

Revised Draft Drought Plan 2020 – Annex 4 – Demand-side Drought Management Actions

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1. Demand-side drought management actions

The document provides a high level summary of the demand management actions that we would take as we enter and pass through the drought action zones. A completed Appendix F form for each of the following demand-side actions is provided below:

- Table 1 - Media Campaign with Water Efficiency Device Offering
- Table 2 - Enhanced Leakage Management
- Table 3 - Temporary Use Bans (TUBS)
- Non Essential Use Ban (NEUB)
- Emergency Drought Order

Demand-side drought management action	
Name: Media Campaign with Water Efficiency Device Offering	
Trigger(s) (or preceding actions)	<p>Trigger</p> <p>Moving from the 'Normal' action zone into the 'Developing Drought' action zone, based on a decision from the Gold Centre Drought Management Team.</p> <p>Additionally, there may be a link with demand levels that show sustained increases above baseline levels, which would trigger a review of the supply / demand situation and subsequent action would be taken if required.</p> <p>Preceding action</p> <p>Normal Operation - Demand levels would be monitored on a daily / weekly basis. When moving towards the severe drought zone, Supply / demand situation will be continually monitored and the effectiveness of all demand-side measures estimated.</p>
<p>Demand Saving</p> <p>MI/day unless stated otherwise</p> <p>Percentage reduction on peak week demand</p>	<p>Estimated Demand Saving is 0 – 5% but would increase with drought severity and messaging.</p> <p>The media campaign would be enhanced as the drought situation developed (and will be accompanied by enhanced leakage detection). Previous media campaigns offering water efficient devices have experienced an average uptake rate of c.20% of customers targeted. The savings are dependent upon a number of factors including:</p> <ul style="list-style-type: none"> • The scale of the area targeted by the campaign, which is linked to the number of customers and uptake rates. • The duration of supply demand situation and the duration of the subsequent campaign. • The products that are ordered and installed. • The time of year the campaign is implemented. • The savings per day and for a typical property: (assumed saving per device taken from Ofwat guidance) are: <ul style="list-style-type: none"> • Aerated Shower head – 30 litres/day • Shower Timer – 5 litres/day • Tap Saver Kit – 36 litres / day (based on 2 taps) • 'Save A Flush' Bag – 10 litres / day • Hose Trigger Gun – 2 litres / day

	<ul style="list-style-type: none"> • Plant Gel (Water Retention) – 0.5 litres / day • Total (if all products Installed) – 83.5 litres / day <p>It is unlikely that all products would be ordered and installed to yield the maximum saving. By far the most popular device is the aerated shower head followed by the ‘Save a Flush’ and tap saver kits. Depending on the combination of products installed it is estimated that a saving of anything up to 10% per property may be achieved. Once products are installed they would be effective year round.</p>
<p>Location Area affected: eg Company, Demand Management Area, WRZ or sub-zonal level</p>	<p>Applicable to entire WRZs / media region levels / company wide.</p>
<p>Implementation timetable Time from drought trigger to implementation (including any consultation required), time of year effective, duration of action being in place</p>	<p>Media Campaign & Device Promotion:</p> <p>1 to 2 weeks - Preparation and implementation time (liaison with local media may delay communication and extend implementation timescale to 3 to 4 weeks).</p> <p>The media campaign can be implemented year round, irrespective of a drought situation. It may have the most impact during early spring / summer prior to garden watering increasing, but the key messages will align with the communication plan and would be cognisant of the season in which the campaign falls and would ensure key messages are in keeping (i.e. discuss lagging pipes in winter, discuss watering activities in summer etc).</p> <p>2 to 3 weeks - Water efficient device turnaround i.e. orders being made through to implementation of products and savings being realised.</p> <p>This demand-side measure will be prepared as much as possible in the time leading up to the ‘Developing Drought’ stage, which will minimise the lead time to implement the demand-side measure in the ‘Developing Drought’ and ‘Drought’ stages. The preparation works undertaken would align with our Drought Communication Plan as required.</p>
<p>Any permissions or approvals required and constraints that apply Including details of liaison carried out with bodies responsible for giving any permits or approvals</p>	<p>We expect there to be limited constraints, however we will be mindful of the following:</p> <ul style="list-style-type: none"> • Maintenance and closer monitoring of our systems to engage with public i.e. online portal, to ensure they are functioning as required. • Promotion of media campaign to be embedded in other relevant departments such as DCWW call centre, meter optants etc, as directed within the communication plan. • Awareness that supporting resource may be required with respect to our existing water efficiency work streams to ensure sufficient engagement with customers as required, and water efficiency devices are available, and delivered within the identified timeframes. • The magnitude of devices that would have to be issued to produce significant demand saving, the cost and effort in terms of widespread distribution of products to customers versus savings of other

	demand management options, the timescales to acquire products and distribution on a large scale, the scale of use within customers' homes, and product wastage.
<p>Risks associated with action Effects on the environment, social and economic factors and uncertainties associated with timings, quantity, quality or cost. Link to your SEA findings (as relevant)</p>	<p>Effectiveness of a media campaign in terms of actual demand reductions.</p> <p>This option would not involve any construction activity and in consequence, effects associated with the implementation of water efficiency measures have been assessed as neutral across all of the SEA objectives.</p> <p>During operation, this option is likely to have positive effects on water (SEA Objective 3) as it will reduce the demand for water helping to protect water resources and secure drinking water supplies in a time of drought. Minor positive effects have also been identified in respect of climate change (SEA Objective 4) and resource use (SEA Objective 7).</p>
<p>Other considerations For example, how does this action affect your duties under the Environment (Wales) Act and your contribution to the Well-being Goals under the Well-being of Future Generations Act (as relevant)</p>	<p>The SEA assessment demonstrates that the revised draft Drought Plan is likely to support the achievement of the majority of the well-being goals for Wales. This principally reflects the objective of the Plan and its associated measures to ensure the continuity of drinking water supplies to Welsh Water's customers during periods of drought.</p>

Table 1: Media Campaign with Water Efficiency Device Offering

Demand-side drought management action Name: Enhanced Leakage Management	
Trigger(s) (or preceding actions)	<p>Trigger Supply /demand situation moving from the 'Normal' action zone into the 'Developing Drought' action zone and through subsequent drought and severe drought stages.</p> <p>Preceding action Normal Operation - Demand levels would be monitored on a daily / weekly basis Developing to severe drought - Supply / demand situation continually monitored throughout drought situation and the effectiveness of all demand-side measures.</p>
Demand Saving Ml/day unless stated otherwise Percentage reduction on peak week demand	<p>Estimated Demand Saving is 0.5 – 2% of the volume above our policy minimum leakage (PML) level The approach to more accurately estimate savings will be to assess the current leakage levels against policy minimum leakage (PML) levels at the time of option implementation for the specific water resource zone / media region level / other company configuration.</p>
Location Area affected: e.g. Company, Demand Management Area, WRZ or sub-zonal level	Applicable to WRZ/DMA level
Implementation timetable Time from drought trigger to implementation (including any consultation required), time of year effective, duration of action being in place	<p>Our enhanced leakage activity will be gradually brought in through zonal targeting.</p> <p>1 – 2 weeks - Preparation / planning time to affect enhanced leakage management.</p> <p>1 – 2 weeks – The length of time required for leakage savings to be realized following an ALC intervention (dependant on leak detection and repair cycle).</p> <p>1 – 2 months – Investigation, analysis and planning of additional pressure management activity.</p>
Any permissions or approvals required and constraints that apply Including details of liaison carried out with bodies responsible for giving any permits or approvals	<p>There are few constraints anticipated, however we will be mindful of the following:</p> <ul style="list-style-type: none"> • Time required for liaison with local authorities regarding traffic management and working in highways. If a reduction in notification time could be achieved, this would facilitate a reduction in the leak repair time cycle. • The estimated savings from the implementation of enhanced leakage management are dependent upon the characteristics of the network / WRZ / area where the option is to be implemented. • Any realised savings are dependent upon the duration of the supply / demand situation and the scale and length of deployment of resources to the zone / area.
Risks associated with action Effects on the environment, social and economic factors and uncertainties	There is a risk around the level of savings achieved which is related to the many variables that could impact the effectiveness of this option, for example, leakage levels at the time of drought, the status of operational resource pool, and the increased man hours required in targeting more difficult leakage to bring down to

<p>associated with timings, quantity, quality or cost. Link to your SEA findings (as relevant)</p>	<p>policy minimum levels. Droughts also have the potential to generate additional leakage through ground drying and movement and / or subsidence, in which case additional resource may be required just to maintain an existing level of leakage without managing to reduce leakage beyond pre-drought levels.</p> <p>There are a number of considerations regarding the level of resource which we will need to manage:</p> <ul style="list-style-type: none"> • It's likely that the level of available resources at critical times (such as during spring / summer) may be lower due to holidays. • The timescales for the recruitment of additional ALC resources to deal with enhanced leakage management. • Resource redeployment may reduce resources in other WRZs and leakage levels may increase over the duration of the drought situation. • Leakage resources may become involved with non-leakage related activities such as customer liaison. <p>The SEA has assessed the enhanced leakage management action as having a minor negative effect on climate change (SEA Objective 4) and resource use (SEA Objective 7) during its 'construction' phase.</p> <p>During operation, this option is likely to have positive effects on water (SEA Objective 3) as it will reduce leakage from the water supply network helping to protect water resources and secure drinking water supplies in a time of drought. Minor positive effects have also been identified in respect of climate change (SEA Objective 4) and resource use (SEA Objective 7).</p>
<p>Other considerations For example, how does this action affect your duties under the Environment (Wales) Act and your contribution to the Well-being Goals under the Well-being of Future Generations Act (as relevant)</p>	<p>The SEA assessment demonstrates that the revised draft Drought Plan is likely to support the achievement of the majority of the well-being goals for Wales. This principally reflects the objective of the Plan and its associated measures to ensure the continuity of drinking water supplies to Welsh Water's customers during periods of drought.</p>

Table 2: Enhanced Leakage Management

Demand-side drought management action Temporary Use Bans (TUBS)	
Name:	
Trigger(s) (or preceding actions)	<p>Trigger Moving from the 'Developing Drought' action zone into the 'Drought' action zone and as per the information communicated by the Gold Centre Drought Management Team.</p> <p>Preceding actions Normal Operation - Demand levels would be monitored on a daily / weekly basis Enhanced leakage detection, and a media campaign capturing this as well as water efficiency and situation awareness, which are actions associated with supply /demand situation moving from the 'Normal Operation' scenario into the 'Developing Drought' scenario. The media campaign will also focus on voluntary restraints and increasing customer awareness. 'Developing Drought' to 'Severe Drought' - Supply / demand situation continually monitored throughout drought situation and the effectiveness of all demand-side measures.</p>
Demand Saving Ml/day unless stated otherwise Percentage reduction on peak week demand	<p>Estimated Demand Saving up to 5%. Demand savings from a TUB are difficult to estimate, due to there being limited real-life data regarding the effects of TUBs in Wales. Estimated savings will be dependent upon the time of year that TUBs is implemented, and it's likely that the higher range of savings would be achieved during the spring to early summer period in line with increased outside water use.</p>
Location Area affected: e.g. Company, Demand Management Area, WRZ or sub-zonal level	Maximum flexibility will be allowed in imposing restrictions geographically, which will range from water resource zone, to media region level, to company-wide. It's likely that the size of implementation would range from media region level to companywide, as this will be a simpler message to convey to the public and to manage.
Implementation timetable Time from drought trigger to implementation (including any consultation required), time of year effective, duration of action being in place	<p>2 – 4 weeks We will start the implementation as we move toward the 'drought' action zone and allow 2 to 4 weeks for the process dependent upon the extent of the affected area. The decision will be made through the Gold Centre Drought Management Team. Implementation will be constrained by the consultation process and requirements to advertise the TUB proposals in the local press. The Code of Practice suggests that there can be a period of at least 2 to 3 weeks between a company making the decision to impose a TUB and being able to implement it. This accounts for the drought scenario falling into the DAZ, the discussion needed within the Gold Centre Drought Management Group, both externally with the regulator and internally as outlined in the</p>

	<p>communication plan, and the amendment of media campaigns to include information and a reasonable notice period regarding TUBs and its planned implementation. The notice period will need to take into account the possible other customer engagements that may be required through increased calls to our customer contact centres and engagement with front line staff.</p> <p>TUBs can be imposed at any time during the year and retain some effectiveness, however they will be the most effective if they are implemented during spring / early summer to coincide with growing seasons and increased outside watering.</p> <p>This demand-side measure will be prepared as much as possible in the time leading up to the 'Developing Drought' action zone, which will minimise the lag time to implement the demand-side measure in the 'Developing Drought' and 'Drought' action zones. The preparation works undertaken would align with our Drought Communication Plan as required.</p>
<p>Any permissions or approvals required and constraints that apply Including details of liaison carried out with bodies responsible for giving any permits or approvals</p>	<p>No third party permissions are required subject to complying with criteria set in section 76 of the Water Industry Act 1991. However, notification to the customer will be made prior to full implementation in line with legislative requirements.</p> <p>Liaison with local media regarding communication of the restriction phases may also determine communication of media campaigns and restrictions being fully implemented</p> <p>Consultation with regulator as required will occur prior to implementation of this option.</p>
<p>Risks associated with action Effects on the environment, social and economic factors and uncertainties associated with timings, quantity, quality or cost. Link to your SEA findings (as relevant)</p>	<p>Effectiveness of TUBs.</p> <p>The resources required to effectively monitor and enforce TUBs.</p> <p>Public relations as a result of imposing a restriction on customers</p> <p>This option would not involve any construction activity and in consequence, effects associated with the implementation of TUBs have been assessed as neutral across all of the SEA objectives.</p> <p>During operation, this option is likely to have positive effects on water (SEA Objective 3) as it will reduce the demand for water helping to protect water resources and secure drinking water supplies in a time of drought. Minor positive effects have also been identified in respect of climate change (SEA Objective 4) and resource use (SEA Objective 7).</p>
<p>Other considerations For example, how does this action affect your duties under the Environment (Wales)</p>	<p>The SEA assessment demonstrates that the revised draft Drought Plan is likely to support the achievement of the majority of the well-being goals for Wales. This principally reflects the objective of the Plan and its</p>

Act and your contribution to the Well-being Goals under the Well-being of Future Generations Act (as relevant)	associated measures to ensure the continuity of drinking water supplies to Welsh Water's customers during periods of drought.
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Table 3: Temporary Use Bans

Demand-side drought management action Non Essential Use Ban (NEUB)	
Name:	
Trigger(s) (or preceding actions)	<p>Trigger Moving from the 'Drought' action zone into the 'Severe Drought' action zone, and as per the information communicated by the Gold Centre Drought Management Team.</p> <p>Preceding actions Normal Operation - Demand levels would be monitored on a daily / weekly basis Enhanced leakage detection, a media campaign capturing this as well as water efficiency and situation awareness which are actions associated with the supply/ demand situation moving from the 'Normal' action zone into the 'Developing Drought' action zone, and the implementation of TUBs as a result of the supply /demand situation moving from the 'Developing Drought' action zone into the 'Drought' action zone. The media campaigns undertaken would evolve based on the drought situation. They would be updated to increase customer awareness, to always aim to appeal for customer constraint, and include whatever additional control measures need to be implemented. 'Developing Drought' to 'Severe Drought' - Supply / demand situation continually monitored throughout drought and the effectiveness of all demand-side measures.</p>
Demand Saving Ml/day unless stated otherwise Percentage reduction on peak week demand	<p>Estimated demand savings will range from 0% up to 5%.</p> <p>Demand savings from a Non-Essential Use Bans are difficult to estimate, due to there being limited real life data. The time of year will also have an impact on the likely savings that could be realized and it's likely that the higher range of savings would be achieved during the spring to early summer period in line with increased outside water use.</p>
Location Area affected: e.g. Company, Demand Management Area, WRZ or sub-zonal level	<p>Maximum flexibility will be allowed in imposing restrictions geographically, which will range from water resource zone, to media region level to companywide. It's likely that the size of implementation would range from media region level to companywide, as this will be a simpler message to convey to the public and to manage, and will align with the TUBs already in place.</p>
Implementation timetable Time from drought trigger to implementation (including any consultation required), time of year effective, duration of action being in place	<p>1 – 3 months</p> <p>Implementation of Non-Essential Use ban is in line with the Code of Practice. Notice of a restriction will be given prior to full implementation. Sufficient time would be required to prepare the statement of reasons, to complete the public consultation, to undertake the public hearing if required, and for the Determination by Welsh Ministers.</p>

	<p>This demand-side measure will be prepared as much as possible in the time leading up to the ‘Drought’ action zone, which will minimise the lag time to implement the measure in the ‘Drought’ action zone. The preparation works undertaken would align with the communication plan as required</p>
<p>Any permissions or approvals required and constraints that apply Including details of liaison carried out with bodies responsible for giving any permits or approvals</p>	<p>Permission required from the Welsh Government. A public hearing is also likely to be required in order to enable objectors’ representations to be heard.</p>
<p>Risks associated with action Effects on the environment, social and economic factors and uncertainties associated with timings, quantity, quality or cost. Link to your SEA findings (as relevant)</p>	<p>Effectiveness of enforcement of Drought Order Order not passed by Welsh Government Public Relations as a result of imposing a restriction on customers</p> <p>This option would not involve any construction activity and in consequence, effects associated with the implementation of NEUBs have been assessed as neutral across all of the SEA objectives.</p> <p>During operation, this option is likely to have positive effects on water (SEA Objective 3) as it will reduce the demand for water helping to protect water resources and secure drinking water supplies in a time of drought. Minor positive effects have also been identified in respect of climate change (SEA Objective 4) and resource use (SEA Objective 7).</p>
<p>Other considerations For example, how does this action affect your duties under the Environment (Wales) Act and your contribution to the Well-being Goals under the Well-being of Future Generations Act (as relevant)</p>	<p>The assessment demonstrates that the revised draft Drought Plan is likely to support the achievement of the majority of the well-being goals for Wales. This principally reflects the objective of the Plan and its associated measures to ensure the continuity of drinking water supplies to Welsh Water’s customers during periods of drought.</p>

Table 4: Non Essential Use Bans

Demand-side drought management action	
Name: Emergency Drought Order	
<p>Trigger(s) (or preceding actions)</p>	<p>Trigger Levels dropping into the ‘Severe Drought’ action zone and measured against the time of year and likelihood of continued dry spell but prior to falling into the ‘Emergency Storage’ action zone and as per the information communicated by the Gold Centre Drought Management Team.</p> <p>Preceding actions Normal Operation - Demand levels would be monitored on a daily / weekly basis Enhanced leakage detection, a media campaign capturing this as well as water efficiency and situation awareness which are actions associated with moving from the ‘Normal’ action zone into the ‘Developing Drought’ action zone, the implementation of TUBs as a result of moving from the ‘Developing Drought’ action zone into the ‘Drought’ action zone, and the implementation of NEUBs / Drought Orders as a result of moving from ‘Drought’ to ‘Severe Drought’. The media campaigns undertaken would evolve based on the situation of drought and update to increase customer awareness, to always aim to appeal for customer constraint and also include with whatever additional control measures need to be implemented. ‘Developing Drought’ to ‘Severe Drought’ - Supply / demand situation continually monitored throughout drought situation and the effectiveness of all demand-side measures.</p>
<p>Demand Saving Ml/day unless stated otherwise Percentage reduction on peak week demand</p>	<p>Estimated demand savings of up to 17.5% form the implementation of stand pipes/rota cuts. Demand savings from an Emergency Drought Order are difficult to estimate, due to there being limited real life data. However, the savings are anticipated to be higher under this restriction than a Drought Order due to the increased restrictions that can be imposed.</p>
<p>Location Area affected: e.g. Company, Demand Management Area, WRZ or sub-zonal level</p>	<p>Maximum flexibility will be allowed in imposing restrictions geographically, which will range from water resource zone, to media region level to company-wide. It’s likely that the size of implementation would range from media region level to company-wide, as this will be a simpler message to convey to the public and to manage and most likely align with the TUBs and NEUBs already in place.</p>
<p>Implementation timetable Time from drought trigger to implementation (including any consultation required), time of year effective, duration of action being in place</p>	<p>1 – 3 months Notice of a restriction will be given prior to full implementation. Preparation time would be required to prepare the statement of reasons, for the public consultation, the public hearing if required, and the Determination by Welsh Ministers. This demand-side measure will be prepared as much as possible in the time leading up to the ‘Emergency Storage’ action zone, which will minimise the lag time to implement the demand-side measure as soon as</p>

	<p>practicable. The preparation works undertaken would align with our Drought Communication Plan as required</p>
<p>Any permissions or approvals required and constraints that apply Including details of liaison carried out with bodies responsible for giving any permits or approvals</p>	<p>Permission required from the Welsh Ministers. A public hearing is likely to be required in order to enable objectors' representations to be heard.</p>
<p>Risks associated with action Effects on the environment, social and economic factors and uncertainties associated with timings, quantity, quality or cost. Link to your SEA findings (as relevant)</p>	<p>Effectiveness of the enforcement of Emergency Drought Order Order not passed by Welsh Government Potentially significant public health and public order risks associated with the imposition of Emergency Drought Orders Public relations with company may be affected.</p> <p>No significant negative operational effects have been identified during the assessment of the demand-side measures. The implementation of extreme measures will help to ensure there is water available during extreme drought conditions. However, water rationing through widespread enhanced pressure management or localised use of standpipes could have temporary adverse effects on human health due to disruption to water supplies (though this would be necessary to ensure that some supply is maintained in emergency conditions) and impacts on opportunities for recreation (e.g. swimming). There is also the potential for water rationing to cause stress and anxiety which could affect human health. On balance, the option has been assessed as having a mixed minor positive and minor negative effect on this objective, although some uncertainty remains (reflecting the likelihood of the measure being implemented).</p>
<p>Other considerations For example, how does this action affect your duties under the Environment (Wales) Act and your contribution to the Well-being Goals under the Well-being of Future Generations Act (as relevant)</p>	<p>The SEA assessment demonstrates that the revised draft Drought Plan is likely to support the achievement of the majority of the well-being goals for Wales. This principally reflects the objective of the Plan and its associated measures to ensure the continuity of drinking water supplies to Welsh Water's customers during periods of drought.</p>

Table 5: Emergency Drought Order