress. This is used to inform whether water companies should be able to consider the option of charging by metered volume for all customers. Bristol Water was not identified as a company in a seriously water stressed area for the purposes of metering. (https://www.gov.uk/government/publications/water-stressed-areas-2021-classification
5	The public generally do not need "help" to reduce water use - they need commitment. "Help" could be available by way of free (or only £1No Response rebated by means test) call-out visits for plumbers to fix leaks, dripping taps etc The key message re reporting links is needed at DMZ-2 and waiting until DMZ-3 to issue it is a failure to use that resource soon enough. Again, this should be put before behavioural psychologists for advice as to whether the messages would be efficacious.	5	Thank you for your comments, we will consider this interesting opportunity.

6	Please remember those that can't use the internet	6	Our communications strategy includes media such as radio, television and newspapers. We are required under the regulations to advertise our intention to implement a temporary use ban and non-essential use bans in the local papers.
7	It's a start but doesn't seem to convey any urgency. Okay to use as a general info pamphlet.	7	The intention of the non-technical summary was to provide a high level overview for customers to quickly and easily digest. The full details of the drought planning process are set out in the main document published on our web site: https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
8	It is human nature that as long as they can turn on the tap and have water ensuring that there are adequate supplies is someone else's worry.	8	Thank you for your comment
9	There is not a table 11 in the drought plan I am reading	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
10	Responding to non-technical summary which doesn't include that table	9	See comment above.
11	Water needs to be communicated as a very precious resource.	10	Thank you for your comment
12	strengthen the tone of that advice	10	Thank you for your comment
13	Key messages helped understand each phase. Good to understand how it will be targeted.	11	Thank you for your comment

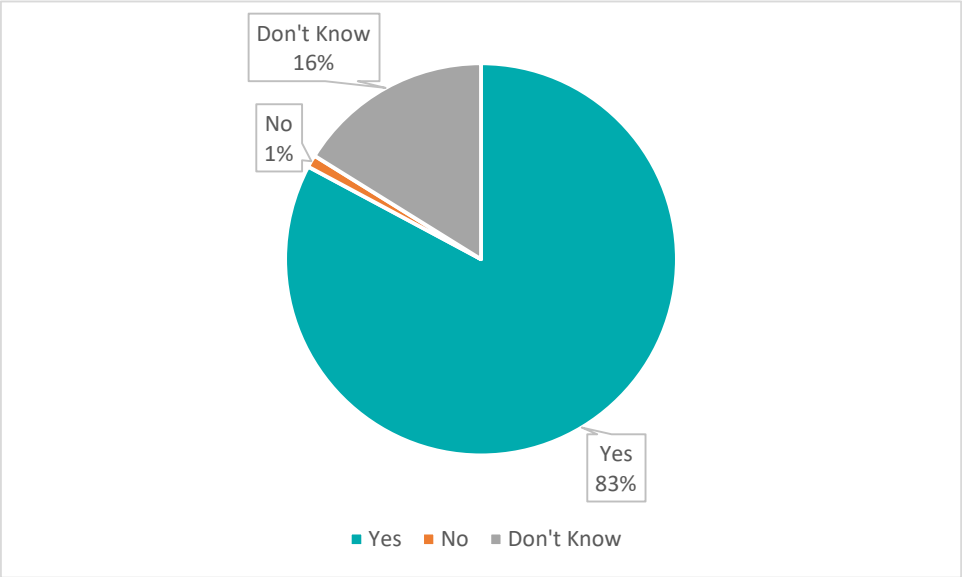
14	Couldn't find table 11. Your tables weren't labelled with numbers.	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
15	Its not clear which graphic in the document is table 11.	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
16	It needs to be accepted that some people will never take notice of any publicised notifications, and will always claim that there were not told!	8	By the time we implement demand restrictions, we will have a very high profile media campaign in place, utilising all forms of communication.
17	I am glad to see that Bristol Water have contingency plans in place. Due to climate change, droughts may become more common in future.	11	Thank you for your comment
18	Far too much reliance on social media for disseminating information.	6	Our communications strategy includes media such as radio, television and newspapers and direct letters/leaflets to customer. We are required under the regulations to advertise our intention to implement a temporary use ban and non-essential use bans in the local papers
19	It will always be better if customers are made to feel that any changes they make is their decision rather being told that they must do something. If you can do that, we all win.	8	Thank you for your comment
21	The key messages column in the table doesn't seem to mention hosepipe / sprinkler / car washing bans. I guess	12	Yes, temporary use bans (also known as TUBs) are bans on using hosepipes for specified activities. Section 4.2.3 of

	this is what you mean by the TUBs but it would be worth "making it real" to consumers		the main drought plan document lists the activities that would be restricted under a TUB.
22	More frequent communication via social media	13	Social media is one of the main communication channels that we use now, and this will be maintained and enhanced during a drought situation.
23	Found that really helpful	11	Thank you for your comment
24	It will certainly make those who are willing to make changes reconsider their usage. You will always get selfish people who refuse to take note.	8	Thank you for your comment
25	Covers a wide range of situations and options with a clear management plan for exit	11	Thank you for your comment
26	Harder education before we get into that situation would be good. Maybe a penalty if a certain water useage is exceeded or a permission or licence for those that need extra water.	1	Thank you for your comment, our ongoing water efficiency work and education programmes help to support customers to reduce their demand on a daily basis to change behaviours for the long term. Details of our latest campaigns are available on our website. https://www.bristolwater.co.uk/en-gb/join-our-water-saving-community
27	As you don't label your tables we don't know which is table 11. The drought action table, page 9, seems woefully optimistic given the worsening climate emergency we face.	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
29	but whether they take any notice is anyone's guess	8	Thank you for your comment
30	It will for those who bother to read it!	8	Thank you for your comment

31	I can't find table 11 in the plan.	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
32	The plan needs more transparency especially in terms of legal requirements and powers.	14	Legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act 1991. Anyone found guilty of breaching a TUB can be fined up to Level 3 (an amount of £1000 under the standard scale of fines for summary offences in the Criminal Justice Act 1982 section 32). Offender under drought order restrictions are liable to a fine not exceeding the statutory maximum (which is an amount of up to £5000). Conviction on indictment renders an offender liable to a fine with no specified upper limit. We will consider whether it is appropriate to include this level of detail in the operational drought plan.
33	I can't see table 11 in the non-technical pdf...	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
34	Did not find table 11. Assume social media will be used. Hopefully posted written material will be avoided.	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/

			Social media is one of the main communication channels that we use now, and this will be maintained and enhanced during a drought situation
35	Some people don't use social media, TV or radio, would there be a leaflet drop as well?	6	Our communications strategy includes media such as radio, television and newspapers and direct letters/leaflets to customer. We are required under the regulations to advertise our intention to implement a temporary use ban and non-essential use bans in the local papers
36	I could not find a table for this. there is a paragraph that says communication over several channels and a ramping up as conditions worsen.	9	Table 11 is on page 74 of the main drought plan document published on the website. https://www.bristolwater.co.uk/about-us/our-plans/planning-for-drought/
37	The communications in the draft plan are a good source of information but, should be updated as soon as possible if that action is needed	11	Thank you for your comment. The communications during a drought will constantly reviewed and updated to reflect the ongoing drought situation.
38	Local authority involvement from an early stage would be beneficial and messages can be echoed through other channels to further the communication reach.	15	We will engage directly with Local Authorities as part of the drought management process. This is set out in Section 6 of the main drought plan document.

Question 10a: Section 4.4 identifies options that may be available if an extreme drought occurs, that prevent the need for Emergency Drought Orders (such as standpipes). Are these measures appropriate in an extreme drought situation?



A total of 181 responses were collected for question ten with 150 (83%) respondents thought these measures were appropriate, with two (1%) stating they thought these measures were not appropriate and twenty-nine (16%) did not know. The most common theme of the open response comments was that there needs to be a plan for essential supplies to vulnerable customers, hospitals and essential industries such as agriculture (8).

Question 10b: If you are concerned, please provide details.

Response theme	Count	Percentage	Response code
Need plans for essential supplies to vulnerable/hospitals/farmers	8	36%	5
Agree	3	14%	3
As a last resort	2	9%	11
Triggers are too late compared to implementation	1	5%	1
Public will support measures in an emergency	1	5%	2
Post-event analysis will identify this	1	5%	4

Availability of bottled water	1	5%	9
Emergency Drought Orders should never be an option	1	5%	10
Should not be used to support another region	1	5%	12
Could not find in non-technical summary	1	5%	6
Consideration of similar incidents	1	5%	7
Did not understand	1	5%	8

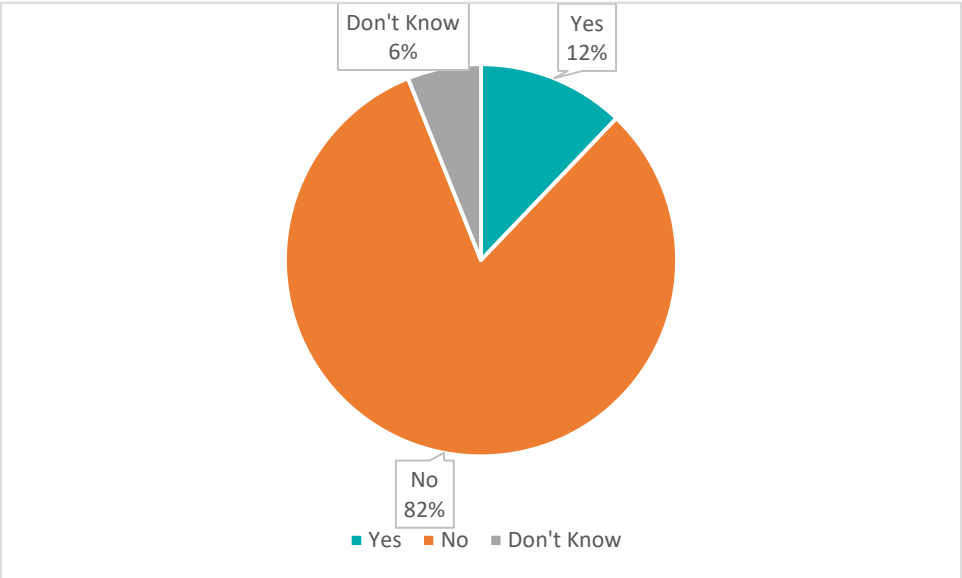
Verbatim comments received to Question 10b			
Response number	Response	Response code	Bristol Water response
1	The triggers for their consideration are TOO LATE given the timescales for their implementation. They should be considered when probability is of level-3 (rather than level-4) being six weeks away. Plans for implementation should be updgrade/reviewed but any decision to proceed must be pragmatic in the circumstances of the time.	1	We have reviewed our extreme drought actions, and will remove three that take a significant time to implement due to their engineering complexity (de-salination, effluent re-use and abstraction from Bristol floating harbour).
2	By definition it is an emergency. The last 18 months has shown how the public will support real unforeseen restrictions	2	Thank you for your comment
3	appear to be	3	Thank you for your comment
4	Only implementation and post event analysis will establish whether the measures are/have been appropriate. It is wise to prepare and have options available and the testing scenarios will give a good idea of how appropriate these options might be.	4	Thank you for your comment. We have modelled drought scenarios to test our plan and these are presented in Appendix B of the drought plan.
5	They present problems to the older generation who are not able to carry and handle containers of water. I did not note arrangements to ensure essential supplies to hospitals etc.	5	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services.
6	Responding to non-technical summary which doesn't include that section.	6	Thank you for your comment.

7	That of ensuring vulnerable people can get the water they need. What welfare support is needed? Will BW be able to deliver bottled supplies if needed?	5	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services. Yes delivery of bottled water would be one of the options to ensure vulnerable customers can still access drinking water.
8	Ensuring you have an up to date list of vulnerable individuals/households/communities (e.g. care homes) and policies for ways to support these groups (either by Bristol Water directly or other agencies you work with) would be a priority action prior to drought conditions.	5	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services. We will include additional detail on the type of support we will offer to priority customers in section 6.6 of our drought plan.
9	Plans would need to be put into place to ensure access to water supplies for vulnerable people, older people and young families.	5	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services. We will include additional detail on the type of support we will offer to priority customers in section 6.6 of our drought plan.
10	Does a shortage of clean drinking water during flooding count as drought?	7	No, this would be covered under our incident response.

11	You say the use of standpipes as an option is low. But Im not sure what that means. We have been having extreme weather although in this country that means more rain.	8	Under our current levels of service the risk of needing to implement Emergency drought orders (standpipes) once every 200 years.
12	I would not like to be a farmer, having to water fields / animals from a standpipe, !	5	As part of our work with the West Country Water resource group we have a project running to better understand the likely demand from other sectors during a drought situation. This includes farmers. It is anticipated that this work will be complete in Autumn 2021. We will update the final drought plan to include the outputs from this work and set out the actions we will take to support other sectors during a drought situation.
13	In the past I have seen bottled water being made available. I haven't seen any mention of this in the non-technical summary	9	The option to provide bottled water may be used at a local level and to support vulnerable customers. It is unlikely this would be available at a large scale. The use of standpipes and/or water bowsers is used to provide water to a large number of customers.
14	Emergency Drought Orders should NEVER be an option in this day and age. I remember them for a week back in 1959, you should have come a long way since then and planned how to avoid this drastic option.	10	Under our current levels of service the risk of needing to implement Emergency drought orders (standpipes) once every 200 years. As we develop our next water resource management plan we are looking to work to increase this resilient to 1 in 500 years.
15	100 % agreeable.	3	Thank you for your comment
16	Again providing it really is a last resort situation	11	Thank you for your comment
17	If this region has standpipes installed even though there was enough water without needing them, but were installed to	12	We would always prioritise the security of supply for Bristol Water customers.

	restrict supply here only because the company is supplying another region, I would be highly concerned.		
18	I am in a top flat so use of a standpipe would be difficult for my wife and myself as we are both pensioners.	5	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services.
19	Provided everything else has been tried	11	Thank you for your comment
20	As long as their are provisions for the elderly and disabled.	5	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services.
21	It does appear so on face value	3	Thank you for your comment
22	They may not be appropriate in all locations and the vulnerability of nearby residents should be assessed before undertaking this action.	5	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services

Question 11a: Do you have any specific concerns about any of the drought management options we have proposed?



A total of 181 responses were collected for question eleven with 148 (82%) respondents having no concerns about any of the drought management options. Twenty-two respondents (12%) said they did have concerns and eleven (6%) did not know. The most common theme of the open response comments was that there needs to be a consideration of vulnerable customers in drought situations (5).

Question 11b: If yes, please explain your concerns here:

Response theme	Count	Percentage	Response code
Support for vulnerable customers	5	33%	7
Effect on industry	2	13%	2
More to be done to improve water retention/usage	2	13%	4
Plan needs to be easier to read/more diagramatic	2	13%	6
Effect of climate change	1	7%	3
Did not read	1	7%	1
Plans cover everything	1	7%	5
More effort to prepare	1	7%	8

Verbatim comments received to Question 11b			
Response number	Response	Response code	Bristol Water response
1	I have not read the detail of the drought management options that are proposed.	1	Thank you for your comment
2	The effect on industry. Should there be provision to supply water of a lower standard where the use of potable water is not essential.	2	This option is something we would consider as part of our long term water resource strategy within our water resource management plan due to the complexity of implementation. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/).
3	It needs to address higher risk of drought as a result of climate change.	3	Our long term water resource planning process includes detailed assessments of the effects of climate change on our resources. This information will inform our long term water resource strategy and understanding of our system resilience to climate change. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/).
4	These address your actions, but more needs to be done with Defra / gov't to allow landowners to carry out soil improvement to provide better water retention / less run-off in the catchment areas, which in turn will abad rough conditions	4	Thank you for your comment, this is outside of the remit of our drought plan.

5	Please seriously consider the development of additional sources of water storage, e.g. underground tanks or additional reservoirs.	4	This is covered by our water resource management plan which sets out the long term strategy for maintaining a secure water supply. We last published our water resource management plan in 2019 and this is available on our website. https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
6	I feel that the plans have been carefully considered to try and cover any eventuality.	5	Thank you for your comment
7	Just needs to be less wordy and more diagramatic for us all to. Absorb. Remember that our attention span is calculated extremely low. And a lot of people don't even read now! They are so used to looking at videos!	6	Thank you for your comment – we will consider the use of video/film clips in our future public consultations.
8	Being a disabled household we always have concerns, the lack of any kind of support during Covid has shown us just how vulnerable we are and how disinterested major providers are. If you are disabled you dont count!	7	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services
9	Really worried that as an elderly person living alone and not driving I will end up unable to get to water without causing a lot of inconvenience and that the price of food will increase or food become unavailable	7	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services

10	There is far too much information in the text for customers to be able to cope with in a useful way	6	Thank you for your comment
11	There is not enough effort to seriously prepare for more frequent and more severe droughts or tie it into intelligent flood management.	8	Our long term water resource planning process includes detailed assessments of the effects of climate change on our resources. This information will inform our long term water resource strategy and understanding of our system resilience to climate change. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
12	timings and plans for commercial and industrial customers appear to be omitted	2	The implementation of non-essential use bans will affect the commercial and industrial customers. Details of the implementation of these restrictions are provided in section 4.2.4 of the main drought plan report.
13	We have a huge number of elderly people on our village, stand pipes would cause them severe problems. Not everyone who would struggle is on the priority scheme. Or registered disabled.	7	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services
14	As I have psoriasis and require regular showers I am concerned if I have to reduce the frequency of the showers when a drought occurs.	7	We advise to use what you need but don't waste it. If you need to shower due to a medical condition then this will not be restricted.
15	Needs of the elderly who might not be able to access or able to use stand pies	7	Customer who are vulnerable in any way can register on our Priority Services Register to ensure you get the

	required support in any water supply related incident. Details of the scheme and how to register are available on our web site: https://www.bristolwater.co.uk/home/account-and-services/your-account/priority-services

Question 12: Do you have any other comments you would like to make?

A total of thirty-four responses were collected for question twelve. Seven respondents stated that they thought the draft Drought Plan was a good, well thought through and presented plan. Four responses related to the need for more public awareness of the value of water and the environmental impact of water usage.

Response theme	Count	Percentage	Response code
Good plan	7		2
More public awareness of the value of water/environmental impact of water use	4		5
Shorter/more user friendly plan needed	3		9
Rely on experts	2		1
More use of hosepipe bans	2		11
More storage of water during wet periods	2		6
More proactive leak management	2		7
More aware of climate change impacts	2		8
Proactive water saving advice needed	2		10
No mention of recyclable water	1		3
Long range solar based forecasts	1		4
Other	1		12
Need to balance customers and the environment	1		13

Verbatim comments received to Question 12b			
Response number	Response	Response code	Bristol Water response
1	I'm a layman without specific knowledge. I rely on your experience and expertise as well as your diligence in securing supplies eg by reducing waste	1	Thank you for your comment
2	Overall this is a well thought out plan and inspires a level of confidence that, should the worst occur, you would be well able to manage the situation.	2	Thank you for your comment
3	No mention of the amount of water that can be/ is returned into the system after suitable treatment	3	Effluent re-use has been considered as one of the extreme drought options. It is also considered as part of our longer term water resource strategy within our water resource management plan. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
6	Many of the questions seem to be asking for my support that your judgements are correct, only water board staff make these decisions, the responsibility is still yours to do your best, there is often no correct answer until after an event.	1	Thank you for your comment
7	Get very long range solar based forecasts for when the drought episodes will be occurring. There's no rush, UK summers are fairly poor until 2No Response25. This summer will see some hot bursts but plenty of rain. Standard climate models cannot handle any of this, as the major or longer lasting heat events are all discretely solar driven by faster solar wind conditions driving positive North Atlantic Oscillation conditions. The brief hot Saharan plumes in summer 2No Response19 were completely dependent on negative NAO conditions typical of a solar minimum, there were several very similar events in the 188No Response-189No Response's.	4	Thank you for your comment

	Cheers.		
8	Hose pipe bans seem a good way of concentrating the mind of users. I would be happy to have more of them when necessary. I find it hard to imagine many instances when a normal householder could deem it essential to water the lawn.	11	Thank you for your comment
9	With the amount of water available during the wet seasons it seems unreal that within a short period there should be shortages. There is a need for everyone to store more, water companies and individuals.	6	Thank you for your comment
10	I think leak management should be the first priority. We had a leak but had to wait 2 months for this to be fixed as it was not in our responsibility location. Was rather suprised that so much cleaned and treated water was allowed to go back into the ground because no urgency was seen in this matter. There cannot be these conflicting signals- asking people to save water but then not sorting leaks asap.	7	We are sorry to hear about your experience with leakage. Leakage is a first priority. At a company level we deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, this continues to see us reduce leakage levels further.
11	I think now that the Frozen North has recorded unprecedented temperatures - 122 degrees I believe - I think you need to spend more time, money and expertise on strategies for dealing with what I'm sure will be far greater extremes in our climate. You are well placed to support behaviour change now which could stem the rising temperatures. I don't think it's going to be too long before we are talking about deep adaptation - I have said before about renewable energy sources, you should look more at that - and as a monopoly supplier you need to find opportunities to be much more proactive on environmental issues.	8	Our long term strategy in terms of water resources is set out in our water resource management plan. This includes detailed climate change assessment and how we can adapt to manage our water resources and demand under these future scenarios. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/ In addition we have recently published our Routemap to Net Zero Carbon by 2030, setting out our plans to decarbonise our operations. This is available by clicking here.
12	I think that the public needs to be aware of their actions in these times of drought as in many cases they flout the rules	5	Legal enforcement for TUBS and drought orders exists under the Water Industry Act 1991 and the Water Resource Act

	knowing that nothing will be done about it, after all these things are put in place to help us get over any long term lack of rainfall.		1991. We will consider whether it is appropriate to include details of the legal enforcement in the operational drought plan. We would aim to work with customers via a high profile communications campaign to increase awareness of the drought position and the actions that customers can take.
13	With the climate crisis worsening are 1 in 200 year projections valid.	8	Our drought plan sets out what we would do if a drought did occur and takes this process through to include what we would do in a very severe drought situation. In the longer term we are being asked to manage our resources such that we are resilient to a 1 in 500 year drought situation. This will be included in our water resource management plan update for 2024.
14	I think it is a reasonable plan. some of the steps to save water though could be put out earlier that when the weather starts to get dry.	5	Thank you for your comment
15	It's good to see you have a plan and are prepared	2	Thank you for your comment
16	If this plan was to go out to customers then I feel there should be a summary or summarise in bullet points for some who may not want to or are unable to read / understand it thoroughly	9	Thank you for your comment
17	I'm always concerned that I have to waste water while waiting for my boiler to heat up the water so that it is hot enough to wash up. However, I've found a solution. I fill up an empty bottle with the cold water coming from the hot tap then I use it to water my garden!	10	Thank you for your comment
18	Yes: In the course of compiling/reflecting on my response, it seems to me that I have no way of comparing my household water usage with other households. Thus, although I can see clearly from my bill how much water I use each day. I have no idea whether that is above, below or about the same as other domestic users. Although households do differ in size etc., it would not be unreasonable to determine the average usage per household (or per person) as a crude initial barometer and have that presented in within my bill? Moreover, when it coms to	10	On your water bill, section 6 'Your water use' sets out how you compare with the national average in terms of the average daily use for the number of people in your household. This gives you an indication of whether you are consuming above or below the current national average. We have not experienced a serious drought for a long time and not needed to implement a hosepipe ban restriction (TUBS) since 1990. We have therefore not had the opportunity to capture data on how much water is used in response to an

	droughts, you should have an exact measure of how much water each "client"(business or household etc) is using. It should not be beyond the wit of the planners to factor this measure in to the compliance side of the equation in drought situations. Finally, As things WILL get worse in all respects over the coming years, perhaps migration to automatic meter measurement (and on-medium-off control?) for billing and other purposes, would be beneficial?		extended drought situation. We have been able to use the experience of the recent heatwave in 2018 to inform our demand estimates. Our water metering strategy is set out in our Business Plan (https://www.bristolwater.co.uk/about-us/our-plans/for-all/) and our water resource management plan (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/. In July 2021 the Environment Agency issued a report setting out the determination of areas of water stress. This is used to inform whether water companies should be able to consider the option of charging by metered volume for all customers. Bristol Water was not identified as a company in a seriously water stressed area for the purposes of metering. (https://www.gov.uk/government/publications/water-stressed-areas-2021-classification
19	I think bringing in Hosepipe bans for gardens and vehicle washing to reduce water use could be used earlier in hope ofnot needing more strict controls later	11	Thank you for your comment
20	No, just make it more user friendly as above,. Thank you.	9	Thank you for your comment
21	Good explanation and useful	2	Thank you for your comment
22	We see water being used excessively throughout the area, such as drive through car washers.....so much wasted with so much chemicals to be separated by water treatment. So maybe record all vehicle registrations and limit 1 wash per month.	5	A non-essential use drought order will restrict the use of mechanical vehicle washers during a drought situation.
24	Please rework this drought plan.	9	We will be reviewing and updating the draft drought plan in response to the comments received from the public consultation process as set out in this statement of response. Our revised draft drought plan including all the changes proposed as a result of the public consultation will be available on our website from 30th September 2021.

25	I think you are bending over backwards to inform the general public and it is then up to them. Nobody can do more than that.	5	Thank you for your comment
27	It seems very thorough and the planned communication should work well	2	Thank you for your comment
28	Hope that the water company has done its bit as well in terms of sorting out burst/leaking pipes	7	We deliver industry leading levels of leakage reduction through targeted investment in our network, improved monitoring and control activities and our pro-active approach to leakage management and leakage reduction activities, continues to see us reduce leakage levels further.
29	Thanks for keeping people informed	2	Thank you for your comment
30	Can water be used from the Bristol Channel?	12	Due to the complexity of the desalination process, it is unlikely that this would be able to be implemented as a response to a drought situation. This resource option is therefore considered as part of our long term water resource management strategy as set out in our water resource management plan. Our current water resource management plan is available on our website: (https://www.bristolwater.co.uk/about-us/our-plans/water-resources/
31	In a drought situation fairness to both customers and the environment is of paramount importance	13	Thank you for your comment
32	I would like to see additional drains into the supply sytem from roads. The sort they have abroad that look like grating at the edge of roads and gathers rainfall and moves it to reservoirs for additional supply.	6	Thank you for your comment. In the Bristol Water area, Wessex Water are responsible for the sewerage system and treatment of effluent. Bristol Water are a water only company.
33	very reassuring possible drought scenarios have been addressed and plans drawn up	2	Thank you for your comment
34	As priority customers, we have confidence that Bristol Water will do their best for us.	2	Thank you for your comment