

## Environment Agency

### An update of the water company drought plan guideline

#### Response to consultation questions

1. Please tell us if you are responding as an individual or on behalf of an organisation or group. Please select one answer only from the following options:

Responding as an individual

Responding on behalf of an organisation or group

Other

If you're responding on behalf of an organisation or group, please tell us who you are responding on behalf of.

This response is made on behalf of the CIWEM Water Resources specialist panel.

CIWEM is the leading independent Chartered professional body for water and environmental professionals, promoting excellence within the sector. The Institution provides independent commentary on a wide range of issues related to water and environmental management, environmental resilience and sustainable development.

CIWEM welcomes the opportunity to respond to the Environment Agency on its consultation on an update of the water company drought plan guideline. This response has been compiled by our Water Resources specialist panel co-chair, Mark Smith, with assistance from Ian Brown and the wider panel.

2. Keeping up to date

The Environment Agency would like to keep you informed about the water company drought plan guideline consultation. If you would like to receive email updates about this consultation, please give us your email address below to provide consent.

We will keep your details until the consultation response document has been published or until you withdraw your consent.

You can withdraw your consent to receive these emails at any time by contacting us at [water-company-plan@environment-agency.gov.uk](mailto:water-company-plan@environment-agency.gov.uk).

We will not share your details with any other third party without your explicit consent unless required to by law.

The Environment Agency is the data controller for the personal data you provide.

For further information on how we deal with your personal data please see our Personal Information Charter on GOV.UK (search 'Environment Agency personal information charter') or contact our Data Protection team.

Address: Data Protection team, Environment Agency, Horizon House, Deanery Road, Bristol, BS1 5AH

Email: [dataprotection@environment-agency.gov.uk](mailto:dataprotection@environment-agency.gov.uk)

Please tell us if you would like to (tick all that apply)

Receive an email acknowledging your response

Receive an email to let you know that the summary of responses has been published

If you have ticked any of the boxes above, please provide us with your email address:

Email: [sarah.anderton@ciwem.org](mailto:sarah.anderton@ciwem.org)

3. Can we publish your response? We will not publish any personal information or parts of your response that will reveal your identity.

Yes.

4. Please tell us how you found out about this consultation?

From the Environment Agency.

5. Do you think the technical changes to this drought plan guideline will help water companies take the right actions to manage their operations in dry weather in the future?

Please tick relevant box

Some

No

I don't know

Please explain your answer. If you ticked no, what changes do you think need to be made to allow a company to achieve this?

The guidance overall appears to reflect a useful, but pragmatic step towards inclusion of more sophisticated methods where these exist from the WRMP19 planning round, in particular to assist in understanding vulnerability to drought and the planning of responses

to severe and extreme drought. However, we would like to raise some comments for consideration in the final guideline:

### **Coverage**

We agree the drought plan needs to be a shorter and easier to follow, and welcome this suggestion, albeit we believe the guidance is still likely to lead to a conflict between detailed evidence needs and ease of communication. This warrants a recommended approach to be included to meet this challenge.

Previous Drought Plans have often been longer, more complex documents. Large proportions of current company plans are used to demonstrate regulatory compliance to the guidelines ('how' and 'why'), as opposed to simply presenting the 'outputs' in terms of the intended operational management action during drought ('what'). Questions and challenges of technical detail by external parties, as well as more sophisticated planning methods, also warrant additional detail and the inclusion of relatively complex information which may be desired by some stakeholders, but not the majority.

Therefore, whilst we agree with the principle of the Drought Plan being shorter and easier to follow (for people in water companies, regulators and external customers), we do not consider that this can be effectively dealt with in a single document.

A stated aim is to avoid companies having more detailed or separate internal plans. However, these internal documents will always be required to provide the detailed governance around operational activities, this information is down to valve and works operation in many cases. This information should not be included within Plans as is overly complex to an external audience and in any case cannot be included for security reasons. With this in mind, the focus of the public facing Drought Plans should be on the impact on customers and the environment from proposed drought measures, these being consistent with the more detailed internal plans.

In order to have a plan that is simple and clear to understand, whilst including the relevant technical detail, we would suggest that the guidelines recommend a non-technical summary, a shorter structured main document, with other detailed material, for instance around specific permit arrangements included within technical appendices.

### **Coverage of peak demands**

Given the experience of a number of companies in 2018 of coincident dry weather and peak demands, the consideration of "other events such as prolonged high demand or significant peak demands caused by heatwaves" in the context of coincidence with dry weather is useful. However, it should be made clear that the Drought Plan, and the actions included (such as drought permits and orders) are not intended to deal with, or assess peak demand in isolation.

### **Demand conditions, and outage**

We note the importance of accounting for the potential for outage to impact supply availability in drought. Inherently, company systems will always be impacted by outage to a lesser or greater extent. It would be worth making clear that companies should account for, and justify their consideration of outage and uncertainty (e.g. linked to headroom calculations) in their modelling assessments. Consideration should be made to setting a

consistent principle of demand conditions in the plans (i.e. dry year 'upper bound' demand, including outages and target headroom allowances, as per the UKWIR risk based planning guidelines).

**Drought Vulnerability Framework**

We welcome the inclusion of the Drought Vulnerability Framework (DVF) from the perspective this encourages companies to explore resilience under a range of drought events, and given that it provides an excellent visualisation tool to understand risks. However, care should be taken, by way of commentary in the guidance, in comparing between companies using such approaches given the different methodologies that may be applied (e.g. the demand condition used).

The DRS combines rainfall severity, over a given period, with system response and the risk of emergency restrictions. However, in their plans companies may use system based return periods (as opposed to those calculated using rainfall and hydrological metrics), and so Guidance needs to explain these different views and their use (as covered in the UKWIR risk based planning documentation).

**WRMP links**

The Drought Plan and WRMP inherently have different planning horizons, and the guidance could be clearer on the degree of alignment required. It is also worth contextualising the regional planning processes indicating that the WRMP is the long term plan which considers the setting of level of service/level around drought resilience and the degree of reliance on drought permits. The drought plan should then set out the operational actions to be taken in a drought, the sequencing and decision-making around those actions based on the level of service set in the WRMP. The expectation should be that Drought Plans will draw on the latest tools from the WRMP19 planning round, with some targeted refinements if available.

6. Do you think the guideline as proposed is in the most useful format to help water companies write their plans?

Please tick relevant box

Yes

No

I don't know

Please explain your answer. If you ticked no, what changes do you think need to be made to allow a company to achieve this?

The format of the guidance is reasonably easy to digest and understand. However, the reader would be aided by:

- Ensuring the ability to download to local machines a PDF version, as previous;

- Some slight amendments to section headings. There are too many "How to write a plan" / "writing a plan" section titles. How about "The Drought Planning Process" to describe the process?
- Inclusion of summary of the key changes from previous guidelines and/or versions;
- The expectations are not always clear in the document, and in particular greater clarity on the statement 'this drought plan should look significantly different from the previous drought plan' should be changed. The guidance should instruct how the plan should be written if necessary. (note Q5). Are there particular examples in current company plans that can be referenced?; and:
- Inclusion of a tick list of technical criteria to meet for submission, akin to that used for the WRMP19 guidance.

7. Please tell us if there are any other actions that you think water companies should include in their drought plans.

Please tick relevant box

Yes

No

I don't know

Please explain your answer. If you ticked no, what changes do you think need to be made to allow a company to achieve this?

This appears reasonably extensive, recognising that local or regional factors will mean that certain other types of actions or variants may be warranted. Such a standard coverage can never be entirely exhaustive.

The only other consideration that could be given is to the interface with EA drought plans during periods of environmental stress but lower water supply stress where water company actions could support environmentally vulnerable sites (e.g. the drying up of chalk streams across the south east in 2019 is a good example of this). This is not the core remit of the company plans and should be considered on a local basis within environmental governance. However, it may be worth recognising the merits of such activities.

8. Do you think the guideline strikes the right balance between planning for droughts that water companies might reasonably expect to experience and planning for more severe drought events?

Please tick relevant box

Yes

No

I don't know

Please explain your answer:

The guidance seems to be give a reasonable balance for the assessment of different types of events. Whilst historic events are very useful for context and to understand the level of service position, the Drought Plan needs to explain actions that could be taken during a full range of drought scenarios including the those events outside historic understanding, when environmental and security of supply consequences are likely to be greater.

However, we make the following points:

- The drought vulnerability framework has taken the industry forward in better understanding resilience to drought, however, there needs to be an acceptance within the guidance around the uncertainty in the assessment of drought probability even when using "state of the art" methods. It may be useful for companies to test their systems against indicative drought events of different severity but these will only be indicative especially at the extremes.
- It would be good to include the merits of communicating drought probability in different ways within the plan, e.g. communication using % annual probability, as opposed to return periods / frequency alone.
- Care should be taken when instructing companies to ensure a scenario that crosses all drought triggers to test the plan. For zones that can be demonstrated to be very resilient to drought, there is no benefit in having to present results for implausible or unrealistic scenarios that will cause unnecessary customer or stakeholder concern.

9. Please tell us if there are any other supply or demand management actions that water companies should consider.

Yes

No

I don't know

Please explain your answer:

As noted under Q7, the supply and demand actions look reasonably representative, recognising that it shouldn't preclude inclusion of local or regionally specific measures. It is worth making reference to activities that may help customers reduce plumbing losses, or raise awareness in this regard.

It will be important to avoid confusion, and retain separation of Drought Plan actions and those in the WRMP, especially given the different drivers and planning horizons through:

- Explicitly stating that many WRMP options will be inappropriate due to lead times, and that supply-demand drivers are primarily assessed through the WRMP;
- Striking a balance between efficient permanent adoptions of measures if possible as a result of implementing the Drought Plan, whilst also ensuring that this does not short-cut the WRMP process (which includes more sophisticated long-term options appraisal). The guidance currently states "Where your drought plan identifies there is a need for a scheme to improve

resilience or to improve the supply-demand balance, include it in your next WRMP" - this seems to conflate the purpose of the two plans.

Clarity could be useful on the definition of un-used sources of water, and what requires an environmental assessment, to avoid slowing important supply side benefits to be deployed for wider benefit. Companies may routinely have sources that are only used in dry weather, or have existing unused sources that are still licensed (with environmental risks already assessed as such). These are distinct from unused sources that have no licence mechanism for use.

10. Do you think that the information required for drought orders and permits is appropriate?

Please tick relevant box

Yes

No

I don't know

Please explain your answer. If you ticked no, what changes do you think are needed.

There are a number of useful suggestions in the guidance, however, we consider that some will not be practical (or require expectations to be managed) and/or it is unclear as to the process that should be followed.

Firstly, it is very likely that customer restrictions will provide little benefit during certain times of the year, so suitable flexibility should be promoted within the guidance around implementation.

The guidance also states that TUBs need to have a measurable impact before applying for drought permits. We would not agree with this. This is important, as the inability to demonstrate impact will increase risks associated with the plans and could also lead to greater environmental impacts further down the line. Rather, the requirement should be to demonstrate the degree of effort in implementing appropriate actions. If customer restrictions do not lead to the reductions expected, this will increase the importance of both supply and demand side measures to manage drought risk.

Given the numerous variables that can impact upon demand variability it can be extremely difficult to prove tangible demand benefits from specific courses of action. Over the short term it is difficult to disentangle the impact of demand management measures of different types from population changes during holiday periods or simply local weather patterns. This is equally difficult over longer periods as behavioural demand for water gradually grows in line with weather conditions whilst measures aim to restrict this. Artesia consultants undertook work in this area following the dry weather of 2018 and concluded that further studies are needed to better understand these behavioural links (see Q12 also). Apart from this, demand investigations during an event will place additional burdens on company's management of the drought event.

The guidance states "You should make full use of all your available licenced sources of water (As set out in your WRMP) before applying for drought permits and drought orders".

Depending on drought specific conditions, such as the nature of the drought, demand levels, and in-event outage / operational constraints, this is unlikely not be possible. 'Full use' should account for evidenced exceptions, whilst ensuring that the spirit of the requirement is met. It should also be noted that the WRMP may include future sources not implemented at the time of the Drought Plan's implementation.

11. Do you think the guidance on the actions water companies could take in the event of an extreme drought makes sense?

(Please refer to the guideline and the supplementary guidance for this topic)

Please tick relevant box

Yes

No

I don't know

Please explain your answer. If you ticked no, how could it be improved?

The guidance makes sense in this regard and it is useful to have highlighted the significant barriers to implementing some of these actions.

For non-industry readers it is worth ensuring in the plans that Level 1, Level 2, Level 3 and Level 4 restrictions also clearly articulated as to what this means in practice.

The guidance should not preclude companies from making actions permanent, where this can cost-effectively be achieved at the time of implementing the drought plan.

Consideration of the benefits in the context of customer and societal of interventions is also important, as well as considering this in the context of the environment (within the extreme drought guidance).

12. Do you think the guideline on communications planning will allow water companies to keep their customers informed during a drought?

Please tick relevant box

Yes

No

I don't know

Please explain your answer and tell us if there is any additional information water companies should consider.

The consultation does not ask questions around stakeholder engagement so we have included comment here.



We do not consider it feasible or necessary to hold discussions with all the organisations and individuals suggested in the guidance. We propose that it would be better to undertake pre-consultation with a number of bodies who we know have an interest in our drought plan through previous consultations. The key is providing the opportunity for dialogue.

Regarding Communication:

The drought plan guidance should also include year on year communication before a formal drought status is declared, as reducing demand might buy more time before other measures are needed. This can be important as droughts, particularly in groundwater supported areas, can develop over several years. This is in line with the findings of the Artesia consulting work following the dry period in 2018 which suggest that communications should be aligned to ongoing drought risk assessments. This work also stresses the benefits of co-ordinating communications at a regional or national level.

In drought events, it is important that the industry and regulators clearly message that actions such as temporary use bans are not a sign of 'failure', but rather pre-defined and agreed plans to reduce impacts later, should the drought persist. This message is important to maximise the chance of buy-in from customers to the interventions proposed.

It is worth ensuring that the pre-consultation process also flags changes to the Drought Plan driven by the strategic WRMP.

The guidance notes the need to consider "How successful, effective and cost efficient, your drought management actions are (Including the effects of restrictions to water use and leakage management". The process following this assessment should be clearly stated.

13. Do you think the guidance on environmental impacts will allow for sufficient protection of the environment during a drought?

(Please refer to the guideline and the supplementary guidance for this topic)

Please tick relevant box

Yes

No

I don't know

Please explain your answer.

We understand that this supplementary guidance has been revised following feedback from water companies, and broadly this ensures sufficient environmental protection, however, we would like to make the following points:

- The post drought analysis of actual and predicted impacts should be made public, and shared with the regulators so that lessons can be learnt, and opportunities to reduce future impacts identified;

- It should be clarified that the mitigation and monitoring actions should be developed in response to company actions over and above the impacts of the drought itself. This is important to ensure clarity, albeit additional company interventions to mitigate the environmental impacts of drought should be encouraged;
- The requirement to "review and update your environmental assessments and associated monitoring plans annually" should be made more clear as to the intention. Considering whether there has been any material change to these assessments, and/or continuing monitoring and a programme of updates (on priority basis) is valuable. However, the assessments can often take one or more years to complete, depending on complexity, including stakeholder engagement. It is not envisaged that all would be updated annually.
- It should be noted that the new hydroecology tool the EA are developing is still in progress, and that user testing has not yet commenced. It may therefore not be available in time for companies to include in their next plans. This should clearly state to use "when available".

14. Do you think the guidance on environmental monitoring will allow water companies to assess the impact of their drought actions on the environment?

(Please refer to the guideline and the supplementary guidance for this topic)

Please tick relevant box

Yes

No

I don't know

Please explain your answer. If you ticked no, how could it be improved?

The guidance notes monitoring in the context of understanding "the nature of the environment under 'normal' circumstances, establish the sensitivity of the environment to changes in flow and any especially sensitive features of interest that you need to particularly consider". It should be clear that this is one important aspect, but in-drought monitoring should also seek to understand the impacts of company impacts over and above the drought itself.

It would be useful for local organisations such as Rivers Trusts to have access to the environmental assessments and monitoring plans (as is good practice) and to be involved in discussions as they may be able to support them with citizen science.

It is important for all organisations to prioritise monitoring methods (as included in Appendix 4) on a case by case basis by discussion. The guidance is very prescriptive in some cases, and by agreement with regulators and stakeholders some monitoring may not be required by agreement (e.g. not relevant at certain times of year).

15. Please tell us if you have any other views or comments on these proposed changes that have not been covered by previous questions.

We believe that both of the items below have value and would benefit from prominence earlier in the document:

- We encourage you to review your drought plan every year, along with your environmental assessment reports and monitoring plan, regardless of whether or not there's been a drought. You could follow water industry good practice and include information about the review of your drought plan in your WRMP Annual Review report.
- You should also periodically run exercises to test your drought plan. The Environment Agency and Natural Resources Wales perform drought exercises to test their own plans and encourage others to join them. Contact them to find out more about taking part in joint drought exercises.

Examples of good practice on the second item would be valuable.

Other comments include:

- Your section on what to include within a drought plan states that water companies should set out "if and how you will supply people businesses and farms that rely on their own water sources... such as drinking water for livestock, should their own supplies fail." The guidance should be clear on the remit of the plan, and the legal responsibilities in supplying people and businesses that have private water supplies. This would add clarity for all with respect to water companies' priorities during a drought in terms of legislative responsibilities from a government source. This will ensure constancy of messaging between individual company plans.
- "You should also show that your drought triggers are linked to your WRMP" - it should be made clear that this comment, we assume, relates to levels of service at the appropriate point in time, rather than the triggers themselves. The triggers may be necessarily different from the WRMP due to the point in the planning horizon being assessed, and because the Drought Plan is the 'leading plan' when it comes to detailed assessment of those triggers (the WRMP being more strategic).
- Wherever relevant you should align your approach with neighbouring companies and with those in your regional water resources group. Some companies may interface with multiple groups, so flexibility will be needed in this regard.
- "You should publish a revised draft drought plan alongside your statement of response so that consultees can see clearly how their comments on your plan have been included. This is particularly important if your statement of response does not allow people to understand the changes you have made between your draft and revised draft plan." - Surely this should be a key element, to explain how feedback has been accounted for, at a summary level?
- The guidelines are for plans to protect water supplies; however, consideration should be given the environmental and agricultural impacts and droughts. The WRMP process is increasingly considered on a cross-sector basis, and drought planning should be consistent with this principle. Cross-sector 'drought plans' would be valuable for certain precious wildlife sites.
- "Maps you should include" - Some of the items listed may not pass a security review, therefore we would encourage a statement overarching the guidance to say "Information not to be included if it does not pass security requirements". It is important that stakeholders and customers recognise this requirement to avoid rapport being damaged by it being seen that companies are holding back information.