South West Water
Bournemouth Water
BRISTOL WATER
Isles of Scilly Water

Draft Drought Plan

Appendix 3: Drought actions

Pennon

Appendix 3: Drought actions

A3.1. Demand-side actions

This section of the Drought Plan gives more information on the demand-side actions that we will consider using during prolonged dry weather and drought as described briefly in Section 3 of this Drought Plan. This will be followed by an appraisal matrix table to show how demand-side actions were appraised and taken forward to this drought plan.

A3.1.1. Business as usual + demand-side actions

As mentioned in Section 5 we will mobilise a communications campaign during Environment Agency drought level 0 were we see a risk of going into prolonged dry weather. As shown in Section 5, the media campaign will change as we progress through the Environment Agency drought stages and levels in terms of messaging and platforms being used.

Table 3.1:Media communications campaign action information

Customer communications campaign	
Description	A communications campaign designed to reduce customer consumption using behavioural 'nudges.' This would involve a variety of mediums such as leaflets, outdoor media, social media campaigns and company websites. It would be adapted to the area of implementation. This action would be enhanced as drought level increases, with higher budget targeting more customers via more varied channels.
Location	Any WRZ
Action type	Internal Action
Drought level implemented	BAU+
Implementation Timetable	Time for preparation: 1 week Time for implementation: 1 week Estimated delay between implementation and beneficial demand reduction: 1 week Expected action duration: 3 months (e.g. over one summer period)
Estimated demand savings	2.5% of DI in relevant area
Engagement with relevant stakeholders	We would engage NAVs and retailers, asking them to send similar messaging to their customers
Effective period	Would be most effective in summer months, but could also be adapted to reduce water usage in winter
Permissions Required	None
Risk assessment	No risks associated with this action

A3.1.2. Prolonged dry weather demand-side actions

During prolonged dry weather (drought level 1) we will look to intensify our BAU activities by directly collaborating with our customers in a targeted and focused manner to drive down customer side leakage (CSL) and on-premises audits. We would undertake a campaign where we further promote our free water saving devices.

Table 3.2: Customer side leakage action information

Customer side leakage (CSL)	
Description	Existing BAU activity whereby high usage customers are identified, and leaks are identified in their system. Advice is given on leakage repairs. During a drought this could be enhanced by lowering the threshold at which CSL would be targeted, reducing timeframes for leak repairs and offering incentives for customers to fix leaks. As drought level worsens, enforcement action could be taken against customers who repeatedly ignore requests for leaks to be repaired. Leakage thresholds not defined to maintain flexibility.
Location	Any WRZ
Action type	Internal Action
Drought level implemented	Level 1a
Implementation Timetable	Time for preparation: 1 week Time for implementation: 1 week Estimated delay between implementation and beneficial demand reduction: 2 weeks Expected action duration: 3 months (e.g. over one summer period)
Estimated demand savings	6-8% of customer side leakage
Engagement with relevant stakeholders	We would notify NAVs and retailers of this activity, appealing for them to consider similar activities with their customers
Effective period	Anytime, though leaks are easier to find in summer
Permissions Required	None
Risk assessment	No risks associated with this action

Table 3.3: Free water saving devices action information

Free water saving devices	
Description	Alert customers that free water saving products are available on our websites, to be ordered for home delivery. For example, leaky loo detection strips, shower flow regulators and toilet cistern bags.
Location	Any WRZ
Action type	Internal Action
Drought level implemented	Level 1a
Implementation Timetable	Time for preparation: 2 weeks Time for implementation: 1 week Estimated delay between implementation and beneficial demand reduction: 2 weeks Expected action duration: 1 month
Estimated demand savings	1% of DI in the relevant area
Engagement with relevant stakeholders	NA
Effective period	Anytime
Permissions Required	None
Risk assessment	Some customers may feel they have missed out if they don't order devices in time. Clear communication necessary to mitigate this risk.

Table 3.4: Household and business efficiency audits action information

Household and business efficiency audits	
Description	Mobilising specialist suppliers to undertake household and non-household audits in relevant areas. Contractors would audit premises to identify opportunities to save water consumption e.g. from household fittings, and to suggest behavioural changes to save water, highlighting the associated cost savings. This is an ongoing BAU activity that could be enhanced during prolonged dry weather.
Location	Any WRZ
Action type	Internal Action
Drought level implemented	Level 1b
Implementation Timetable	Time for preparation: 2 weeks (change to contract for existing contractors). Longer time for non-household preparation, to procure contractors. Time for implementation: 2 weeks Estimated delay between implementation and beneficial demand reduction: instant benefits Expected action duration: 3 months (e.g. over one summer period)
Estimated demand savings	1-2 Ml/d across Pennon Group
Engagement with relevant stakeholders	Communication with NAVs and retailers to understand who their highest consumers are.
Effective period	Anytime
Permissions Required	Non-household audits would require retailers' permission to hold audits for their customers.
Risk assessment	No risks associated with this action

Table 3.5: Company use of water action information

Company use of water (internal to Pennon)	
Description	Reduction in water use for Pennon company activities, such as washing windows, buildings and cars, and other water consuming processes on company sites. Internally encouraging colleagues to reduce water usage both at home and at work.
Location	All areas
Action type	Internal Action
Drought level implemented	Level 1b
Implementation Timetable	Time for preparation: 2 days Time for implementation: 2 days Estimated delay between implementation and beneficial demand reduction: 2 days Expected action duration: 3 months (e.g. over one summer/autumn period)
Estimated demand savings	Up to 1Ml/d across Pennon Group
Engagement with relevant stakeholders	Internal engagement
Effective period	Anytime
Permissions Required	None
Risk assessment	Some risks associated with not cleaning company property e.g. dirty car windscreens pose driving risk. It will be made clear that water should still be used for essential cleaning such as windscreens.

Table 3.6: Leakage control and pressure management action information

Leakage control and pressure management	
Description	We will increase our leakage control and pressure management activity where it is practical to do so, prioritising work in the most drought stressed areas. This includes prioritising customer supply pipe leaks and increasing leakage detection. Pressure management schemes will be brought forwards where practical, with reduced pressure in existing pressure management installations, where possible.
Location	Any WRZ
Action type	Internal Action
Drought level implemented	Level 1b
Implementation Timetable	Time for preparation: 3 days Time for implementation: 3 days Estimated delay between implementation and beneficial demand reduction: 1 week Expected action duration: dependent on specific area
Estimated demand savings	Up to 2Ml/d per WRZ
Engagement with relevant stakeholders	Internal engagement with operations
Effective period	Anytime
Permissions Required	None
Risk assessment	Risk of dropped pressure would be managed at each individual pressure management installation.

A3.1.3. Drought stage demand-side actions

If we ever go into Environment Agency drought levels 2 and 3a we will continue with the demand-side actions mentioned above and consider the mobilisation of TUBs and NEUBs which will be sensible and proportionate to the risks associated to the drought at the time relevant to the applicable WRZs. We would also consider the use of “reward through billing” where customers are rewarded as a collective or as an individual to lower their water consumption during prolonged dry weather and drought.

Table 3.7:Reward through billing

Reward through billing	
Description	Collective customer rewards for meeting water efficiency targets in the form of bill reductions / credit to accounts. Flexible approach to measures used e.g. reduction in demand across an area of refill of reservoir. This has previously been successfully implemented in the South West. This would tie into any existing communications campaigns.
Location	Any WRZ
Action type	Internal Action
Drought level implemented	Level 1b
Implementation Timetable	Time for preparation: 2 weeks Time for implementation: 2 weeks Estimated delay between implementation and beneficial demand reduction: 2 weeks Expected action duration: 3 months (e.g. over one summer/autumn period)
Estimated demand savings	Between 0.25-2% of demand in the relevant area
Engagement with relevant stakeholders	Notify NAVs and retailers of the set targets, encouraging them to hold similar campaigns
Effective period	Anytime, especially dry summer periods
Permissions Required	None
Risk assessment	No risks associated with this action

Table 3.8: Temporary use bans action information

Temporary use bans (TUBs)	
Description	We will plan, design and deploy a TUB (commonly known as a 'hosepipe ban') that restricts water usage in the affected area. See below
Location	Any WRZ or at regional level if appropriate
Action type	Water use restriction
Drought level implemented	Level 2
Implementation Timetable	Time for preparation: 4-6 weeks before storage projected to enter Level 2 Time for implementation: advertise TUBs up to 3 weeks before implementation, with formal notice given 1 week ahead of implementation, as per Section 5 Estimated delay between implementation and beneficial demand reduction: immediate Expected action duration: dependent on drought severity; a ban would be maintained until the water resource position is restored to an acceptable level in a WRZ as outlined in Section 7
Estimated demand savings	5% of demand in the relevant area. This number is based on UKWIR reports on water use restrictions from both 2014[1] (which assumes a 5-9.5% saving) and 2023[2] (which models a 6.62% saving) As the UKWIR report on the benefits of demand measures in the 2025 drought is still ongoing, we are keeping this estimate under review
Engagement with relevant stakeholders	Frequent engagement on implementation and planning with regulators and interested stakeholders
Effective period	Anytime, but most effective in summer period
Permissions Required	As specified in Section 36 of the *Flood and Water Management Act 2010* and *The Drought Direction 2011*
Risk assessment	Risks to social and economic factors are unlikely given that this restriction only applies to households

The Pennon Group developed a TUBs delivery playbook in Spring 2025 so all water companies in the group have an off the shelf TUBs plan ready to go minimising the time to execute TUBs from designing, running a public notification and then deployment. When designing this, we undertook lessons learned from our own experience in 2022, from other water companies during the 2025 dry summer, and from open source reports we have contributed to such as UKWIR's Code of Practice[2] and Review of 2022 Drought Demand Management Measures[3].

Currently the list of prohibited activities during TUBs is well defined in legislation and includes the following:

- Watering gardens, lawns, ornamental beds, and allotments (unless commercial/agricultural) using a hose or sprinkler.

[1] UKWIR (2014) 14/WR/33/6 - *Managing through drought: Code of practice for water companies on water use restrictions - 2013*
[2] UKWIR (2023) 23/WR/02/19 - *Managing Through Drought: Code of Practice and Guidance for Water Companies on Water Use Restrictions – 2023* (Incorporating lessons from the 2022 drought)
[3] UKWIR (2023) 23/WR/02/18 – *Review of 2022 Drought Demand Management Measures*

- Watering domestic both indoor/outdoor plants (excluding non-commercial greenhouses) with a hose.
- Washing private vehicles—cars, boats, motorbikes, caravans—with a hose.
- Cleaning private leisure boats or any private watercraft using a hose.
- Filling or topping up domestic swimming pools or paddling pools via hose.
- Filling, topping up, or maintaining domestic ponds or ornamental fountains using a hose.
- Drawing water from the hose for domestic recreational use (e.g., garden sprinklers, water fights).
- Cleaning patios, paths, driveways, or other artificial outdoor surfaces with a hose.
- Cleaning domestic building walls or windows with a hose.
- Using hosepipes to water sports pitches, playing fields, or green spaces for non-commercial purposes

In line with the Flood and Water Management Act 2010 (s36), The Water use Act 2010 and Water Industry Act 1991 (s76) we will develop a list of exemptions for water use and concessions for our PSR customers which will be shared during our public notices with our customers and stakeholders. Currently, there are exemptions explicitly stated in legislation (statutory exemptions) and further discretionary exemptions for customers which meet certain requirements. We have outlined our current lists of exemptions at the end of this section below.

To communicate the TUBs to our customers we will do the following direct and indirect methods of communicating:

- Publish notices in two circulated newspapers in the area(s) the TUBs are applied in. We will also publish in the London Gazette.
- Update websites and social media.
- Create and execute feedback channels (e.g., email accounts)
- Provide FAQs for customer services and website.

The following stakeholders (organisations/individuals) will need to be notified and briefed at a minimum when we formally notify the public that we are implementing TUBs and when we close TUBs:

- ✓ Members of Parliament
- ✓ Local Authorities
- ✓ NAV's and retailers
- ✓ Regulators (Ofwat & EA) and Defra

Statutory TUBs Exemptions

- Using a hosepipe for health or safety reasons, where this includes (a) removing or minimising any risk to human or animal health or safety; and (b) preventing or controlling the spread of causative agents of disease
- Watering plants that are (1) grown or kept for sale or commercial use, or (2) that are part of a National Plant Collection or temporary garden or flower display
- Cleaning any area of a private leisure boat which, except for doors or windows, is enclosed by a roof and walls
- Filling or maintaining a pool where necessary in the course of its construction
- Filling or maintaining a pool that is designed, constructed or adapted for use in the course of a programme of medical treatment

- Filling or maintaining a pool that is used for the purpose of decontaminating animals from infections or disease Filling or maintaining a pool used in the course of a programme of veterinary treatment
- Filling or maintaining a pool in which fish or other aquatic animals are being reared or kept in captivity
- Filling or maintaining a domestic pond in which fish or other aquatic animals are being reared or kept in captivity
- Filling or maintaining an ornamental fountain which is in or near a fish-pond and whose purpose is to supply sufficient oxygen to the water in the pond in order to keep the fish healthy.

Discretionary TUBs Exemptions

- Watering a garden attached to a domestic dwelling, or watering plants on domestic premises using a hosepipe by people who hold a Blue Badge or by people registered to our Priority Services Register
- Cleaning a private motor-vehicle using a hosepipe or specific low water use apparatus such as pressure washers by people who hold a Blue Badge or by people registered to our Priority Services Register
- Cleaning walls, or windows, of domestic premises using a hosepipe by people who hold a Blue Badge or by people registered to our Priority Services Register
- Cleaning paths or patios, or other artificial outdoor surfaces, using a hosepipe by people who hold a Blue Badge or by people registered to our Priority Services Register
- Filling or maintaining a domestic pond using a hosepipe by people who hold a Blue Badge or by people registered to our Priority Services Register
- Use of an approved drip or trickle irrigation watering system, fitted with a pressure reducing valve and a timer, that are not handheld, that place water drip by drip directly onto the soil surface or beneath the soil surface, without any surface run off or dispersion of water through the air using a jet or mist
- Commercial customers that use hosepipes in the course of their day-to-day cleaning business operation (for example hand car washing, window cleaning, graffiti removal), excluding the watering of domestic gardens
- Cleaning a private motor vehicle using specific low water use apparatus such as pressure washers
- Watering food crops at domestic premises or private allotments using a hosepipe
- Watering newly laid turf using a hosepipe for the first 28 days
- Watering newly-bought plants for the first 14 days
- Cleaning a private leisure boat using a hosepipe to remove graffiti
- Cleaning a private leisure boat using a hosepipe to prevent or control the spread of non-native and/or invasive species
- Filling or maintaining an ornamental fountain to operate water features with religious significance
- Filling or maintaining a new domestic swimming pool
- Filling or maintaining a domestic swimming or paddling pool with covers to minimise evaporative losses when not in use
- Filling or maintaining a domestic swimming or paddling pool with water conservation and/or recycling systems approved by South West Water
- Filling or maintaining a domestic swimming pool that is subject to significant repair and renovation

- Cleaning walls or windows of domestic premises using a hosepipe for the removal of graffiti or where very low water use technologies are employed and approved by South West Water
- Cleaning paths or patios or other artificial outdoor surfaces using a hosepipe for the removal of graffiti or where very low water use technologies are employed and approved by the water company.

Table 3.9: Non-essential use ban action information

Non-essential use bans (NEUBs)	
Description	Deployment of a NEUB involves restricting non-critical water use in businesses. There is high confidence that this would reduce demand for water, although uncertainty remains regarding the extent, as NEUBs have not been implemented in England for some time.
Location	Any WRZ or at regional level if appropriate
Action type	Water use restriction (demand-side drought order)
Drought level implemented	Level 3a
Implementation Timetable	Time for preparation: 4-6 weeks before storage projected to enter Level 3a Time for implementation: advertise NEUBs up to 3 weeks before implementation, with formal notice given 1 week ahead of implementation, as per Section 5 Estimated delay between implementation and beneficial demand reduction: immediate Expected action duration: dependent on drought severity; a ban would be maintained until the water resource position is restored to an acceptable level in a WRZ as outlined in Section 7
Estimated demand savings	2.5% of demand in the relevant area This estimate is based on the impact of NEUBs that Southern Water experienced during the 2005-6 drought. We have taken a conservative view of the likely impact to ensure we do not overestimate savings
Engagement with relevant stakeholders	Frequent engagement with retailers and NAVs as this drought order would impact their customers Frequent engagement on implementation and planning with regulators and interested stakeholders
Effective period	Anytime, but most effective in summer period
Permissions Required	Drought order
Risk assessment	There may be risks to social and economic factors as this restriction applies to businesses, but this would be mitigated by clear communication that only non-essential water uses are banned

Like a TUB, a Non-essential Use Ban can be brought in until the water resource position is restored to an acceptable level in a WRZ. These are restrictions as defined in the Drought Direction 2011[4] and are to be applied proportionately with consideration for specific exemptions and representations.

[4] Defra (2011) *Drought Direction 2011*. Available at: https://assets.publishing.service.gov.uk/media/5a7ade66ed915d670dd7f233/droughtdirection2011.pdf

Non-Essential Use Bans (NEUBs) are statutory drought measures that water companies may implement under Section 76 of the Water Industry Act 1991, typically following Temporary Use Bans (TUBs). NEUBs target commercial and industrial water use that is not critical to health, safety, or essential operations. Benefits from water savings would expect to be high and instant in saving a significant amount of water, particularly as NEUB include commercial and industrial activities, which collectively account for around one-third of all water use in the UK[5]. Implementation of NEUBs would allow us to apply for further drought permits or orders.

Management of the NEUB will be the same as described for the TUBs management process described above. The additional layer is that there will be greater collaboration with water retailers as the commercial water users are not our customers directly.

A3.1.4. Demand-side actions appraisal

As outlined in Chapter 3, the Pennon Group took a group wide appraisal of demand-side actions for drought by considering the lessons learnt from previous droughts by our own water companies and others alongside reviewing data in open-source reports on droughts. We have taken the following factors as evaluation criteria into consideration when identifying the appropriate options for this framework:

Cost/benefit ratio: This is the value benefit of an option to determine whether we are objectively saving enough water for the money we spend on the option defined in £'s per Ml/d.

Time/impact: We favour options that provide benefits rapidly, helping us mitigate the risk of a potential drought and/or help recovery from a current drought.

Certainty: We place higher value on options that provide certainty that benefits will be realised, meaning we are able to manage our drought resilience with higher confidence.

Speed of mobilisation: The time it takes to deploy an activity which includes assessing the costs, mobilising resources (including suppliers if required), developing a plan and complying with stakeholder governance.

Scalability: The ability to scale up the activities across different water resource zones across the whole Pennon Group

The results of this actions appraisal can be found in Table 3.10 below.

[5] Hosepipe bans and non-essential use bans: what they mean for you - Ofwat 17 July 2025

Table 3.10: Appraisal of potential demand-side actions

Action	Scalability	Impact	Time to realise benefits	Certainty	Time to mobilise (approx.)	Reason for accepting/discounting
HH and Business Audits	Yes	Hight	Instant	High	Instant as BAU activity	Accepted: Certain benefits and as it is a BAU activity all we need is to concentrate activities in affected WRZ
Free Water Butts	Yes	Very Low	Long	low	No Longer BAU so would have to procure a supplier	Discounted: This was not considered value for money during the 2022 drought. During this drought South West also paid for the delivery of the water butts
Grants for business efficiency projects	Yes	Low	Long	low	Instant as we already run competitions for businesses/CIC/Charities	Discounted: Only three organisations successfully applied for funds in 2023. Not much benefits which are likely not to be realised immediately
Media Campaign	Yes	Medium	Instant	Medium	2-3 weeks	Accepted: Instant benefits and has to be done in isolation and with efficiency schemes to unlock benefits
Progressive charging	No	Medium	Long	Medium	2 years	Discounted: No certainty in benefits as only a trial at the moment. Takes a long time to set up and agree with a wide spectrum of stakeholders.
Reward through billing	Yes	Medium	Medium	medium	1 month	Accepted: Worked successfully in the past in 2023. Only been used once before so unsure on certainty of impact but consensus with stakeholders is that this is a must do.
Free Water saving devices	Yes	medium	instant	medium	Instant as BAU activity	Accepted: Easy to do and has proven to be very popular. However, benefits are not certain as we cannot assume all water saving devices will be installed.
Customer side Leakage intervention	Yes	High	Instant	Medium	Instant to 2-3 weeks for enforcement at later drought stages	Accepted: So long as customers comply and fix leaks and allow access (if applicable) then this is a certain way to obtain water savings.

A3.2. Supply-side actions

A3.2.1. Unconstrained supply-side actions

Table 3.11: Unconstrained list of supply-side options considered for inclusion in the plan

WRZ	Action ID	Action Name	Preferred plan
COLLIFORD			
COL	C-01	De Lank WTW - booster pumping to support Lowermoor WTW supply area	Out
COL	C-02	College WTW - booster pumping to support Wendron WTW supply area	In
COL	C-03	River Fowey at Restormel - increase annual abstraction limit	In
COL	C-04a	Stannon Lake - increase daily abstraction limit	In
COL	C-04b	Stannon Lake - lower hands off level	Out
COL	C-05	Porth Reservoir & Porth Stream - abstract from new source	Out
COL	C-06	Colliford Reservoir - reduce compensation flow	In
COL	C-07a	Park Lake - increase daily abstraction limit	In
COL	C-07b	Park Lake - lower hands off level	Out
COL	C-08	Blackpool Pit - abstract from new source	Out
COL	C-09	Crowdy Reservoir - reduce compensation flow	Out
COL	C-10	Drift Reservoir - reduce compensation flow	In
COL	C-11	Hawk's Tor Pit - abstract from new source	In
COL	C-12	Leswidden Pool - abstract from new source	Out
COL	C-13	Porth Reservoir - reduce compensation flow	Out
COL	C-14	River Fowey for St Cleer WTW - remove maintenance flow condition	Out
COL	C-15	River Hayle - abstract from new source	Out
COL	C-16	Siblyback Reservoir - reduce compensation flow by 50%	Out
COL	C-17	Stithians Reservoir - reduce compensation flow	In
COL	C-18	Boswyn Stream, Cargenwyn Reservoir and Carwynnen Stream - abstract from new source	Out

COL	C-19	River Cober - reduce prescribed flow	Out
COL	C-20	River Kennal - reduce prescribed flow	Out
COL	C-21	River Fowey for Restormel WTW - reduce prescribed flow	Out
COL	C-22	Withey Brook - reduce prescribed flow	Out
COL	C-23	River Fowey for St Cleer WTW - reduce prescribed flow	Out
COL	C-24	Plymouth to Saltash booster pumping	Out
COL	C-25	Reviewing and implementing actions to optimise current sources and network	Out
COL	C-26	River Fowey for St Cleer WTW - transfer annual licence volume to Restormel WTW	Out
COL	C-27	Porth Reservoir - supply releases	Out
COL	C-28	Porth Stream - abstraction April to September	Out
COL	C-29a	Blackpool Pit - increase daily abstraction limit	Out
COL	C-29b	Blackpool Pit - lower hands off level	Out
COL	C-30	Siblyback Reservoir - reduce compensation flow	In
COL	C-31	River Fowey for Restormel WTW - remove % take condition on licence	Out
COL	C-32	River Kennal - remove % take condition on licence	Out
COL	C-33	Siblyback Reservoir - increase maximum release volume	Out
COL	C-34	Colliford Reservoir release to Restormel WTW using pumped storage pipeline	Out
COL	C-35	River Fowey for St Cleer WTW & Withey Brook - increase aggregated annual licence limit	Out
COL	C-36	Colliford Reservoir - increase annual licence limit	Out
COL	C-37	River Cober at Wendron - increase annual abstraction limit	In
COL	C-38	Drift Reservoir - increase annual licence limit	Out
COL	C-39	Siblyback Reservoir to Bastreet WTW - increase annual licence limit	Out
COL	C-40	Colliford Reservoir - reduce fish bank releases	In
COL	C-41	River Kennal to Stithians Reservoir - pumped storage improvements	Out
COL	C-42	Blackpool Pit - pumped storage	Out
COL	C-43	Restormel WTW – additional DAF treatment	Out

COL	C-44	Coswarth WTW commissioning	Out
COL	C-45	River Kennal to Stithians Reservoir - asset improvements	Out
COL	C-46	College WTW - supernatant returns	Out
COL	C-47	River Cober for Wendron WTW - river transfer losses	Out
COL	C-48	Stithians WTW - booster pump	Out
ROADFORD			
ROA	R-01	Burrator Reservoir - low level pumps	Out
ROA	R-02	Crabadon Cross booster pumping	Out
ROA	R-03	Dennis Down booster pumping	Out
ROA	R-04	Moortown booster pumping	Out
ROA	R-05	Sindercombe booster pumping	Out
ROA	R-06	Follygate booster pumping	Out
ROA	R-07	Slade Reservoir - abstract from new source	In
ROA	R-08	Challacombe Reservoir - abstract from new source	Out
ROA	R-09	Meldon Reservoir to Northcombe WTW pipeline	Out
ROA	R-10	Lee Moor quarries - abstract from new source	Out
ROA	R-11	River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May	In
ROA	R-12	Duckaller - lower groundwater level constraint	Out
ROA	R-13	Metherell Quarry - abstract from new source	Out
ROA	R-14	River Erme - remove monthly and annual abstraction limits	Out
ROA	R-15	River Yealm - remove monthly and annual abstraction limits	Out
ROA	R-16	Gammaton Reservoir - abstract from new source	Out
ROA	R-17	Meldon Pond - abstract from new source	Out
ROA	R-18	Red Lake & Left Lake - abstract from new source	Out
ROA	R-19	River Thrushel - abstract from new source	Out
ROA	R-20	Avon Reservoir - reduce compensation flow	In

ROA	R-21	Burrator Reservoir - reduce compensation flow	In
ROA	R-22	Fernworthy Reservoir - reduce compensation flow	In
ROA	R-23	Trenchford Reservoir - reduce compensation flow	In
ROA	R-24	Meldon Reservoir - reduce compensation flow	In
ROA	R-25	Roadford Reservoir - reduce compensation flow	In
ROA	R-26	Upper Tamar Lake - reduce compensation flow	In
ROA	R-27	Venford Reservoir - reduce compensation flow	Out
ROA	R-28	River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include November and December	Out
ROA	R-29	River Torridge - abstract from new source	Out
ROA	R-30	Wimbleball Reservoir to River Taw for abstraction at temporary WTW	Out
ROA	R-31	Rydon Springs - abstract from new source	Out
ROA	R-32	Bala Brook - abstract from new source	Out
ROA	R-33	River Bray - reduce prescribed flow	Out
ROA	R-34	River Swincombe - reduce prescribed flow	Out
ROA	R-35	River Dart - reduce prescribed flow	Out
ROA	R-36	River Erme - reduce prescribed flow	Out
ROA	R-37	River Tavy - reduce prescribed flow	Out
ROA	R-38	River Tamar for Mayflower WTW - reduce prescribed flow	Out
ROA	R-39	River Tamar to Roadford Reservoir - increase daily abstraction	Out
ROA	R-40	River Tamar to Roadford Reservoir - extend pumped storage abstraction season to include April and May	Out
ROA	R-41	Brandis booster pumping	Out
ROA	R-42	Reviewing and implementing actions to optimise current sources and network	Out
ROA	R-43	River Dart – reduce October prescribed flow	Out
ROA	R-44	Swincombe - reduce prescribed flow	Out
ROA	R-45	River Dart & Littlehempston boreholes - aggregate daily and annual licence limits	In
ROA	R-46	Moorcroft Quarry - abstract from new source	Out

ROA	R-47	Stop River Tavy HEP abstraction to increase available abstraction for supply	Out
ROA	R-48	Roadford Reservoir - reduce fish bank releases	In
ROA	R-49	Fernworthy Reservoir to Tottiford WTW pipeline improvements	Out
ROA	R-50	Upper Tamar Lake - increase annual licence limit	Out
ROA	R-51	Lower Tamar Lake - abstract from new source	Out
ROA	R-52	River Tamar to Roadford Reservoir - early commissioning	Out
ROA	R-53	Tamar WTW - supernatant returns	Out
WIMBLEBALL			
WIM	W-01	Quartermile Lane booster pumping	Out
WIM	W-02	Musbury booster pumping	Out
WIM	W-03	Wimbleball Reservoir - reduce compensation flow	In
WIM	W-04	Hook Springs - remove annual abstraction limit	Out
WIM	W-05	Wilmington Springs - remove annual abstraction limit	Out
WIM	W-06	Brampford Speke & Stoke Canon - abstract from new source	In
WIM	W-07	Otter Valley licences - increase annual abstraction limit	Out
WIM	W-08	Greatwell boreholes - stream support suspension	Out
WIM	W-09	River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May	In
WIM	W-10	Coleford borehole - abstract from new source	Out
WIM	W-11	Knowle borehole - abstract from new source	Out
WIM	W-12	River Exe for Allers WTW - reduce prescribed flow	Out
WIM	W-13	River Exe for Pynes WTW - reduce prescribed flow	Out
WIM	W-14	Squabmoor Reservoir - abstract from new source	Out
WIM	W-15	Increase depth of borehole pumps	Out
WIM	W-16	Increase Roadford WRZ to Wimbleball WRZ transfers	Out
WIM	W-17	Stop transfers from Wimbleball WRZ to Roadford WRZ	Out
WIM	W-18	Reviewing and implementing actions to optimise current sources and network	Out

WIM	W-19	Temporary booster pumping stations	Out
WIM	W-20	East Devon boreholes - increase annual abstraction limits	Out
WIM	W-21	Wistlandpound Reservoir - reduce compensation flow	Out
WIM	W-22	Wimbleball Reservoir - reduce fish bank releases	In
WIM	W-23	Greatwell 4C borehole - abstract from new source	Out
WIM	W-24	Colaton Raleigh boreholes - improved abstraction control	In
WIM	W-25	Dotton 1 borehole - improved abstraction control	Out
WIM	W-26	Wessex Water to reduce abstraction from Wimbleball Reservoir L1	In
WIM	W-27	Wessex Water to reduce abstraction from Wimbleball Reservoir L2	In
WIM	W-28	Wessex Water to reduce abstraction from Wimbleball Reservoir L3a	In
BRISTOL			
BRL	BR-01	System operation optimised on both cost and maintaining resources within zone 1	Out
BRL	BR-02	Increased monitoring and management of sources	Out
BRL	BR-03	Review planned outage program of work to minimise reductions in supply capability from outage	Out
BRL	BR-04	Minimise use of reservoir water and ensure balancing of reservoir drawdown	Out
BRL	BR-05	River Axe abstraction & transfer (within licence conditions)	Out
BRL	BR-06	Maximise Sharpness and Gloucester Canal	Out
BRL	BR-07	Maximise groundwater abstractions	Out
BRL	BR-08	Minimise reservoir compensation releases within licence conditions	Out
BRL	BR-09	Review availability of any mothballed/emergency sources and plan any mobilisation	Out
BRL	BR-10	Reduce bulk supplies within established agreement	In
BRL	BR-11	Minimise compensation releases within licence requirements	Out
BRL	BR-12	Optimise treatment works to reduce/minimise losses	Out
BRL	BR-13	Manage water treatment works to cope with reduced water quality	Out
BRL	BR-14	Review planned outage program of work to minimise reductions in supply capability from outage	Out
BRL	BR-15	Implement environmental monitoring in line with Monitoring Plan	Out

BRL	BR-16	Bring emergency/mothballed supply side options online where practicable	Out
BRL	BR-17	Postpone planned maintenance where possible to reduce planned outage	Out
BRL	BR-18	Prepare drought permit applications for supply side drought actions	Out
BRL	BR-19	Submit drought permits with a lead time to enable them to be implemented when drought management zone 5 is reached.	Out
BRL	BR-20	Continue environmental monitoring in line with Monitoring Plan	Out
BRL	BR-21	Once demand management options are in place, implement supply side options that require drought permits	Out
BRL	BR-22	Continue environmental monitoring in line with Monitoring Plan	Out
BRL	BR-23	Bring in extreme drought sources of supply online with customer notices in place if there is a risk of water quality issues	Out
BRL	BR-24	Managing draw off from reservoirs at low volume	Out
BRL	BR-25	Reduce bulk supplies with temporary variation to established agreement L2	In
BRL	BR-26	Honeyhurst & Rodney Stoke - abstract from new source	Out
BRL	BR-27a	Blagdon Reservoir - reduce compensation flow	In
BRL	BR-27b	Blagdon Reservoir - delay water bank releases	In
BRL	BR-28a	Chew Valley Lake - reduce compensation flow	In
BRL	BR-28b	Chew Valley Lake - delay water bank releases	In
BRL	BR-29	Chew Magna Reservoir - reduce compensation flow	In
BRL	BR-30	Cheddar Ponds - reduce compensation flow	In
BRL	BR-31a	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October	In
BRL	BR-31b	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May	In
BRL	BR-32	Alderley WTW - network improvements	Out
BRL	BR-33	Ozelworth Brook - reduce prescribed flow condition	Out
BRL	BR-34	Chelvey Well - reduce prescribed flow condition	Out
BRL	BR-35	Emergency Storage & zero compensation releases	Out
BRL	BR-36	Lowering pumps in boreholes	Out
BRL	BR-37	Cold Bath Springs - abstract from new source	Out
BRL	BR-38	Gurney Slade - abstract from new source	Out

BRL	BR-39	Honeyhurst & Rodney Stoke - increase daily abstraction limit	Out
BRL	BR-40	Banwell Springs - reduce compensation release	Out
BRL	BR-41	Litton Reservoir - reduce compensation release	Out
BRL	BR-42	Elwell - abstract from new source	Out
BRL	BR-43	Forum Springs optimisation	Out
BRL	BR-44	Reverse Forum WTW to Frome & Oldford WTWs transfer	Out
BRL	BR-45	Maximise Clevedon - resolve treated water network constraints	Out
BRL	BR-46	Maximise Oldford - resolve treated water network constraints	Out
BRL	BR-47	River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction	In
BRL	BR-48	Malmesbury boreholes - abstract from new source	Out
BRL	BR-49	Chew Stoke Stream - abstract from new source	Out
BRL	BR-50	River Avon at Bath to Chew Valley Reservoir	Out
BRL	BR-51	Cumberland Basin to Barrow 3 Reservoir	Out
BRL	BR-52	Long Newnton borehole 2 - abstract from new source	Out
BRL	BR-53	Chew Magna Reservoir to Chew Valley Lake transfer	Out
BRL	BR-54	Increase Cowbridge transfer from Wessex Water	In
BRL	BR-55	Reduce bulk supplies with temporary variation to established agreement L3a	In
BOURNEMOUTH			
BNW	BN-01	Wimborne borehole - abstract from new source	Out
BNW	BN-02	Stanbridge boreholes - increase daily abstraction limit to 25 Ml/d	Out
BNW	BN-03	Ibsley Lake - abstract from new source	Out
BNW	BN-04	River Stour at Longham - remove prescribed flow constraint	In
BNW	BN-05	Stanbridge boreholes - increase daily abstraction limit	In
BNW	BN-06	Reduce process losses across Bournemouth WRZ	Out
BNW	BN-07	Reviewing and implementing actions to optimise current sources and network	Out
BNW	BN-08	River Stour at Longham - increase daily abstraction within current licence limits	Out

BNW	BN-09	Stanbridge boreholes - increase annual abstraction limit	Out
BNW	BN-10	Woodgreen WTW boreholes - increase annual abstraction limit	Out
BNW	BN-11	River Avon at Knapp Mill WTW - increase annual abstraction limit	Out
BNW	BN-12	River Stour at Longham - increase weekly abstraction limit	In
BNW	BN-13	Stanbridge boreholes discharge to River Allen for abstraction at Longham Lakes	Out
BNW	BN-14	Reduce supply of treated water to large industrial customer	In
BNW	BN-15	Woodgreen WTW - additional booster pump for East of supply area	Out
BNW	BN-16	Reducing WTW losses	Out
ISLES OF SCILLY			
IoS	IS-01	Level 1 Drought actions with minor environmental impacts	Out
IoS	IS-02	Level 2 Drought actions with minor environmental impacts - tankering	Out
IoS	IS-03	Level 3 Drought actions	Out
IoS	IS-04	Moderate environmental impact drought permit and ordinary drought orders	Out
IoS	IS-05	Extreme Drought Management Supply Options	Out
IoS	IS-06	Extreme Drought Management Supply Options - St Mary's	Out
IoS	IS-07	Temporary sea desalination on each island	Out
IoS	IS-08	Bottled water	Out
IoS	IS-09	Temporary floating desalination, or desalination used on cruise ships	Out
IoS	IS-10	Buy long lead time items for desalination projects to reduce time to implement	Out
IoS	IS-11	Borehole opportunities either within existing licences or with permits	Out
IoS	IS-12	St Mary's - increase abstraction from boreholes within existing licence conditions	In
IoS	IS-13	St Mary's - increase abstraction from boreholes exceeding existing licence conditions	Out
IoS	IS-14	Tresco - increase abstraction from boreholes within existing licence conditions	In
IoS	IS-15	Tresco - increase abstraction from boreholes exceeding existing licence conditions	Out
IoS	IS-16	Bryher - increase abstraction from boreholes, but remain less than 20 m3/d	Out
IoS	IS-17	Bryher - increase abstraction from boreholes to greater than 20m3/d	Out

IoS	IS-18	St Martins - increase abstraction from boreholes to greater than 20m3/d	In
IoS	IS-19	St Agnes - increase abstraction from boreholes, but remain less than 20 m3/d	In
IoS	IS-20	St Agnes - increase abstraction from boreholes to greater than 20m3/d	Out
IoS	IS-21	Transfer 'spare' licence volume from Tresco (Borehole by lake) to other islands	Out
IoS	IS-22	Transfer water exceeding existing licence conditions from Tresco (Borehole by lake) to other islands	Out
IoS	IS-23	Tresco - Great Pool and/or Abbey Pool - abstract from new source	Out
IoS	IS-24	St Mary's - early deployment of direct sea intake to abstract for desalination	Out
IoS	IS-25	Tresco to Bryher temporary transfer pipeline	Out

A3.2.2. Preferred supply-side actions

Table 3.12: List of supply-side options retained for inclusion in preferred plan

WRZ	Action ID	Action Name	Action Type	Drought Level
COLLIFORD				
COL	C-02	College WTW - booster pumping to support Wendron WTW supply area	Internal Action	1
COL	C-03	River Fowey at Restormel - increase annual abstraction limit	Drought Permit	2
COL	C-04a	Stannon Lake - increase daily abstraction limit	Drought Permit	3a
COL	C-06	Colliford Reservoir - reduce compensation flow	Drought Permit	3a
COL	C-07a	Park Lake - increase daily abstraction limit	Drought Permit	2
COL	C-10	Drift Reservoir - reduce compensation flow	Drought Permit	3b
COL	C-11	Hawk's Tor Pit - abstract from new source	Drought Permit	2
COL	C-17	Stithians Reservoir - reduce compensation flow	Drought Permit	3b
COL	C-30	Siblyback Reservoir - reduce compensation flow	Drought Permit	3a
COL	C-37	River Cober at Wendron - increase annual abstraction limit	Drought Permit	2
COL	C-40	Colliford Reservoir - reduce fish bank releases	Local EA agreement	3b
ROADFORD				
ROA	R-07	Slade Reservoir - abstract from new source	Local EA agreement	2
ROA	R-11	River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May	Drought Permit	3a
ROA	R-20	Avon Reservoir - reduce compensation flow	Drought Permit	3b
ROA	R-21	Burrator Reservoir - reduce compensation flow	Drought Permit	3b
ROA	R-22	Fernworthy Reservoir - reduce compensation flow	Drought Permit	3b
ROA	R-23	Trenchford Reservoir - reduce compensation flow	Drought Permit	3b
ROA	R-24	Meldon Reservoir - reduce compensation flow	Drought Permit	3b
ROA	R-25	Roadford Reservoir - reduce compensation flow	Drought Permit	2
ROA	R-26	Upper Tamar Lake - reduce compensation flow	Drought Permit	3b
ROA	R-45	River Dart & Littlehempston boreholes - aggregate daily and annual licence limits	Drought Permit	2
ROA	R-48	Roadford Reservoir - reduce fish bank releases	Local EA agreement	3b

WIMBLEBALL				
WIM	W-03	Wimbleball Reservoir - reduce compensation flow	Drought Permit	2
WIM	W-06	Brampford Speke & Stoke Canon - abstract from new source	Drought Order	3a
WIM	W-09	River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May	Drought Permit	2
WIM	W-22	Wimbleball Reservoir - reduce fish bank releases	Drought Permit	3b
WIM	W-24	Colaton Raleigh boreholes - improved abstraction control	Internal Action	2
WIM	W-26	Wessex Water to reduce abstraction from Wimbleball Reservoir L1	External Action	1
WIM	W-27	Wessex Water to reduce abstraction from Wimbleball Reservoir L2	External Action	2
WIM	W-28	Wessex Water to reduce abstraction from Wimbleball Reservoir L3a	External Action	3a
BRISTOL				
BRL	BR-10	Reduce bulk supplies within established agreement	External Action	1
BRL	BR-25	Reduce bulk supplies with temporary variation to established agreement L2	External Action	2
BRL	BR-27a	Blagdon Reservoir - reduce compensation flow	Drought Permit	3a
BRL	BR-27b	Blagdon Reservoir - delay water bank releases	Local EA agreement	1
BRL	BR-28a	Chew Valley Lake - reduce compensation flow	Drought Permit	3a
BRL	BR-28b	Chew Valley Lake - delay water bank releases	Local EA agreement	1
BRL	BR-29	Chew Magna Reservoir - reduce compensation flow	Drought Permit	3a
BRL	BR-30	Cheddar Ponds - reduce compensation flow	Drought Permit	3a
BRL	BR-31a	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October	Drought Permit	3a
BRL	BR-31b	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May	Drought Permit	3a
BRL	BR-47	River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction	Drought Permit	2
BRL	BR-54	Increase Cowbridge transfer from Wessex Water	External Action	2
BRL	BR-55	Reduce bulk supplies with temporary variation to established agreement L3a	External Action	3a
BOURNEMOUTH				
BNW	BN-04	River Stour at Longham - remove prescribed flow constraint	Drought Permit	3b
BNW	BN-05	Stanbridge boreholes – increase daily abstraction limit	Drought Permit	3a
BNW	BN-12	River Stour at Longham - increase weekly abstraction limit	Drought Permit	3a
BNW	BN-14	Reduce supply of treated water to large industrial customer	External Action	1

ISLES OF SCILLY				
IoS	IS-12	St Mary's - increase abstraction from boreholes within existing licence conditions	Internal Action	1
IoS	IS-14	Tresco - increase abstraction from boreholes within existing licence conditions	Internal Action	1
IoS	IS-18	St Martins - increase abstraction from boreholes to greater than 20m3/d	Drought Permit	3a
IoS	IS-19	St Agnes - increase abstraction from boreholes, but remain less than 20 m3/d	Internal Action	1

A3.2.3. Screened out/rejected supply-side actions

Table 3.13: List of supply-side options screened out of preferred plan

WRZ	Action ID	Action Name	Reason for rejection/screening out
COLLIFORD			
COL	C-01	De Lank WTW - booster pumping to support Lowermoor WTW supply area	Depends on water available at De Lank, more operational analysis and modelling required.
COL	C-04b	Stannon Lake - lower hands off level	Under investigation, not currently in preferred plan
COL	C-05	Porth Reservoir & Porth Stream - abstract from new source	Have new licence, once new WTW commissioned abstraction will be BAU
COL	C-07b	Park Lake - lower hands off level	Under investigation, not currently in preferred plan
COL	C-08	Blackpool Pit - abstract from new source	Licensed and in use. BAU.
COL	C-09	Crowdy Reservoir - reduce compensation flow	Low benefit and likely high environmental impact. Compensation flow Q97. River Camel SAC
COL	C-12	Leswidden Pool - abstract from new source	High environmental impact. No infrastructure.
COL	C-13	Porth Reservoir - reduce compensation flow	Low benefit and likely high environmental impact. Comp flow Q99
COL	C-14	River Fowey for St Cleer WTW - remove maintenance flow condition	Low benefit
COL	C-15	River Hayle - abstract from new source	No infrastructure. WRMP option.
COL	C-16	Siblyback Reservoir - reduce compensation flow by 50%	Low benefit and likely high environmental impact. Comp flow Q99
COL	C-18	Boswyn Stream, Cargenwyn Reservoir and Carwynnen Stream - abstract from new source	No abstraction infrastructure on site or network connectivity. WRMP option.
COL	C-19	River Cober - reduce prescribed flow	Low benefit and likely high environmental impact. Prescribed flow Q99
COL	C-20	River Kennal - reduce prescribed flow	Low benefit and likely high environmental impact. Prescribed flow Q99
COL	C-21	River Fowey for Restormel WTW - reduce prescribed flow	Low benefit and likely high environmental impact. Prescribed flow Q97
COL	C-22	Withey Brook - reduce prescribed flow	Low benefit and likely high environmental impact. Prescribed flow Q99
COL	C-23	River Fowey for St Cleer WTW - reduce prescribed flow	Low benefit and likely high environmental impact. Prescribed flow Q99

COL	C-24	Plymouth to Saltash booster pumping	Increase in transfer flow is now BAU.
COL	C-25	Reviewing and implementing actions to optimise current sources and network	Replaced by individual actions
COL	C-26	River Fowey for St Cleer WTW - transfer annual licence volume to Restormel WTW	Not a separate scheme
COL	C-27	Porth Reservoir - supply releases	Licence was granted recently with no supply releases and infrastructure / weir issues.
COL	C-28	Porth Stream - abstraction April to September	Licence was granted recently with no supply releases, significant summer abstraction from Porth Stream only feasible with supporting supply releases.
COL	C-29a	Blackpool Pit - increase daily abstraction limit	2025/26 winter recharge data needs to be reviewed and stakeholder engagement required.
COL	C-29b	Blackpool Pit - lower hands off level	2025/26 winter recharge data needs to be reviewed and stakeholder engagement required.
COL	C-31	River Fowey for Restormel WTW - remove % take condition on licence	EA had significant environmental concerns and 2022 data showed there would have been little benefit
COL	C-32	River Kennal - remove % take condition on licence	EA had significant environmental concerns and 2022 data showed there would have been little benefit
COL	C-33	Siblyback Reservoir - increase maximum release volume	In dry conditions storage needs to be conserved to allow supply releases for Trekeivesteps and Bastreet abstractions
COL	C-34	Colliford Reservoir release to Restormel WTW using pumped storage pipeline	WRMP option. Can't use this pipeline when abstracting from Blackpool because uses same pipe
COL	C-35	River Fowey for St Cleer WTW & Withey Brook - increase aggregated annual licence limit	Option limited by Siblyback storage and closer to limit in wetter years
COL	C-36	Colliford Reservoir - increase annual licence limit	Generally closer to limit in wetter years (supplying St Cleer and De Lank WTWs)
COL	C-38	Drift Reservoir - increase annual licence limit	Limited by local demand and Drift Reservoir storage
COL	C-39	Siblyback Reservoir to Bastreet WTW - increase annual licence limit	Requires Bastreet WTW output to be increased to become viable
COL	C-41	River Kennal to Stithians Reservoir - pumped storage improvements	Likely WRMP option. Would take too long to deliver in drought due to complexity of current infrastructure constraints.
COL	C-42	Blackpool Pit - pumped storage	Suitable waterbodies are too far away, require full abstraction and pipeline infrastructure, and third-party ownership negotiation
COL	C-45	River Kennal to Stithians Reservoir - asset improvements	Solution to screen blockages required, likely WRMP option.
COL	C-46	College WTW - supernatant returns	Need better understanding of savings and requirements to implement

COL	C-47	River Cober for Wendron WTW - river transfer losses	Likely to require pipework to save water losses rather than utilising river transfer. Needs investigation to understand benefits, likely WRMP option.
COL	C-48	Stithians WTW - booster pump	Scheme now in delivery
ROADFORD			
ROA	R-01	Burrator Reservoir - low level pumps	No DO benefit. Pumps are now permanent so BAU.
ROA	R-02	Crabadon Cross booster pumping	BAU utilisation during dry weather periods for resilience
ROA	R-03	Dennis Down booster pumping	This is now a BAU pumping arrangement
ROA	R-04	Moortown booster pumping	This is now a BAU pumping arrangement
ROA	R-05	Sindercombe booster pumping	Booster unit being used at Moortown. Requires spare water from Allers WTW which would be unlikely during drought.
ROA	R-06	Follygate booster pumping	Asset refurbishment required. Could lead to discoloration events, would need planning and trialling.
ROA	R-08	Challacombe Reservoir - abstract from new source	Small yield, no licence, infrastructure needed to abstract
ROA	R-09	Meldon Reservoir to Northcombe WTW pipeline	Would take too long to implement in drought. WRMP supply option
ROA	R-10	Lee Moor quarries - abstract from new source	Would take too long to implement in drought. Need lease agreement in place to be viable.
ROA	R-12	Duckaller - lower groundwater level constraint	Estates issues and complex licence including provision of water to third parties. Treatment needs WRMP option
ROA	R-13	Metherell Quarry - abstract from new source	Temporary abstraction and transfer infrastructure would need to be installed. Access difficult due to remote location. Low yield.
ROA	R-14	River Erme - remove monthly and annual abstraction limits	Dartmoor SAC. Water availability limited in drought
ROA	R-15	River Yealm - remove monthly and annual abstraction limits	Dartmoor SAC. Licence likely to be revoked.
ROA	R-16	Gammaton Reservoir - abstract from new source	Temporary abstraction and transfer infrastructure would be needed
ROA	R-17	Meldon Pond - abstract from new source	Yield uncertain in drought, water quality risk, no abstraction infrastructure.
ROA	R-18	Red Lake & Left Lake - abstract from new source	Dartmoor SAC. Abstraction and transfer infrastructure required
ROA	R-19	River Thrushel - abstract from new source	Little water available in low flow periods.
ROA	R-27	Venford Reservoir - reduce compensation flow	Compensation flow Q99, low yield. Dartmoor SAC

ROA	R-28	River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include November and December	No longer required as abstraction Nov-Dec allowed within licence.
ROA	R-29	River Torridge - abstract from new source	Temporary pipelines and WTW needed at disused WTW site. Intake refurbishment needed. Key site for Pearl Mussel conservation work.
ROA	R-30	Wimbleball Reservoir to River Taw for abstraction at temporary WTW	Transfer limited by storage in Wimbleball. Temporary river intake, pipelines and WTW needed at disused WTW site.
ROA	R-31	Rydon Springs - abstract from new source	No infrastructure at site, likely to be no water available in drought
ROA	R-32	Bala Brook - abstract from new source	No infrastructure at site, likely to be no water available in drought
ROA	R-33	River Bray - reduce prescribed flow	Likely to be little water available to abstract. Environmental impacts are likely to be high.
ROA	R-34	River Swincombe - reduce prescribed flow	Likely to be little water available to abstract. Environmental impacts are likely to be high.
ROA	R-35	River Dart - reduce prescribed flow	Likely to be little water available to abstract. Environmental impacts are likely to be high.
ROA	R-36	River Erme - reduce prescribed flow	Likely to be little water available to abstract. Environmental impacts are likely to be high.
ROA	R-37	River Tavy - reduce prescribed flow	Likely to be little water available to abstract. Environmental impacts are likely to be high.
ROA	R-38	River Tamar for Mayflower WTW - reduce prescribed flow	In severe drought, even with reduced prescribed flows, likely to be little water available to abstract. Environmental impacts are likely to be high.
ROA	R-39	River Tamar to Roadford Reservoir - increase daily abstraction	Abstraction licence application in progress at this site - remove from draft plan until licence and discharge permit details confirmed
ROA	R-40	River Tamar to Roadford Reservoir - extend pumped storage abstraction season to include April and May	Abstraction licence application in progress at this site - remove from draft plan until licence and discharge permit details confirmed
ROA	R-41	Brandis booster pumping	BAU action
ROA	R-42	Reviewing and implementing actions to optimise current sources and network	Replaced by individual actions
ROA	R-43	River Dart – reduce October prescribed flow	Environmental impact and likely low benefit
ROA	R-44	Swincombe - reduce prescribed flow	Uncertain benefit, Venford is a single season reservoir which refills every year. Condition only applies Oct-Jun
ROA	R-46	Moorcroft Quarry - abstract from new source	Third party location too far away from existing WTW/network. Would need complete abstraction infrastructure

ROA	R-47	Stop Tavy HEP abstraction at Tavistock for extra abstraction at Lopwell	Abstraction will have stopped for HEP before low flows limit Lopwell abstraction.
ROA	R-49	Fernworthy Reservoir to Tottiford WTW pipeline improvements	WRMP Option, would take too long to deliver in drought as requires 16km of pipeline to be cleared or replaced.
ROA	R-50	Upper Tamar Lake - increase annual licence limit	This option is not included in the draft drought plan because it needs more modelling to confirm the potential benefit. Ongoing work.
ROA	R-51	Lower Tamar Lake - abstract from new source	Unlikely to be a repeat of specific 2022 drought situation as network improvements have been made to be able to transfer more water into area from WTWs which have been upgraded to be able to treat poorer quality water
ROA	R-52	River Tamar to Roadford Reservoir - early commissioning	Dependant on licence and would require discharge permit so not considered an action
ROA	R-53	Tamar WTW - supernatant returns	WRMP29 programme, need better understanding of savings and requirements to implement
WIMBLEBALL			
WIM	W-01	Quartermile Lane booster pumping	This is now a BAU pumping arrangement
WIM	W-02	Musbury booster pumping	Not used to date due to water quality risk. Needs flushing and discharge plan. Water may not be available during drought.
WIM	W-04	Hook Springs - remove annual abstraction limit	Yield constrained, particularly at times when other nearby boreholes are low.
WIM	W-05	Wilmington Springs - remove annual abstraction limit	Yield constrained in dry weather
WIM	W-07	Otter Valley licences - increase annual abstraction limit	Screened out because waiting to see conditions on new Otter Valley licences
WIM	W-08	Greatwell boreholes - stream support suspension	Screened out because waiting to see conditions on new Otter Valley licences
WIM	W-10	Coleford borehole - abstract from new source	Low yield and radioactivity risk
WIM	W-11	Knowle borehole - abstract from new source	Low yield and radioactivity risk
WIM	W-12	River Exe for Allers WTW - reduce prescribed flow	Likely to be little water available during drought conditions
WIM	W-13	River Exe for Pynes WTW - reduce prescribed flow	Likely to be little water available during drought conditions. More likely to be needed if lose Licence of Right
WIM	W-14	Squabmoor Reservoir - abstract from new source	No treatment infrastructure, water quality concerns.
WIM	W-15	Increase depth of borehole pumps	Screened out until specific sites identified
WIM	W-16	Increase Roadford WRZ to Wimbleball WRZ transfers	This is a BAU activity, the balance of transfers varies within and between years.

WIM	W-17	Stop transfers from Wimbleball WRZ to Roadford WRZ	This is a BAU activity, the balance of transfers varies within and between years.
WIM	W-18	Reviewing and implementing actions to optimise current sources and network	Replaced by individual actions
WIM	W-19	Temporary booster pumping stations	Replaced by individual actions
WIM	W-20	East Devon boreholes - increase annual abstraction limits	Most likely to be yield limited in dry weather. Review once changes to Otter Valley licences known
WIM	W-21	Wistlandpound Reservoir - reduce compensation flow	Compensation flow >Q99.9. Low benefit, comp flow = 0.7 Ml/d
WIM	W-23	Greatwell 4C borehole - abstract from new source	Likely to be included in new licence, therefore no longer a drought option.
WIM	W-25	Dotton 1 borehole - improved abstraction control	Delivered by DWS, now BAU.
BRISTOL			
BRL	BR-01	System operation optimised on both cost and maintaining resources within zone 1	BAU
BRL	BR-02	Increased monitoring and management of sources	BAU
BRL	BR-03	Review planned outage program of work to minimise reductions in supply capability from outage	Not a specific action - this would apply to all WRZ in early drought
BRL	BR-04	Minimise use of reservoir water and ensure balancing of reservoir drawdown	Not a specific action - this would apply to all WRZ in early drought
BRL	BR-05	River Axe abstraction & transfer (within licence conditions)	BAU
BRL	BR-06	Maximise Sharpness and Gloucester Canal	BAU
BRL	BR-07	Maximise groundwater abstractions	Not a specific action - this would apply to all WRZ in early drought
BRL	BR-08	Minimise reservoir compensation releases within licence conditions	General statement - specific schemes detailed below
BRL	BR-09	Review availability of any mothballed/emergency sources and plan any mobilisation requirements	General statement - specific schemes detailed below
BRL	BR-11	Minimise compensation releases within licence requirements	Duplicate of BR-08
BRL	BR-12	Optimise treatment works to reduce/minimise losses	Not a specific action - this would apply to all WRZ in early drought

BRL	BR-13	Manage water treatment works to cope with reduced water quality	Not a specific action - this would apply to all WRZ in early drought
BRL	BR-14	Review planned outage program of work to minimise reductions in supply capability from outage	Duplicate of BR-03
BRL	BR-15	Implement environmental monitoring in line with Monitoring Plan	See specific scheme requirements
BRL	BR-16	Bring emergency/mothballed supply side options online where practicable	General statement - specific schemes detailed below
BRL	BR-17	Postpone planned maintenance where possible to reduce planned outage	Duplicate of BR-03
BRL	BR-18	Prepare drought permit applications for supply side drought actions	General statement - specific schemes detailed below
BRL	BR-19	Submit drought permits with a lead time to enable them to be implemented when drought management zone 5 is reached.	General statement - specific schemes detailed below
BRL	BR-20	Continue environmental monitoring in line with Monitoring Plan	See specific scheme requirements
BRL	BR-21	Once demand management options are in place, implement supply side options that require drought permits	General statement - specific schemes detailed below
BRL	BR-22	Continue environmental monitoring in line with Monitoring Plan	See specific scheme requirements
BRL	BR-23	Bring in extreme drought sources of supply online with customer notices in place if there is a risk of water quality issues	General statement - specific schemes detailed below
BRL	BR-24	Managing draw off from reservoirs at low volume	Not a specific action - this would apply to all WRZ in early drought
BRL	BR-26	Honeyhurst & Rodney Stoke - abstract from new source	Honeyhurst borehole being returned to service. Will either be BAU or not feasible based on testing.
BRL	BR-32	Alderley WTW - network improvements	Not practical to resolve network constraints
BRL	BR-33	Ozelworth Brook - reduce prescribed flow condition	Partially dependant on BR-32 to maximise benefit. Little benefit, even in low flows prescribed flow is rarely limiting factor.
BRL	BR-34	Chelvey Well - reduce prescribed flow condition	Issues with flow gauging for river Kenn, benefit uncertain. WINEP scheme
BRL	BR-35	Emergency Storage & zero compensation releases	Emergency Planning outside scope of Drought Plan.

BRL	BR-36	Lowering pumps in boreholes	Screened out, specific sites identified
BRL	BR-37	Cold Bath Springs - abstract from new source	Infrastructure requirements and water quality concerns
BRL	BR-38	Gurney Slade - abstract from new source	Infrastructure requirements and water quality concerns
BRL	BR-39	Honeyhurst & Rodney Stoke - increase daily abstraction limit	Prioritising running within current licence conditions
BRL	BR-40	Banwell Springs - reduce compensation release	Low benefit
BRL	BR-41	Litton Reservoir - reduce compensation release	Compensation flow Q99, environmental impact
BRL	BR-42	Elwell - abstract from new source	Low benefit, environmental impact
BRL	BR-43	Forum Springs optimisation	Membranes replaced in September 2025
BRL	BR-44	Reverse Forum WTW to Frome & Oldford WTWs transfer	Requires modelling and potential yield estimate, wider change to system operation than drought plan
BRL	BR-45	Maximise Clevedon - resolve treated water network constraints	Benefit reduced by requirement to flush wider system, better to include as a BAU operational activity.
BRL	BR-46	Maximise Oldford - resolve treated water network constraints	Membranes replaced in September 2025. To abstract more would require significant additional infrastructure
BRL	BR-48	Malmesbury boreholes - abstract from new source	Review after AMP8 WINEP, also abstraction for stream support
BRL	BR-49	Chew Stoke Stream - abstract from new source	No abstraction infrastructure on site. Chew Valley Lake SPA
BRL	BR-50	River Avon at Bath to Chew Valley Reservoir	No infrastructure, water quality concerns
BRL	BR-51	Cumberland Basin to Barrow 3 Reservoir	Time to implement including requirements for civil and mechanical works
BRL	BR-52	Long Newnton borehole 2 - abstract from new source	Ongoing work will either be completed at which point becomes BAU, or will be considered not feasible
BRL	BR-53	Chew Magna Reservoir to Chew Valley Lake transfer	Will become BAU once flume installed
BOURNEMOUTH			
BNW	BN-01	Wimborne borehole - abstract from new source	No assets on site, network issues. Doesn't mitigate short term demand risk because it would take too long to implement.
BNW	BN-02	Stanbridge boreholes - increase daily abstraction limit to 25 Ml/d	Borehole 3 out of service, limiting max abstraction to 17.5 Ml/d. River Allen is a chalk stream. Yield uncertain in severe drought.
BNW	BN-03	Ibsley Lake - abstract from new source	Requires abstraction infrastructure and temporary pipeline. Eutrophic waterbody. WRMP and WINEP.

BNW	BN-06	Reduce process losses across Bournemouth WRZ	Environmental concerns regarding reducing discharge to Bourne stream from Alderney & uncertain benefit for Alderney and Knapp Mill due to new WTW delivery
BNW	BN-07	Reviewing and implementing actions to optimise current sources and network	Not a specific action - this would apply to all WRZ in early drought
BNW	BN-08	River Stour at Longham - increase daily abstraction within current licence limits	Limited to 44 Ml/d due to prescribed flow condition at low flows. Not worth carrying out action unless BN04 implemented to remove prescribed flow constraint
BNW	BN-09	Stanbridge boreholes - increase annual abstraction limit	Primary constraint at Standbridge is daily limit
BNW	BN-10	Woodgreen WTW boreholes - increase annual abstraction limit	Yield limited in dry years
BNW	BN-11	River Avon at Knapp Mill WTW - increase annual licence limit	Not licence constrained in 2022, could be impacted by breach
BNW	BN-13	Stanbridge boreholes discharge to River Allen for abstraction at Longham Lakes	Would need BN04 implemented for pumping infrastructure capacity at Longham to be increased to be able to abstract this - unlikely to be able to achieve in timescale
BNW	BN-15	Woodgreen WTW - additional booster pump for East of supply area	Risks bursting main, VSD now installed to better control flow
BNW	BN-16	Reducing WTW losses	Environmental concerns regarding reducing discharge to Bourne stream from Alderney & uncertain benefit for Alderney and Knapp Mill due to new WTW delivery
ISLES OF SCILLY			
IoS	IS-01	Level 1 Drought actions with minor environmental impacts	BAU
IoS	IS-02	Level 2 Drought actions with minor environmental impacts - tankering	Water quality concerns. Uncertain where this solution could be deployed due to demand. Implementation restricted by weight limits on boats and jetties etc, not feasible to land.
IoS	IS-03	Level 3 Drought actions	Replaced by individual actions
IoS	IS-04	Moderate environmental impact drought permits and ordinary drought orders	SSSIs, infrastructure needs and no power, water quality issues. WRMP24 Drought option dC2
IoS	IS-05	Extreme Drought Management Supply Options	Replaced by specific actions
IoS	IS-06	Extreme Drought Management Supply Options - St Mary's	Joaneys Well abstraction environmental threshold to be reviewed with EA, unlikely to be able to significantly increase abstraction in drought because in 2022 well ran dry.
IoS	IS-07	Temporary sea desalination on each Island	Long delivery timescales. Regulation 31 restriction. Permanent desalination schemes will be delivered.

IoS	IS-08	Bottled water	Timing would be equivalent to standpipes on the mainland. This is a Level 4 emergency plan action.
IoS	IS-09	Temporary floating desalination, or desalination used on cruise ships.	Not practical. Will not be required once permanent desalination implemented
IoS	IS-10	Buy long lead items for desalination projects to reduce time to implement.	Only relevant if temporary desalination scheme to buy assets ahead of permanent desalination implementation. Regulation 31 restriction
IoS	IS-11	Borehole opportunities either within existing licences or with permits	Replaced by individual actions
IoS	IS-13	St Mary's - increase abstraction from boreholes exceeding existing licence conditions	Due to WTW output constraint and blending requirement you would never go above licence conditions.
IoS	IS-15	Tresco - increase abstraction from boreholes exceeding existing licence conditions	Likely to be no water available without impacting on SSSI
IoS	IS-16	Bryher - increase abstraction from boreholes, but remain less than 20 m3/d	No water available in dry conditions
IoS	IS-17	Bryher - increase abstraction from boreholes to greater than 20m3/d	No water available in dry conditions
IoS	IS-20	St Agnes - increase abstraction from boreholes to greater than 20m3/d	WTW can only treat up to 12 m^3/d. Can only increase from ~ 9 - 12 m^3/d.
IoS	IS-21	Transfer 'spare' licence volume from Tresco (Borehole by lake) to other islands	Water quality concerns. Uncertain where this solution could be deployed due to demand. Implementation restricted by weight limits on boats and jetties etc, not feasible to land.
IoS	IS-22	Transfer water exceeding existing licence conditions from Tresco (Borehole by lake) to other islands	Water quality concerns. Uncertain where this solution could be deployed due to demand. Implementation restricted by weight limits on boats and jetties etc, not feasible to land.
IoS	IS-23	Tresco - Great Pool and/or Abbey Pool - abstract from new source	Major environmental impact. Infrastructure isn't in place.
IoS	IS-24	St Mary's - early deployment of direct sea intake to abstract for desalination	Licence was varied in 2023 to extend period from March to November. This extended period (including Mar and Nov) was what this action was included for.
IoS	IS-25	Tresco to Bryher temporary transfer pipeline	Infrastructure and SAC/SPA. WRMP/AMP8 option.

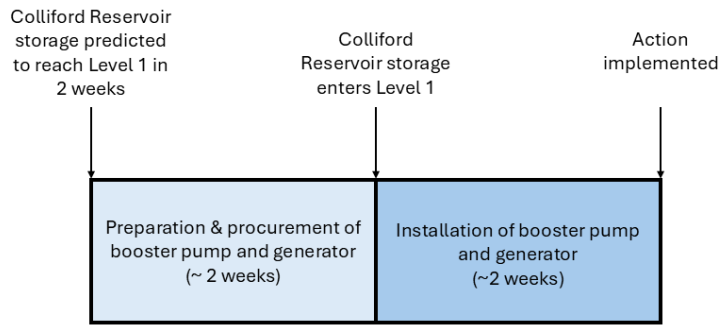
A3.2.4. Preferred supply-side actions summaries

During the action screening process, the following standard assumptions and comments apply for all actions unless stated otherwise:

- They are feasible to implement quickly enough to be useful in drought timescales, i.e. normally within a maximum of a couple of months.
- Hydrological & water resource modelling has indicated water would be available and that it could be effectively utilised to provide a net benefit within the water resource system. However, expected yields stated are generally average or maximum estimates. So, depending on the exact conditions encountered in a real drought it may be that some actions would not be as effective as estimated and therefore we would not choose to implement these.
- Assumes that short-term operational issues such as equipment failure or temporary water quality issues do not significantly impact yields.
- Key concerns identified by the current stage of environmental assessment are indicated for each action. See Appendix 9 for more detailed Environmental Assessment Summaries for each action, which include risks, potential mitigation measures, and further monitoring & investigation required.

A3.2.1. Colliford WRZ

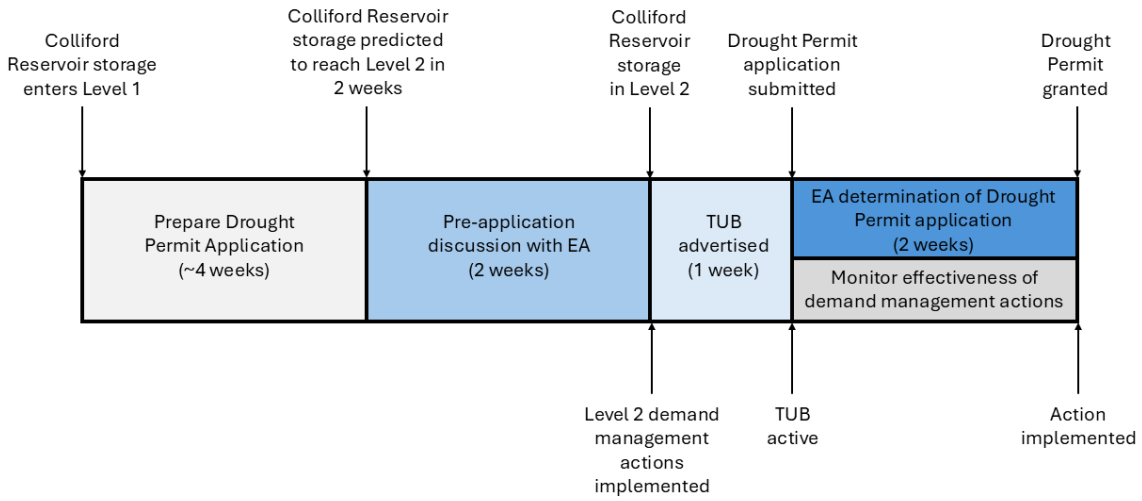
A3.2.1.1. C-02: College WTW - booster pumping to support Wendron WTW supply area

C-02: College WTW - booster pumping to support Wendron WTW supply area	
Description	Installation of temporary booster pump and generator to allow treated water to be pumped from College WTW to nearby service reservoir, which is normally supplied by Stithians WTW and supports the Wendron WTW supply area. This is beneficial because College WTW maximum output is often higher than the demand in the local area. Whereas Wendron WTW output is limited by the annual limit on its abstraction licence, and Stithians WTW output is limited by Stithians Reservoir storage. Support for Wendron supply area is normally provided from Stithians WTW (abstracted from Stithians Reservoir) or Restormel WTW (abstracted from River Fowey with supply releases from Colliford Reservoir).
Location	Colliford WRZ
Action Type	Internal Action
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Action can be implemented as soon as booster pump and generator is installed, which is expected to take approximately 2 weeks.
Benefit Delivered	Immediately as long as College WTW output exceeds local area demand.
Duration	Up to 6 months
Yield	Approximately 0.5 Ml/d. This would reduce the treated water from Stithians or Restormel WTWs needing to be transferred into the Wendron WTW supply area. Ultimately this helps preserve Stithians Reservoir and Colliford Reservoir storage. Based on achievable maximum transfer with other current infrastructure constraints and College WTW maximum output. It is assumed this action will be implemented early in a drought and could be active for approximately 6 months. The exact dates would vary year to year based on the hydrological conditions.

Action Timing	Some support is generally required to the Wendron supply area from Stithians and/or Restormel WTWs all year, so this action would be effective and could carry on until Stithians and Colliford Reservoir storages have recovered to a suitable level. In a very severe and/or prolonged drought it is possible this action may have to cease if College Reservoir storage becomes too low and abstraction needs to be reduced, however in most modelled scenarios this is not the key constraint of the system. No negative environmental impact of this action is expected at any time of year.	
Permissions Required	None	
Interested Third Parties	• No impact on other Water Companies or NAVs. • No consultation required with any other external parties.	
Action Group	COL-L1	Colliford Level 1 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action will be beneficial depends on when Stithians and/or Colliford Reservoir supply releases are made, which varies between years based on river flow conditions
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action will still comply with all conditions on current abstraction licences and abstractions will not differ significantly from recent actual volumes in drier years. So, it is not expected there will be any additional negative environmental impact from this action.	

A3.2.1.2. C-03: River Fowey at Restormel - increase annual abstraction limit

C-03: River Fowey at Restormel - increase annual abstraction limit	
Description	Increase the Restormel abstraction licence annual limit to enable greater abstraction for winter pumped storage to Colliford Reservoir. The current abstraction licence allows abstraction from the River Fowey for transfer to Colliford Reservoir through existing infrastructure, which normally takes place during November to March. The abstraction volume is constrained primarily by an annual limit of 28,900 Ml total combined abstraction for supply and transfer.
Location	Colliford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented during November to March after Drought Permit is granted.
Benefit Delivered	Immediate during November to March
Duration	Up to 6 months
Yield	40 Ml/d between November to March, direct benefit to Colliford Reservoir storage from addition of transferred water. Therefore, increasing annual abstraction limit by 2440 Ml for November to December of Year 1 licence, and by 3600 Ml for January to March of Year 2 licence. Based on achievable maximum daily abstraction with current infrastructure. It is proposed to maintain all other conditions on the current abstraction licence, such as prescribed flow and percentage take, so abstraction will be limited if natural river flows are low, but this is very unlikely to be a limiting factor at this time of year.
Action Timing	This action will be implemented between November and March, when it will be effective to increase Colliford



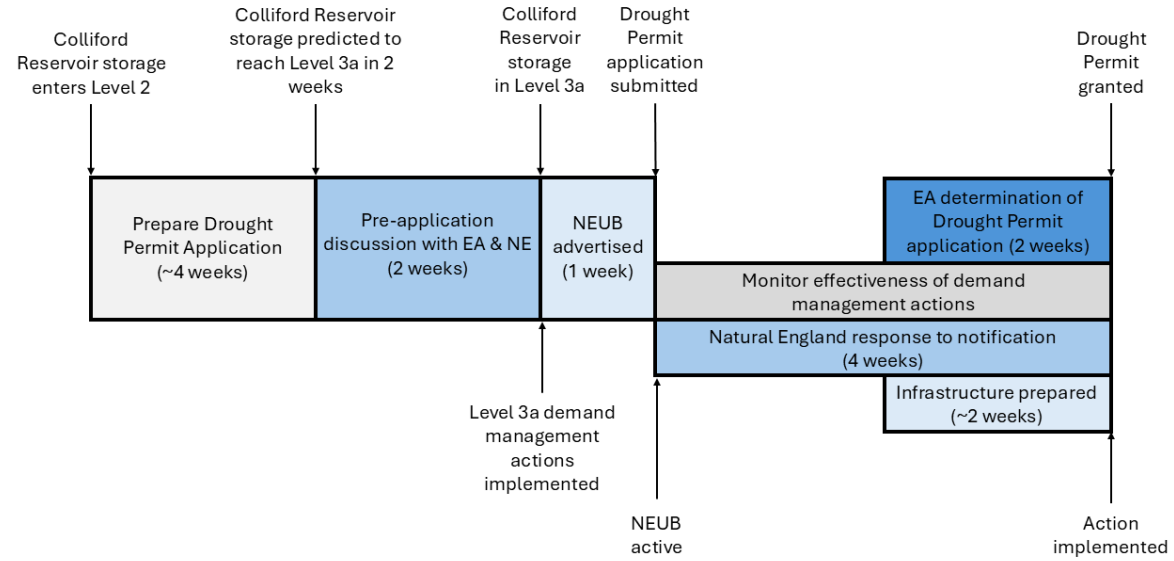
	Reservoir storage after/during a long-running drought. It will only be effective if river flow is high enough to allow abstraction above the prescribed flow and supply releases are not required from Colliford, but these are unlikely to be constraints during this time of year. It is believed that increasing the annual limit and carrying out additional abstraction during November to March is likely to have less negative environmental impact than alternatives such as increasing daily abstraction or increasing abstraction during summer months when river flows are low. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	

Interested Third Parties	• No impact on other Water Companies or NAVs.
	• Local Authority: Cornwall Council
	• Organisations who made representations regarding 2022 Restormel Drought Permit:
	  ○ Fowey Rivers Association
	  ○ South West Rivers Association
	  ○ Liskeard and District Angling Club
	  ○ Restormel Anglers Ltd	

Action Group	COL-L2	Colliford Level 2 actions
Risks	**Environment**	AMP8 WINEP investigation for River Fowey underway, which may result in changes to reservoir release profiles and abstractions within the River Fowey catchment
	Social & Economic	No known significant risks
	Resource	Available abstraction varies between years based on river flow conditions
	Interaction with other actions	Other actions relate to Colliford or Siblyback Reservoirs (C-06, C-11, C-30, C-40), but none should impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor.	

	A drought permit was successfully applied for and used in 2022/23 when Colliford Reservoir storage was in Drought level 2. The associated EAR found that "the effect of the drought permit is predicted to be minor on almost all receptors in comparison with the baseline, with the exception of Moderate effects predicted on fish passage and habitat availability for juvenile lamprey." A retrospective review of fish movement data identified lower fish counts and early smolt migration during this period but couldn't determine if the additional abstraction influenced this beyond the impact of the prevailing dry conditions. The 2022/23 EAR would need to be reviewed and appropriately updated before applying for the next drought permit, including the latest additional baseline data. Specifically, this would aim to address EA feedback provided for the previous EAR including increased fisheries baseline data. Generally increasing annual abstraction limits are assumed to be less environmentally damaging than changes to other licence conditions such as daily limits or prescribed flow. This is particularly the case for this scheme where most of the additional abstraction is expected to take place over the winter when river flows are naturally higher, and most of the abstraction will be transferred within the same catchment to Colliford Reservoir. A significant increase in INNS risk is not expected relative to typical current use of this abstraction for transfer to Colliford Reservoir, which is used in most normal to dry years. No new pathways are being introduced, and the abstraction will be transferred within the same catchment to Colliford Reservoir. Changes to water depth and wetted area in the River Fowey and Colliford Reservoir would be within the normal range of variation during and between years. This scheme would help increase storage in Colliford Reservoir, which would return conditions closer to a more typical hydrological year and associated typical INNS risk from this abstraction / transfer as used in non-drought conditions.

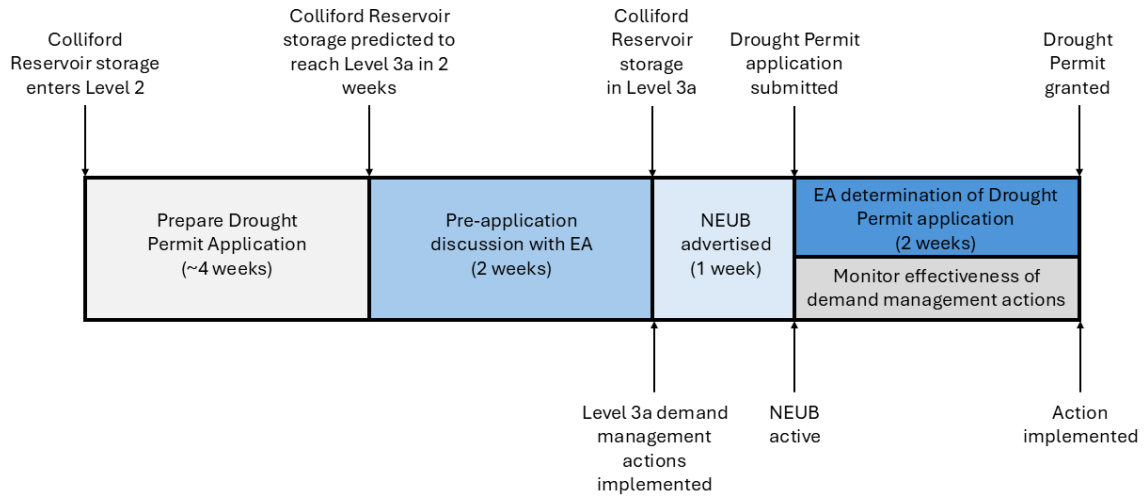
A3.2.1.3. C-04a: Stannon Lake - increase daily abstraction limit

C-04a: Stannon Lake - increase daily abstraction limit	
Description	Increase the Stannon abstraction licence daily limit from 4 Ml/d to 6 Ml/d and increase hourly abstraction limit and annual abstraction limit proportionally. Abstracted water will be transferred to De Lank WTW and Lowermoor WTW in line with normal operation of this licence. The annual abstraction limit of 1464 Ml would also need to be increased proportionally to allow the additional abstraction (an additional 364 Ml for 2 Ml/d for 6 months). The increased abstraction can be delivered use the existing transfer pipeline and pumping infrastructure. Stannon Lake does not have a compensation flow requirement on the current licence. It is assumed that in line with the 2022/23 Drought Permit, a future Drought Permit would include a condition for a compensation flow to be triggered when downstream flow is low to provide environmental mitigation. This would require the installation of temporary pumps, generator and pipework.
Location	Colliford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action to increase abstraction rate does not require any infrastructure changes. Preparation would be needed for temporary pumps, generator and pipework necessary to be able to release a compensation flow, in case low flow triggers are met. Action can be implemented as soon as Drought Permit is granted.

Benefit Delivered	Immediate	
Duration	Up to 6 months	
Yield	2 Ml/d between approximately July to November. Based on abstraction achieved with 2022/23 Drought Permit. Assumes all other conditions on existing licence will remain unchanged. Increased abstraction from Stannon Lake will reduce the abstraction required from other sources, primarily Colliford Reservoir which normally provides the main support during dry summers to the WTWs also supplied by Stannon. It is assumed that Stannon Lake storage level is high enough to allow the proposed additional abstraction. The current licence prevents abstraction when the water level is lower than 3 metres below Top Water Level (TWL). The storage varies during the year and between years based on hydrological conditions and abstraction profile. Modelling indicates Stannon Lake storage should not be a significant constraint in most droughts if the storage is in a good position at the start of the drought.	
Action Timing	This action will be implemented in the later phases of a drought, so if used in the first year of a severe drought, it is assumed that is likely to be July by the time this action is implemented but the exact timing would vary based on hydrological conditions. It would remain in use as long as the Drought Permit allows and/or Colliford Reservoir storage levels have recovered sufficiently. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to River Camel SAC & River Camel Valley and Tributaries SSSI. • Local Authority: Cornwall Council • Cornwall Wildlife Trust due to Wenfordbridge to Helsbury Park County Wildlife Site downstream.	
Action Group	COL-L3A	Colliford Level 3a actions
Risks	**Environment**	Upstream of River Camel SAC, so likely to be more concern regarding this action.
	Social & Economic	No known significant risks
	Resource	Assumes Stannon Lake storage is high enough to allow proposed additional abstraction, this varies during the year and between years based on hydrological conditions.

	Interaction with other actions	No other actions should impact feasibility of this action. Action C-04b to lower the hands-off level condition for Stannon Lake has been screened out as feasibility is still under investigation.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.2 Provide a sustainable water supply in times of drought. The existing EAR associated with the 2022/23 drought permit would need to be updated including the latest baseline data.	

A3.2.1.4. C-06: Colliford Reservoir - reduce compensation flow

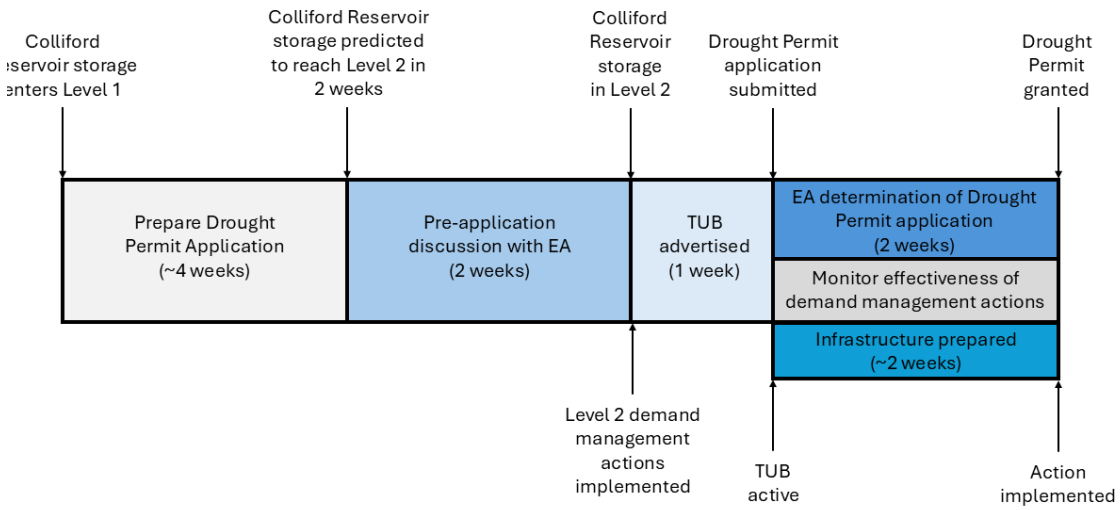
C-06: Colliford Reservoir - reduce compensation flow	
Description	Remove the requirement to make a compensation flow release from Colliford Reservoir to the St Neot River (a tributary of the River Fowey), when a supply release is also being made from Colliford Reservoir for abstraction downstream on the River Fowey for Restormel WTW. The current Colliford impounding licence requires a compensation release of 5.7 Ml/d which is not allowed to be abstracted at Restormel as per available abstraction calculations agreed with EA in line with Restormel abstraction licence. It is not expected that this action would be implemented when abstraction from Restormel for transfer to Colliford Reservoir is taking place.
Location	Colliford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes, although reconfiguration of the abstraction intake control system is likely to be required to update the calculation method of available abstraction to remove consideration of the compensation flow. Action can be implemented as soon as Drought Permit is granted if supply releases are being made.
Benefit Delivered	Immediate if supply releases are being made.
Duration	Up to 6 months
Yield	2.85 to 5.7 Ml/d direct benefit to Colliford Reservoir storage, due to retaining an additional volume equal to the compensation flow every day this action is active. It only provides benefit when supply releases are being made (when natural river flows are low), typically this is

	between April and October, but exact dates vary year to year based on the hydrological conditions. It is assumed by the time this action is implemented in the first year of a severe drought, it is likely to be active for approximately 4 months. The method agreed with the EA for calculating the available abstraction at Restormel is complex. When the natural river flow at the River Fowey at Restormel gauging station is below the prescribed flow, all abstraction must come from supply releases from Colliford or Siblyback Reservoirs. In this case the full benefit equal to the normal compensation flow of 5.7 Ml/d will be achieved. However, in scenarios where the natural river flow is above the prescribed flow, half the excess natural flow can be abstracted (so some abstraction is available from the river but needs to be supplemented by reservoir releases). In this case the compensation flow is treated as part of the natural flow, so half of the compensation flow can be abstracted at Restormel. So, by not releasing the compensation flow, the natural flow will be lower by the same volume as the compensation flow. Therefore, available abstraction at Restormel will be reduced by half the compensation flow volume, or the supply release will need to be increased by half the compensation flow to maintain the same abstraction rate. So, when the natural river flow is above the prescribed flow the benefit (in terms of reduction in total release from Colliford Reservoir) is only half the compensation flow (2.85 Ml/d).
Action Timing	This action will only be effective when supply releases are being made, i.e. during the summer. The exact dates would vary year to year based on the hydrological conditions, but for the first year of a severe drought it could be assumed a period of July to October may be the most likely. If applied for in the second year of a drought, it may start earlier in the year when supply releases start e.g. April and remain in place for longer until supply releases stop and/or there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.
Permissions Required	Drought Permit issued by EA

Interested Third Parties	• No impact on other Water Companies or NAVs.
	• Local Authority: Cornwall Council
	• Organisations who made representations regarding 2022 Restormel Drought Permit:
	  ○ Fowey Rivers Association
	  ○ South West Rivers Association

	○ Liskeard and District Angling Club ○ Restormel Anglers Ltd	
Action Group	COL-L3A	Colliford Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for River Fowey underway, which may result in changes to reservoir release profiles and abstractions within the River Fowey catchment
	Social & Economic	No known significant risks
	Resource	Timing when action can be implemented depends on when supply releases are made, which varies between years based on river flow conditions. River flow will also impact yield, but it is assumed in a drought most of the time the natural river flow will be below the prescribed flow so the full benefit can be realised.
	Interaction with other actions	Other actions relate to Colliford Reservoir and/or Restormel abstraction (C-03, C-11, C-40), but none should impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.2 Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water sensitive sites. • 1.3 Reduce the spread or presence of INNS. • 2.2 Provide a sustainable water supply in times of drought.	

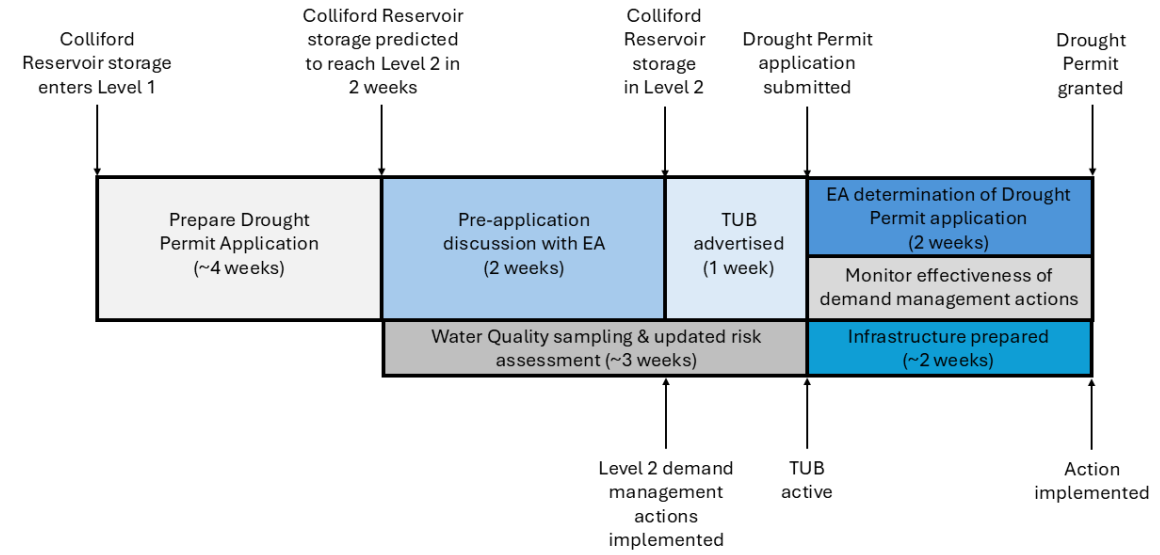
A3.2.1.5. C-07a: Park Lake - increase daily abstraction limit

C-07a: Park Lake - increase daily abstraction limit	
Description	Increase the Park abstraction licence daily limit from 8 Ml/d to 14 Ml/d and increase hourly abstraction limit, annual abstraction limit and rolling 5-year limit proportionally. Abstracted water will be transferred to St Cleer WTW (estimated 2 Ml/d) and Colliford Reservoir (estimated 4 Ml/d) in line with normal operation of this licence. The transfer from Park Lake to Colliford Reservoir will require installation of a temporary in line pump set and generator, and temporary pipeline joined to the existing main to St Cleer WTW. The annual abstraction limit of 2920 Ml and rolling 5-year limit would also need to be increased proportionally to allow the additional abstraction (an additional 1092 Ml for 6 Ml/d for 6 months). Park Lake does not have a compensation flow requirement on the current licence. It is assumed that in line with the 2022/23 Drought Permit, a future Drought Permit would include a condition for a compensation flow to be triggered when downstream flow is low to provide environmental mitigation. This would require the installation of temporary pumps, generator and pipework.
Location	Colliford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Transfer of water from park Lake to Colliford Reservoir will require installation of temporary additional pumpset, generator and pipeline.

	Preparation would be needed for temporary pumps, generator and pipework necessary to be able to release a compensation flow, in case low flow triggers are met. Action can be implemented as soon as Drought Permit is granted.	
Benefit Delivered	Immediate	
Duration	Up to 6 months	
Yield	6 Ml/d between approximately July to November. Based on abstraction achieved with 2022/23 Drought Permit. Assumes all other conditions on existing licence will remain unchanged. More abstraction from Park Lake will help refill Colliford Reservoir and reduce the abstraction required from Siblyback Reservoir which normally supplies St Cleer WTW. It is assumed that Park Lake storage level is high enough to allow the proposed additional abstraction. The current licence prevents abstraction when the water level is lower than 7.5 metres below Top Water Level (TWL). The storage varies during the year and between years based on hydrological conditions and abstraction profile. Modelling indicates Park Lake storage could become a constraint in more severe droughts, but this is less likely if the storage is in a good position at the start of the drought.	
Action Timing	This action will be implemented in the later phases of a drought, so if used in the first year of a severe drought, it is assumed that is likely to be July by the time this action is implemented, but the exact timing would vary based on hydrological conditions. It would remain in use as long as the Drought Permit allows and/or Colliford Reservoir storage levels have recovered sufficiently. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Local Authority: Cornwall Council • Cornwall Wildlife Trust due to Browngelly Downs County Wildlife Site • Fowey Rivers Association • South West Rivers Association	
Action Group	COL-L2	Colliford Level 2 actions
Risks	**Environment**	AMP8 WINEP investigation for River Fowey underway, which may result in changes to reservoir release

		profiles and abstractions within the River Fowey catchment
	Social & Economic	No known significant risks
	Resource	Assumes Park Lake storage is high enough to allow proposed additional abstraction, this varies during the year and between years based on hydrological conditions.
	Interaction with other actions	No other actions should impact feasibility of this action. Action C-07b to lower the hands-off level condition for Park Lake has been screened out as feasibility is still under investigation.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.2 Provide a sustainable water supply in times of drought. Link to assessment summary including risks, mitigation measures, and further monitoring & investigation required. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. A drought permit was successfully applied for and used in 2022/23 when Colliford Reservoir storage was in Drought level 2. The associated EAR would need to be updated including the latest baseline data. It is expected that a new drought permit would include a requirement for an appropriate compensation flow release, similar to the 2022/23 drought permit. This compensation flow would support the downstream environment whilst abstraction is taking place and during the drought recovery period, reducing the impact of additional abstraction on the Trenant Stream and River Fowey. The existing hands-off level condition on the current abstraction licence is expected to remain in place.	

A3.2.1.6. C-11: Hawk's Tor Pit - abstract from new source

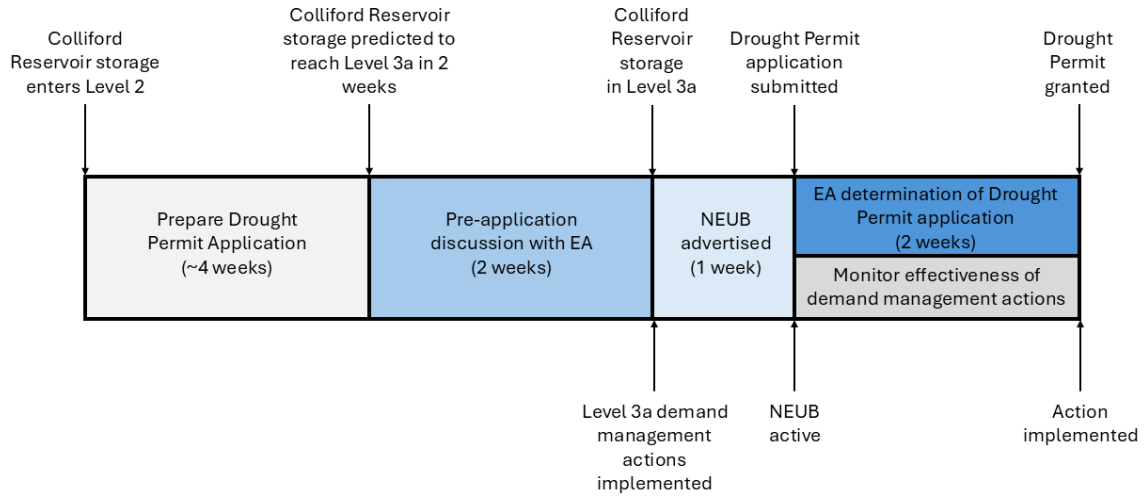
C-11: Hawk's Tor Pit - abstract from new source	
Description	Abstract water from Hawk's Tor Pit for transfer to Colliford Reservoir to preserve Colliford storage. Hawk's Tor Pit is owned by SWW, but does not currently have an abstraction licence, although abstraction was carried out under a Drought Permit during the 2022/23 drought. This action requires installation of temporary pumps, which should be quick to implement and uses an existing raw water transfer pipeline, which is normally used to transfer water from Colliford Reservoir to De Lank and Lowermoor WTWs. It is assumed that in line with the 2022/23 Drought Permit, a future Drought Permit would include a condition for a compensation flow to be triggered when downstream flow is low to provide environmental mitigation. This would require the installation of temporary pumps, generator, pipework and SCADA outstation.
Location	Colliford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Action requires installation of temporary pumps for abstraction. Preparation would be needed for temporary pumps, generator and pipework necessary to be able to release a compensation flow, in case low flow triggers are met. Water has not been abstracted for supply from Hawk's Tor Pit recently, so water quality sampling would need to be undertaken, and risk assessment report updated. The

	DWI would not need to be specifically notified as this is a previously used source and is a raw water transfer to another water body rather than straight to a WTW for supply. Action can be implemented as soon as Drought Permit is granted.	
Benefit Delivered	Immediate	
Duration	Up to 6 months	
Yield	4 Ml/d between July to December. Based on abstraction achieved with 2022/23 Drought Permit. It is assumed that conditions similar to the 2022/23 Drought Permit would be included for environmental mitigation. Specifically, a compensation flow release into the Warleggan River and a hands-off level of 12 metres below Top Water Level. While the raw water transfer pipeline is being used to transfer water from Hawk's Tor Pit to Colliford, transfers in the opposite direction from Colliford Reservoir to De Lank and Lowermoor WTWs would not be possible, so it is only possible to carry out this action if these transfers are not required. Transfers using the same pipeline from Stannon Lake to Colliford Reservoir would still be possible at the same time as this action because water flow would be in the same direction (this was tested during use of the 2023 Drought Permit).	
Action Timing	If used in the first year of a severe drought, it is assumed that is likely to be July by the time this action is implemented, but the exact timing would vary based on hydrological conditions. It would remain in use as long as the Drought Permit allows and/or there is an end to the drought when Colliford Reservoir storage levels have recovered sufficiently. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA.	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Hawk's Tor Pit SSSI, Bodmin Moor North SSSI, Cabilla Manor Wood SSSI. • Local Authority: Cornwall Council • Cornwall Wildlife Trust due to North Bodmin Moor County Wildlife Site • Fowey Rivers Association • South West Rivers Association	
Action Group	COL-L2	Colliford Level 2 actions

Risks	**Environment**	AMP8 WINEP investigation for River Fowey underway, which may result in changes to reservoir release profiles and abstractions within the River Fowey catchment
	Social & Economic	No known significant risks
	Resource	Assumes Hawk's Tor Pit storage is high enough to allow proposed additional abstraction, this varies during the year and between years based on hydrological conditions, but this is not expected to be a limiting constraint. As a disused source, it is assumed water quality sampling undertaken before implementation will not identify any significant issues.
	Interaction with other actions	Other actions relate to Colliford Reservoir (C-03, C-06, C-40), but none should impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.1 Protect and enhance designated ecological sites. • 1.3 Reduce the spread or presence of INNS. • 2.2 Provide a sustainable water supply in times of drought. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. A drought permit was successfully applied for and used in 2022/23 when Colliford Reservoir storage was in Drought level 2. The associated EAR found that the likely impact on all relevant designated sites was minor (low-medium confidence) and INNS risk was also minor (medium confidence). This EAR would need to be reviewed and appropriately updated before applying for the next drought permit, including the latest additional baseline data. It is expected that a new drought permit would include requirements for a hands-off level at which abstraction must stop and an appropriate compensation flow release, similar to the 2022/23 drought permit. This compensation flow would support the downstream environment whilst abstraction is taking place and during the drought recovery period until Hawk's Tor Pit spills again, reducing the impact of abstraction on the Warleggan River.	

A3.2.1.7. C-30: Siblyback Reservoir - reduce compensation flow

C-30: Siblyback Reservoir - reduce compensation flow	
Description	Remove the requirement to make a compensation flow release from Siblyback Reservoir to a tributary of the River Fowey, when a supply release is also being made from Siblyback Reservoir for abstraction downstream on the River Fowey for St Cleer WTW, or further downstream for Restormel WTW. The current Siblyback impounding licence requires a compensation release of 3.1 Ml/d which is not allowed to be abstracted as per available abstraction calculations agreed with the EA.
Location	Colliford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	



Implementation Details	Action does not require any infrastructure changes, although reconfiguration of the abstraction intake control system is likely to be required to update the calculation method of available abstraction to remove consideration of the compensation flow. Action can be implemented as soon as Drought Permit is granted if supply releases are being made.
Benefit Delivered	Immediate if supply releases are being made.
Duration	Up to 6 months
Yield	1.55 to 3.1 Ml/d direct benefit to Siblyback Reservoir storage, due to retaining an additional volume equal to the compensation flow every day this action is active. This will preserve more storage in Siblyback Reservoir, which will allow it to supply more water to St Cleer, Restormel and Bastreet WTWs and reduce the amount being supplied by Colliford Reservoir, preserving Colliford storage.

	It only provides benefit when supply releases are being made (when natural river flows are low), typically this is between April and October, but exact dates vary year to year based on the hydrological conditions. It is assumed by the time this action is implemented in the first year of a severe drought, it is likely to be active for approximately 4 months. The method agreed with the EA for calculating the available abstraction for St Cleer and Restormel is complex, and the two abstraction points differ in how the compensation release is handled. Generally, most or all the Siblyback Reservoir supply release is abstracted at St Cleer with relatively little continuing on to Restormel, which is primarily supported by supply releases from Colliford Reservoir. Currently for St Cleer the compensation flow cannot be abstracted as part of the Siblyback release and is excluded from the natural river flow calculation. Therefore, not releasing the compensation flow, will not change the available abstraction at St Cleer, so the full benefit equal to the normal compensation flow of 3.1 Ml/d would be achieved in all scenarios. However, if the natural river flow is very low, this may trigger the maintained flow condition on the St Cleer abstraction licence, so the total release may need to be increased to fulfil this condition, reducing the potential benefit, although this extra release would be able to be abstracted further downstream at Restormel. If releases were being made from Siblyback that were not abstracted at St Cleer, then these could be abstracted at Restormel. At Restormel when the natural river flow at the River Fowey at Restormel gauging station is below the prescribed flow, all abstraction must come from supply releases from Colliford or Siblyback Reservoirs. In this case the full benefit equal to the normal compensation flow of 3.1 Ml/d will be achieved (not double counting any benefit already counted at St Cleer) because the compensation flow volume will be retained in Siblyback Reservoir and not change the available abstraction at Restormel. However, in scenarios where the natural river flow is above the prescribed flow at Restormel, half the excess natural flow can be abstracted (so some abstraction is available from the river but needs to be supplemented by reservoir releases). In this case the compensation flow is treated as part of the natural flow, so half of the compensation flow can be abstracted at Restormel. So, by not releasing the compensation flow, the natural flow will be lower by the same volume as the compensation flow. Therefore, available abstraction at Restormel will be reduced by half the compensation flow volume, or the

	supply release will need to be increased by half the compensation flow to maintain the same abstraction rate. So, when the natural river flow is above the prescribed flow the benefit (in terms of reduction in total release from Siblyback Reservoir) is only half the compensation flow (1.55 Ml/d).	
Action Timing	This action will only be effective when supply releases are being made, i.e. during the summer. The exact dates would vary year to year based on the hydrological conditions, but for the first year of a severe drought it could be assumed a period of July to October may be the most likely. If applied for in the second year of a drought, it may start earlier in the year when supply releases start e.g. April and remain in place for longer until supply releases stop and/or there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	

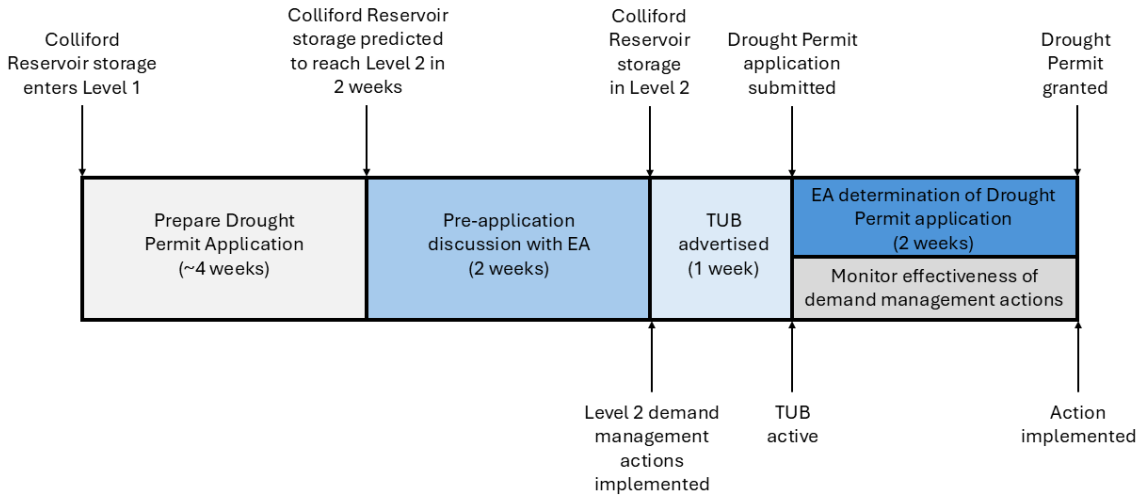
Interested Third Parties	• No impact on other Water Companies or NAVs.
	• Natural England due to Draynes Wood SSSI
	• Local Authority: Cornwall Council
	• Organisations who made representations regarding 2022 Restormel Drought Permit:
	  ○ Fowey Rivers Association
	  ○ South West Rivers Association
	  ○ Liskeard and District Angling Club
	  ○ Restormel Anglers Ltd	

Action Group	COL-L3A	Colliford Level 3a actions
Risks	**Environment**	AMP8 WINEP investigations for Siblyback Reservoir and River Fowey underway, which may result in changes to reservoir release profiles and abstractions within the River Fowey catchment
	Social & Economic	No known significant risks
	Resource	Timing when action can be implemented depends on when supply releases are made, which varies between years based on river flow conditions. River flow will also impact yield but it is assumed in a drought most of the time the natural river flow will be below the prescribed flow so the full benefit can be realised.
	Interaction with other actions	Other actions relate to Restormel abstraction (C-03, C-

		06), but none should impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.2 Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water sensitive sites. • 1.3 Reduce the spread or presence of INNS. • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought.	

A3.2.1.8. C-37: River Cober at Wendron - increase annual abstraction limit

C-37: River Cober at Wendron - increase annual abstraction limit	
Description	Increase the River Cober abstraction licence annual limit to enable greater abstraction during the winter recovery period. The current abstraction licence allows abstraction from the River Cober to Wendron WTW which includes natural river flow and water transferred from Stithians Reservoir into the River Cober upstream of the abstraction point. The annual abstraction limit of 3000 Ml is the primary constraint, allowing an average of 8.2 Ml/d abstraction. Increasing the annual abstraction limit by 650 Ml would allow an average of 10 Ml/d abstraction.
Location	Colliford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	



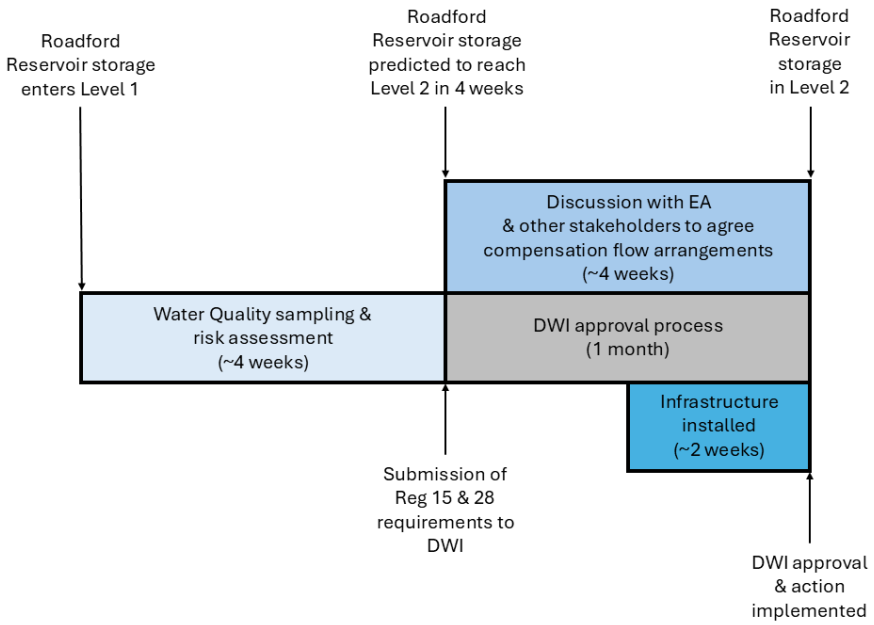
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate if supply releases are not being made.
Duration	Up to 6 months
Yield	2 Ml/d between October to March. Based on achievable maximum daily abstraction and WTW output with current infrastructure of 10 Ml/d. Additional abstraction during lower flow periods when the River Cober is being supported by transfers from Stithians Reservoir would not be beneficial because this would decrease Stithians storage further. So additional abstraction would only take place when natural river flows are high enough above the prescribed flow to allow the full required abstraction without supply releases being required from Stithians Reservoir.

	Increasing abstraction at Wendron reduces the water transferred (occurs all year but increases in the summer) from Stithians WTW and Restormel WTW to support the Wendron WTW supply zone, allowing quicker recovery of Stithians and Colliford Reservoir storages. It is proposed to maintain all other conditions on the current abstraction licence, such as the prescribed flow and percentage take, so abstraction will be limited if natural river flows are low, but this is very unlikely to be a limiting factor during winter when this Drought Permit is expected to be used.	
Action Timing	This action is most likely to be implemented between October and March, as it is only beneficial once natural River Cober flow is high enough to not need supply releases from Stithians Reservoir to support abstraction. The exact timing of this varies year to year based on hydrological conditions. It is believed that increasing the annual limit and carrying out additional abstraction during the winter is likely to have less negative environmental impact than alternatives such as increasing daily abstraction or increasing abstraction during summer months when river flows are low. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Low Pool SSSI • Local Authority: Cornwall Council • Cornwall Wildlife Trust due to Upper Cober Valley and Lower Cober Valley County Wildlife Site	
Action Group	COL-L2	Colliford Level 2 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Available abstraction and timing of when this action will be beneficial varies between years based on river flow conditions
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. • 2.2 Provide a sustainable water supply in times of drought.	

	This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. Generally increasing annual abstraction limits are assumed to be less environmentally damaging than changes to other licence conditions such as daily limits or prescribed flow. This is particularly the case for this scheme where most of the additional abstraction is expected to take place when river flows are naturally higher and do not need to be supported by releases from Stithians Reservoir, i.e. over the winter. A significant increase in INNS risk is not expected relative to typical current use of this abstraction. No new pathways are being introduced, and the abstraction will be transferred directly to Wendron WTW. Changes to water depth and wetted area in the River Cober would be within the normal range of variation during and between years. Due to most additional abstraction being during higher flow periods, the relative change in depth and wetted area would be lower.

A3.2.2. Roadford WRZ

A3.2.2.1. R-07: Slade Reservoir - abstract from new source

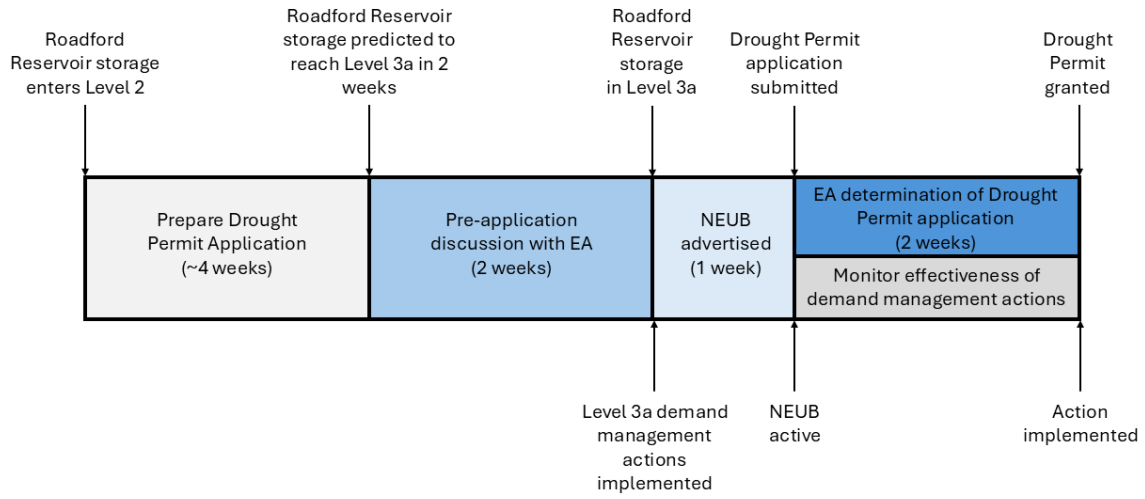
R-07: Slade Reservoir - abstract from new source	
Description	Abstract water from Slade Reservoir to Hore Down WTW. Slade Reservoir is owned by SWW and has an abstraction licence but is not currently routinely used. Licence abstraction limits are 2.7 Ml/d and annual limit of 545.52 Ml. Some abstraction testing was carried out in 2018 and further monitoring in 2022. Since then the required upgrades to the pipeline and WTW have been carried out to allow successful treatment of water from Slade Reservoir at Hore Down WTW. Temporary abstraction pumps would need to be installed but the existing pipeline would be used. This abstraction licence does not include a compensation flow condition, but EA Drought Plan pre-consultation feedback was that a suitable compensation flow should be released to provide environmental mitigation if this source was used in a drought.
Location	Roadford WRZ
Action Type	Local EA Agreement
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Action will require installation of temporary abstraction pumps.

	Water has not been abstracted into supply from Slade Reservoir recently, so it would be treated as a new source by the DWI as per Regulation 15[6]. A risk assessment and full set of water quality sampling for all Schedule 1 and 2 parameters, repeated over a period of time, would need to be undertaken. A Form 6 – Regulation 15 application and a Regulation 28 report must be submitted to the DWI at least 1 month prior to abstraction commencing. Action can be implemented as soon as DWI permission is granted, and agreement has been reached with the Local EA regarding suitable compensation flow arrangements.
Benefit Delivered	Immediate
Duration	Approximately 3 months
Yield	Up to 2.7 Ml/d benefit to Wistlandpound and/or Roadford Reservoir storage. Wistlandpound Reservoir is the only abstraction source normally used by Hore Down WTW to supply this part of the North Devon area, so abstraction from Slade will reduce the abstraction from Wistlandpound and preserve its storage. Treated water can be transferred into this area from Roadford Reservoir to support summer peaks, so this action will also help preserve Roadford storage. Abstraction is likely to be constrained by Slade Reservoir storage, it is assumed that just Lower Slade will be used with a net storage of 150 Ml, and Upper Slade with a net storage of 70 Ml will not be used. Therefore, with low inflow during a drought it is assumed that abstraction would only be able to be sustained for approximately 3 months to help supply the summer peak in demand. It is assumed that a compensation flow release into the West Wilder Brook would be required for environmental mitigation while abstraction was taking place and continued until the reservoir refilled. This action only provides benefit when supply releases are being made. Supply releases are made when river flows are low, typically this is between April and October, but exact dates vary year to year based on the hydrological conditions. It is assumed by the time this action is implemented in the first year of a severe drought, it is likely to be active for approximately 4 months.
Action Timing	This action will only be effective when Wistlandpound Reservoir is not full or refilling, i.e. during the summer. The exact dates would vary year to year based on the hydrological conditions, but for the first year of a severe

[6] The Water Supply (Water Quality) Regulations 2016, Section 15

	drought it could be assumed a period of July to September may be the most likely. If applied for in the second year of a drought, it may start earlier in the year when draw down of Wistlandpound Reservoir starts, but because Wistlandpound is one of the smaller Reservoirs it is always expected to refill totally in any plausible winter conditions. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Agreement with local EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • DWI due to source not used recently • Local Authority: Devon County Council	
Action Group	ROA-L2	Roadford Level 2 actions
Risks	**Environment**	No known significant risks
	Social & Economic	Very high pumping head for this abstraction so high energy costs when in use.
	Resource	Timing when action can be implemented depends on when hydrological conditions, which varies between years. Uncertain how long Slade Reservoir storage can sustain maximum abstraction rate and/or what abstraction rate would be sustainable, particularly during drought conditions. As a disused source, it is assumed water quality sampling undertaken before implementation will not identify any significant issues.
	Interaction with other actions	Other actions relate to Roadford WRZ but none should impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.2 Provide a sustainable water supply in times of drought. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. This action will comply with all conditions on the existing abstraction licence and will provide an additional compensation flow (details of which to be agreed with the EA in advance of the option being implemented) to support the downstream environment whilst abstraction is taking place and during the drought recovery period until the reservoir spills again.	

A3.2.2.2. R-11: River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May

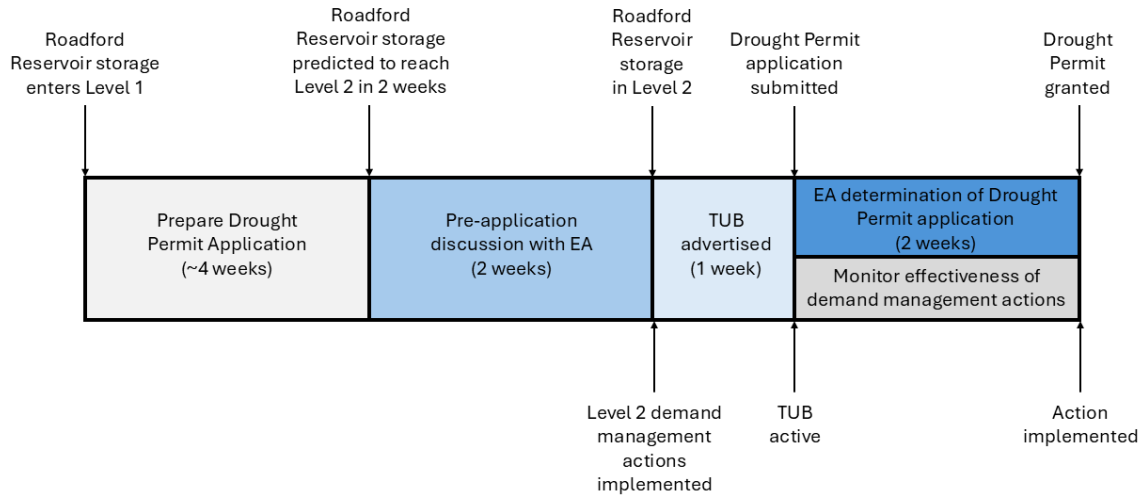
R-11: River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May	
Description	Abstract from the River Lyd and transfer into Roadford Reservoir during April and May using existing pipeline and pumping infrastructure. The current abstraction licence allows abstraction from the River Lyd for transfer to Roadford Reservoir during November to March. This is likely to also require a proportional increase of the annual abstraction limit of 6000 Ml by 2440 Ml based on 61 days at maximum daily abstraction of 40 Ml/d. Assumes all other conditions will be the same as the existing licence, with a prescribed flow of 537 l/s as per the specified prescribed flow for January to March (as was specified in the 2023 Drought Permit for this action).
Location	Roadford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented in April and May after Drought Permit is granted.
Benefit Delivered	Immediate
Duration	2 months
Yield	Up to 40 Ml/d direct benefit to Roadford Reservoir storage from addition of transferred water. It is proposed to maintain the prescribed flow and percentage take condition on the current abstraction licence, so abstraction will be limited if natural river flows are low. It is also assumed that abstraction cannot take

	place if supply releases are being made from Roadford Reservoir (as per current licence conditions), which is possible in April and May if natural river flows are particularly low. Natural river flow varies from year to year based on the hydrological conditions, but in persistent droughts where the winter and/or April and May are dry there may be little benefit achievable from this action. Modelling assumes the proposed new River Tamar for pump storage to Roadford Reservoir abstraction licence is not yet granted, if a licence is granted this may require reassessment of the potential benefit of this action.	
Action Timing	This action will only be implemented in April and May, therefore likely the second year of a long-running drought. It will only be effective if river flow is high enough to allow abstraction above the prescribed flow and supply releases are not required for the abstraction further downstream on the River Tamar. April and May have been selected because it is believed this would be more likely to be effective and have less environmental impact (primarily on migratory fish) than starting the transfer early in October. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Local Authority: Devon County Council • Roadford Fisheries Liaison Committee (RFLC) • Tamar and Tributaries Fisheries Association • South West Rivers Association	
Action Group	ROA-L3A	Roadford Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for Roadford, which may result in changes to reservoir releases and abstractions within the River Tamar catchment
	Social & Economic	No known significant risks
	Resource	Effectiveness of action depends on available abstraction and not carrying out supply releases, which varies between years based on river flow conditions
	Interaction with other actions	Other actions relate to the River Tamar catchment (R-25, R-26, R-48), but none should impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence

Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. • 2.1 Protect and enhance the quality of the water environment and water resources. The existing EAR associated with the 2022/23 drought permit would need to be updated including the latest baseline data.

A3.2.2.3. R-25: Roadford Reservoir - reduce compensation flow

R-25: Roadford Reservoir - reduce compensation flow	
Description	Remove the requirement to make a compensation flow release from Roadford Reservoir to the River Wolf (a tributary of the River Tamar), when a supply release is also being made from Roadford Reservoir for abstraction downstream on the River Tamar. The abstracted water is transferred via pipeline to Mayflower and Littlehempston WTWs. The current Roadford impounding licence requires a compensation release of 9 Ml/d which is not allowed to be abstracted. It is not expected that this action would be implemented when abstraction from the River Lyd for transfer to Roadford Reservoir is taking place.
Location	Roadford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	
Implementation Details	Action does not require any infrastructure changes, although reconfiguration of the abstraction intake control system is likely to be required to update the calculation method of available abstraction to remove consideration of the compensation flow. Action can be implemented as soon as Drought Permit is granted if supply releases are being made.
Benefit Delivered	Immediate if supply releases are being made.
Duration	Up to 6 months
Yield	4.5 to 9 Ml/d direct benefit to Roadford Reservoir storage, due to retaining an additional volume equal to the compensation flow every day this action is active.

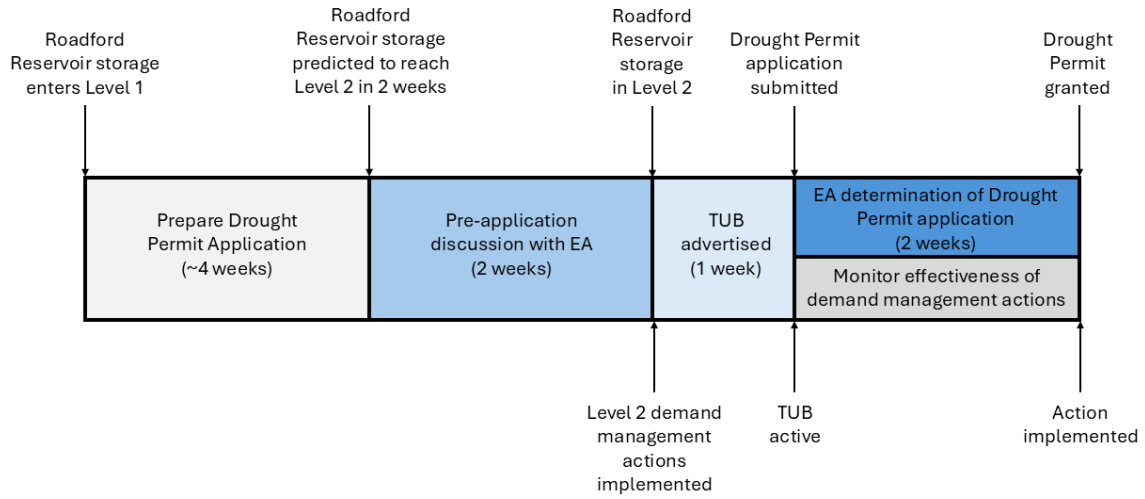


	It only provides benefit when supply releases are being made (when natural river flows are low), typically this is between April and October, but exact dates vary year to year based on the hydrological conditions. It is assumed by the time this action is implemented in the first year of a severe drought, it is likely to be active for approximately 4 months. It is proposed to maintain all other conditions on the current abstraction licence, such as the prescribed flow and daily and annual limits. When the natural river flow at the River Tamar at gauging station is below the prescribed flow, all abstraction must come from supply releases from Roadford Reservoir. In this case the full benefit equal to the normal compensation flow of 9 Ml/d will be achieved. However, in scenarios where the natural river flow is above the prescribed flow, half the excess natural flow can be abstracted (so some abstraction is available from the river but needs to be supplemented by reservoir releases). In this case the compensation flow is treated as part of the natural flow, so half of the compensation flow can be abstracted. So, by not releasing the compensation flow, the natural flow will be lower by the same volume as the compensation flow. Therefore, available abstraction will be reduced by half the compensation flow volume, or the supply release will need to be increased by half the compensation flow to maintain the same abstraction rate. So, when the natural river flow is above the prescribed flow the benefit (in terms of reduction in total release from Roadford Reservoir) is only half the compensation flow (4.5 Ml/d).
Action Timing	This action will only be effective when supply releases are being made, i.e. during the summer. The exact dates would vary year to year based on the hydrological conditions, but for the first year of a severe drought it could be assumed a period of July to October may be the most likely. If applied for in the second year of a drought, it may start earlier in the year when supply releases start e.g. April and remain in place for longer until supply releases stop and/or there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.
Permissions Required	Drought Permit issued by EA
Interested Third Parties	• No impact on other Water Companies or NAVs. • Local Authority: Devon County Council • Roadford Fisheries Liaison Committee (RFLC) • Tamar and Tributaries Fisheries Association

	• South West Rivers Association	
Action Group	ROA-L2	Roadford Level 2 actions
Risks	**Environment**	AMP8 WINEP investigation for Roadford, which may result in changes to reservoir releases and abstractions within the River Tamar catchment
	Social & Economic	No known significant risks
	Resource	Timing when action can be implemented depends on when supply releases are made, which varies between years based on river flow conditions. River flow will also impact yield but it is assumed in a drought most of the time the natural river flow will be below the prescribed flow so the full benefit can be realised.
	Interaction with other actions	Other actions relate to the River Tamar catchment (R-11, R-26, R-48), but none should impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.2 Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water sensitive sites. • 2.2 Provide a sustainable water supply in times of drought. • 6.1 Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. The compensation flow is relatively small compared to typical supply release flows, so for the reach of the River Tamar between Roadford Reservoir and the abstraction point the difference in flow by not additionally releasing the compensation flow will be minimal. As the compensation flow will only not be released when supply releases are being made, this would only be during periods where the natural river flow is low (restricting abstraction from natural river flow), so reducing the total release would bring river flow closer to the typical natural flow for the time of year. By the time the river reaches the abstraction point it is much larger, and the	

	compensation flow would only form a small percentage of the typical river flow. The abstraction point is also close to the tidal limit of the River Tamar, so there would be little deprived reach before the tidal influence overshadows any change in river flow.

A3.2.2.4. R-45: River Dart & Littlehempston boreholes - aggregate daily and annual licence limits

R-45: River Dart & Littlehempston boreholes - aggregate daily and annual licence limits	
Description	Aggregate the daily and annual abstraction limits between Littlehempston boreholes and ranneys licence, and the River Dart licence. Both sources supply Littlehempston WTW. The full licensed volume cannot be abstracted from the boreholes and ranneys due to hydraulic constraints. Whereas the River Dart abstraction is primarily constrained by the daily and annual abstraction limits on the licence. Combining the daily and annual limits rather than using the individual ones currently on the licence would allow more actual abstraction, but no net change to water abstracted in this location when modelling a fully licenced scenario, because the boreholes and ranneys are so closely hydrologically linked to the river.
Location	Roadford WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	Up to approximately 8 Ml/d benefit to Roadford storage when supply releases are being made. Littlehempston WTW can also be supplied by abstraction from the River Tamar, which in low flow conditions is supported by supply releases from Roadford Reservoir.

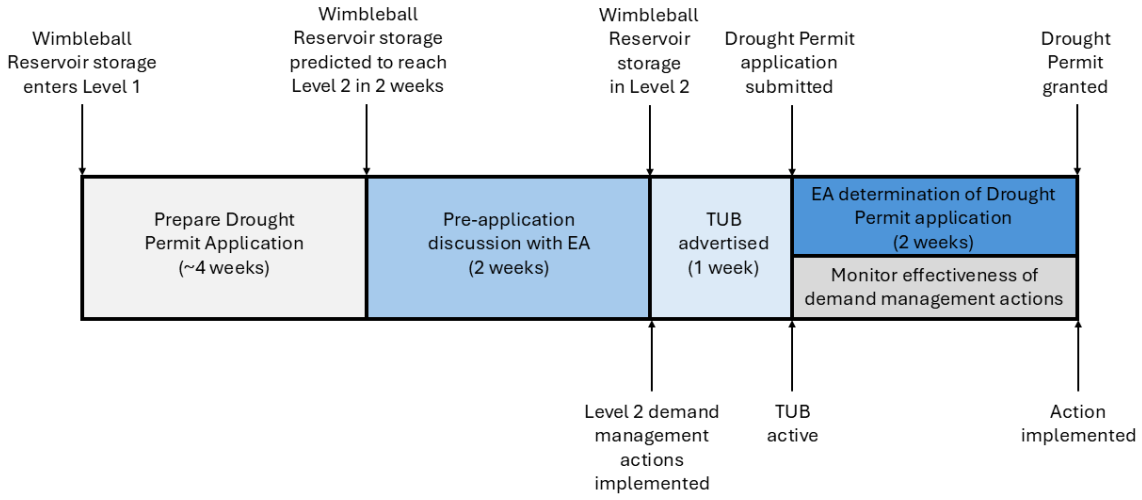
	Current borehole licence limits: 20 Ml/d and 5932 Ml/year. Current River Dart licence limits: 27.28 Ml/d, 9410.4 Ml/year. This action would remove these limits and change to an aggregated limit across both licences of 47.28 Ml/d and 15342.4 Ml/year. The total achievable maximum daily abstraction from boreholes and ranneys due to hydraulic constraints is approximately 12 Ml/d. This action would effectively allow the extra 8 Ml/d abstraction that is allowed on the borehole licence but physically cannot be abstracted, to be abstracted from the River Dart instead. It is proposed to maintain all other conditions on the current abstraction licences, such as the prescribed flow. So, abstraction will be limited if River Dart natural flow is very low, but hydrological modelling indicates this is expected to be rarely a major constraint.	
Action Timing	This action will primarily be beneficial when supply releases are being made from Roadford to support low natural river flows, i.e. during the summer, and water is being transferred from abstraction on the River Tamar to Littlehampton. The exact dates would vary year to year based on the hydrological conditions, but for the first year of a severe drought it could be assumed a period of July to October may be the most likely. If applied for in the second year of a drought, it may start earlier in the year when supply releases start e.g. April and remain in place for longer until supply releases stop and/or there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Local Authority: Devon County Council • South West Rivers Association	
Action Group	ROA-L2	Roadford Level 2 actions
Risks	**Environment**	AMP8 WINEP investigation for River Dart, which may result in changes to abstractions
	Social & Economic	No known significant risks
	Resource	Available abstraction and timing of when this action will be beneficial varies between years based on river flow conditions on the River Dart and River Tamar
	Interaction with other actions	No other actions should impact feasibility of this action.

Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.2 Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water sensitive sites. • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. This action will comply with all other conditions on the existing abstraction licences including the prescribed flow which restricts River Dart abstraction at very low flows. The combined daily and annual abstraction will not exceed the current modelled fully licenced scenario which assumes both licences can be maximised. It has been agreed with the EA that there is a 1:1 hydrological link between the boreholes & ranneys, and the River Dart, so which site the water is abstracted from should be largely immaterial. Additional appropriate conditions could be specified on the drought permit to provide a greater level of environmental protection and/or mitigation if required.	

A3.2.3. Wimbleball WRZ

A3.2.3.1. W-03: Wimbleball Reservoir - reduce compensation flow

W-03: Wimbleball Reservoir - reduce compensation flow	
Description	Remove the requirement to make a compensation flow release from Wimbleball Reservoir to the River Haddeo (a tributary of the River Exe), when a supply release is also being made from Wimbleball Reservoir for abstraction downstream on the River Exe for Allers WTW or Pynes WTW. The current Wimbleball impounding licence requires a compensation release of 9 Ml/d, 100% of which can be abstracted when natural river flow in the River Exe at Thorverton gauging station is above the prescribed flow.
Location	Wimbleball WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	

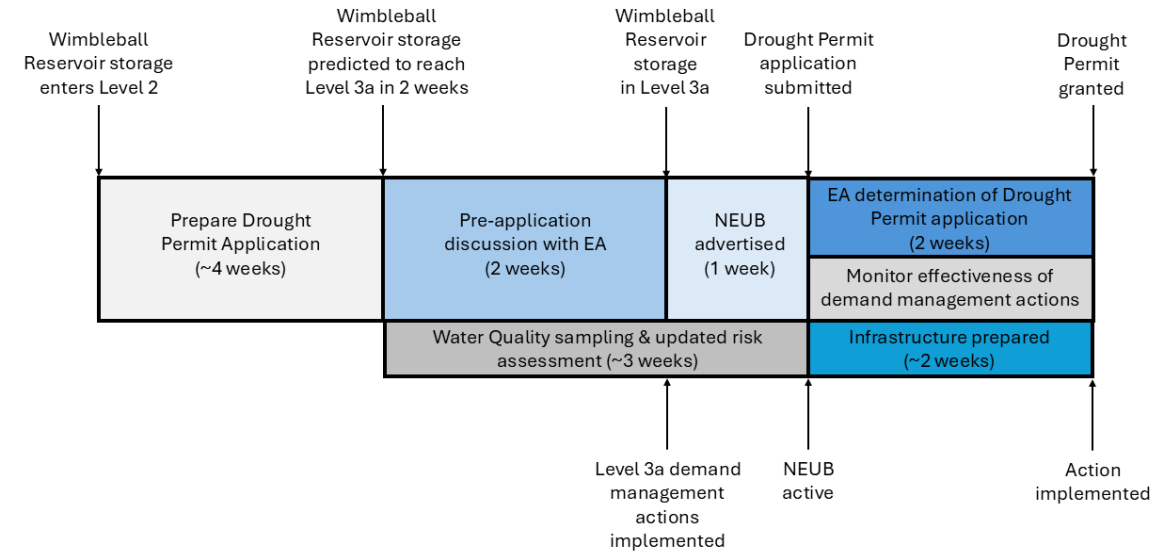


Implementation Details	Action does not require any infrastructure changes, although reconfiguration of the abstraction intake control system is likely to be required to update the calculation method of available abstraction to remove consideration of the compensation flow. Action can be implemented as soon as Drought Permit is granted if supply releases are being made.
Benefit Delivered	Immediate if supply releases are being made and no abstraction is available from natural river flow.
Duration	Up to 6 months
Yield	9 Ml/d direct benefit to Wimbleball Reservoir storage, due to retaining an additional volume equal to the compensation flow every day this action is active.

	This action only provides benefit when supply releases are being made, and no abstraction is available from natural river flow (natural river flow is below the prescribed flow). When natural river flow is above the prescribed flow, the current licence conditions treat the compensation release as part of the natural flow, and it can be abstracted with no percentage take condition. So, by not releasing the compensation flow, this volume must be replaced with the same volume supply release, so no net benefit is gained. Supply releases are made when natural river flows are low, typically this is between April and October, but exact dates vary year to year based on the hydrological conditions. It is assumed by the time this action is implemented in the first year of a severe drought, it is likely to be active for approximately 4 months.	
Action Timing	This action will only be effective when supply releases are being made, and no abstraction is available from natural river flow, i.e. during the summer. The exact dates would vary year to year based on the hydrological conditions, but for the first year of a severe drought it could be assumed a period of July to October may be the most likely. If applied for in the second year of a drought, it may start earlier in the year when supply releases start e.g. April and remain in place for longer until supply releases stop and/or there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• Wessex Water also abstract from Wimbleball Reservoir so this action to preserve storage will also benefit them. • No impact on NAVs. • Local Authority: Somerset Council & Devon County Council • Exmoor National Park • River Exe and Tributaries Association. • South West Rivers Association.	
Action Group	WIM-L2	Wimbleball Level 2 actions
Risks	**Environment**	AMP8 WINEP investigation for River Exe underway, which may result in changes to reservoir release profiles
	Social & Economic	No known significant risks
	Resource	Timing when action can be implemented depends on when supply releases are made, which varies between years based on river flow conditions. River flow will also impact yield but it is assumed in a drought most of the time the natural

		river flow will be below the prescribed flow so the full benefit can be realised.
	Interaction with other actions	Other actions relate to Wimbleball Reservoir or River Exe (W-06, W-09, W-22, W-26, W-27, W-28), but none should impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.2 Provide a sustainable water supply in times of drought. • 3 Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. The compensation flow is relatively small compared to typical supply release flows, so for the reach of the River Exe between Wimbleball Reservoir and the Pynes WTW abstraction point the difference in flow by not additionally releasing the compensation flow will be minimal. As the compensation flow will only not be released when supply releases are being made, this would only be during periods where the natural river flow is low (restricting abstraction from natural river flow), so reducing the total release would bring river flow closer to the typical natural flow for the time of year. By the time the river reaches the Pynes abstraction point it is much larger, and the compensation flow would only form a small percentage of the typical river flow.	

A3.2.3.2. W-06: Brampford Speke and Stoke Canon - abstract from new source

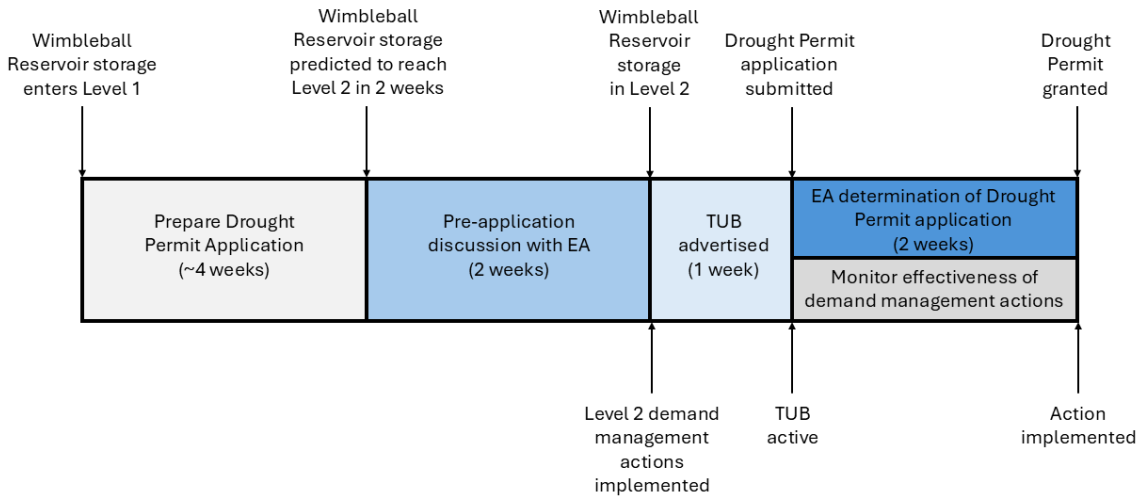
W-06: Brampford Speke and Stoke Canon - abstract from new source	
Description	Abstract from two licensed but disused borehole sources at Brampford Speke and Stoke Canon. The abstracted water would be released into the River Exe and abstracted for Pynes WTW (replacing the equivalent flow that would otherwise need to be released from Wimbleball Reservoir to support abstraction for Pynes WTW). The current licences allow abstraction of 3.545 Ml/d and 1293.92 Ml/year for Brampford Speke, and 4.546 Ml/d and 622.24 Ml/year for Stoke Canon. But they do not specifically include permission to discharge the abstracted water to the River Exe, therefore this action would need to be an ordinary drought order because discharges are not covered on drought permits. Existing pipelines are in place, and Brampford Speke requires no additional infrastructure, but Stoke Canon would require temporary pumps, monitoring system and generator for power.
Location	Wimbleball WRZ
Action Type	Drought Order
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action will require installation of temporary pumps, monitoring system and generator at Stoke Canon. Action can be implemented as soon as Drought Order is granted, if supply releases are required from Wimbleball Reservoir.

	Water has not been abstracted from these boreholes recently, so water quality sampling would need to be undertaken, and risk assessment report produced. The DWI would not need to be specifically notified as this is a raw water transfer to another water body, rather than straight to a WTW for supply.
Benefit Delivered	Immediate if natural river flow is restricting abstraction at Pynes WTW.
Duration	Approximately 4 months
Yield	Up to 8 Ml/d benefit to Wimbleball Reservoir storage. During periods where natural River Exe flow at Pynes is below the prescribed flow, restricting abstraction, river flow is increased by making supply releases from Wimbleball Reservoir. Discharging from these boreholes to increase river flow will allow the supply release to be reduced by the same amount as the discharge and still maintain the same rate of abstraction for Pynes. The method of calculation of available abstraction at Pynes (defined in the Wimbleball WRZ Operating Manual) would need to be revised in agreement with the EA, because this references Thorverton gauging station, which is upstream of the boreholes, so discharge from the boreholes would need to be explicitly added into the flow available for abstraction. It is assumed that abstraction at the maximum daily rate allowed by the licences can be achieved. Abstraction testing was carried out during 2022/23 to give some confidence in this, but water was not used for supply. But it is possible that this cannot be sustained with constant abstraction over a period of months, e.g. due to hydraulic or water quality issues, and/or if water levels in the boreholes drop in a more severe drought, limiting yield. This action only provides benefit when supply releases are being made. Supply releases are made when river flows are low, typically this is between April and October, but exact dates vary year to year based on the hydrological conditions. It is assumed by the time this action is implemented in the first year of a severe drought, it is likely to be active for approximately 4 months.
Action Timing	This action will only be effective when supply releases are being made, i.e. during the summer. The exact dates would vary year to year based on the hydrological conditions, but for the first year of a severe drought it could be assumed a period of July to October may be the most likely. If applied for in the second year of a drought, it may start earlier in the year when supply releases start e.g. April and remain in place for longer until supply releases stop and/or there is an end to the drought.

	More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Order issued by EA.	
Interested Third Parties	• Wessex Water also abstract from Wimbleball Reservoir so this action to preserve storage will also benefit them. • No impact on NAVs. • Local Authority: Devon County Council • River Exe and Tributaries Association. • South West Rivers Association.	
Action Group	WIM-L3A	Wimbleball Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for River Exe underway, which may result in changes to abstractions within the River Exe catchment
	Social & Economic	No known significant risks
	Resource	Timing when action can be implemented depends on when supply releases are made, which varies between years based on river flow conditions. Uncertain what is a sustainable yield over a period of months, particularly during drought conditions. As a disused source, it is assumed water quality sampling undertaken before implementation will not identify any significant issues.
	Interaction with other actions	Other actions relate to Wimbleball Reservoir or River Exe (W-03, W-09, W-22, W-26, W-27, W-28), but none should impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.2 Provide a sustainable water supply in times of drought. • 3 Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance.	

A3.2.3.3. W-09: River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May

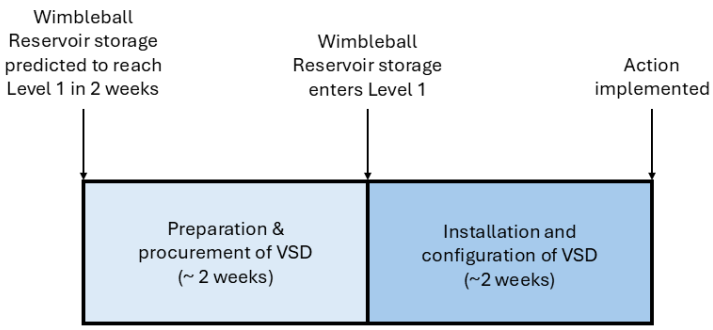
W-09: River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May	
Description	Abstract water from the River Exe to transfer into Wimbleball Reservoir during April and May through existing infrastructure. The current abstraction licence allows abstraction from the River Exe and transfer into Wimbleball Reservoir during November to March. Maximum limits are 150 Ml/d and 13,633 Ml per calendar year, with 50% of the excess river flow above 1.16 m3/s available for abstraction. The annual limit may also need to be increased in proportion with this extended transfer period.
Location	Wimbleball WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented in April and May after Drought Permit is granted.
Benefit Delivered	Immediate
Duration	2 months
Yield	15-20 Ml/d direct benefit to Wimbleball Reservoir storage from addition of transferred water. It is proposed to maintain the prescribed flow and percentage take condition on the current abstraction licence, so abstraction will be limited if natural river flows are low. Abstraction is also stopped if supply releases need to be made from Wimbleball Reservoir, which is possible in April and May, but varies from year to year based on the hydrological conditions. So, in more persistent droughts where the winter and/or April and May



	are dry there may be little benefit achievable from this action.	
Action Timing	This action will only be implemented in April and May, therefore likely the second year of a long-running drought. It will only be effective if river flow is high enough to allow abstraction above the prescribed flow and supply releases are not required for the WTW abstractions further downstream. April and May have been selected because it is believed this would be more likely to be effective and have less environmental impact (primarily on migratory fish) than starting the transfer early in October. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• Wessex Water also abstract from Wimbleball Reservoir so this action to preserve storage will also benefit them. • No impact on NAVs. • Local Authority: Somerset Council & Devon County Council • Exmoor National Park • River Exe and Tributaries Association. • South West Rivers Association.	
Action Group	WIM-L2	Wimbleball Level 2 actions
Risks	**Environment**	AMP8 WINEP investigation for River Exe underway, which may result in changes to reservoir release profiles and abstractions within the River Exe catchment
	Social & Economic	Expensive abstraction due to high pumping head and associated power needs. It is expected that in the medium term this site will be connected to the mains electricity supply, but currently it still runs on diesel generators at considerable cost and carbon impact. Site is not automated so requires constant staff presence.
	Resource	Effectiveness of action depends on available abstraction and not carrying out supply releases, which varies between years based on river flow conditions
	Interaction with other actions	Other actions relate to Wimbleball Reservoir or River Exe (W-03, W-06, W-22, W-26, W-27, W-28), but none should impact feasibility of this action.

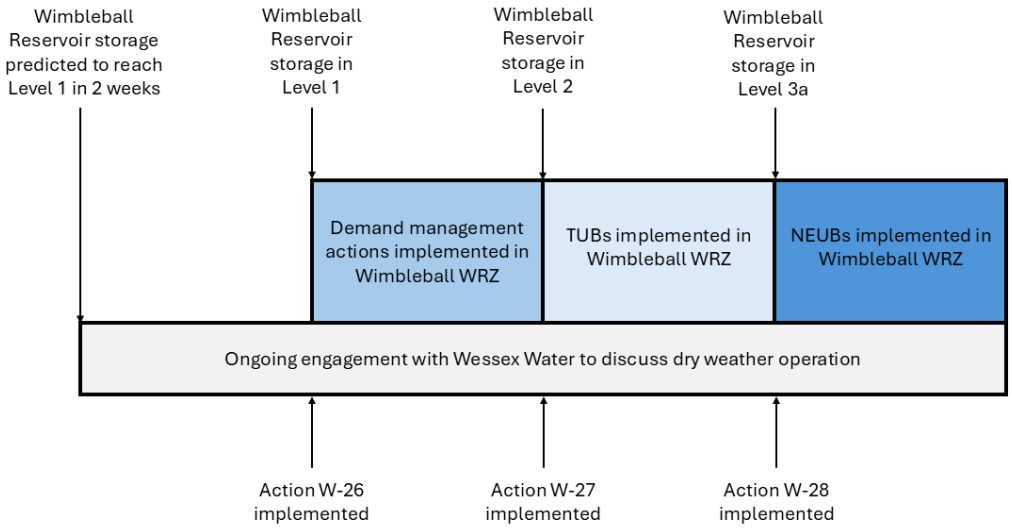
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. A significant increase in INNS risk is not expected relative to typical current use of this abstraction for transfer to Wimbleball Reservoir, which is used in most normal to dry years. No new pathways are being introduced, and the abstraction will be transferred within the same catchment to Wimbleball Reservoir. Changes to water depth and wetted area in the River Exe and Wimbleball Reservoir would be within the normal range of variation during and between years. This scheme would help increase storage in Wimbleball Reservoir, which would return conditions closer to a more typical hydrological year and associated typical INNS risk from this abstraction / transfer as used in non-drought conditions.	

A3.2.3.4. W-24: Colaton Raleigh boreholes – improved abstraction control

W-24: Colaton Raleigh boreholes – improved abstraction control	
Description	Accelerate existing scheme to install variable speed drives (VSD) on Colaton Raleigh boreholes abstraction pumps to be able to fully utilise abstraction licence more effectively. The current abstraction licence allows abstraction from two boreholes, each with a maximum daily limit of 1.295 Ml/d. The current abstraction process does not allow for very fine control of the speed of the abstraction pumps. Therefore, to ensure compliance and make sure the daily limit is not exceeded, abstraction is generally ceased a relatively long way before the daily limit is reached. A VSD would enable a more granular level of control, so that abstraction closer to the daily limit could take place while maintaining confidence in that the limit will not be exceeded. Installation of a VSD is in the planned program of work for this site, but in a drought could be prioritised to take place before other planned work.
Location	Wimbleball WRZ
Action Type	Internal Action
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Action can be implemented as soon as VSDs are installed and configured appropriately.
Benefit Delivered	Immediate
Duration	Ongoing
Yield	Approximately 0.15 Ml/d. This benefit would not directly impact Wimbleball Reservoir storage but would support higher summer demand in the Otter Valley area and/or declining borehole yields. The East Devon area of Wimbleball WRZ is primarily supplied by a few relatively small groundwater abstractions, with additional support when needed through transfers from two large WTWs which abstract from the River Exe. Enabling more abstraction

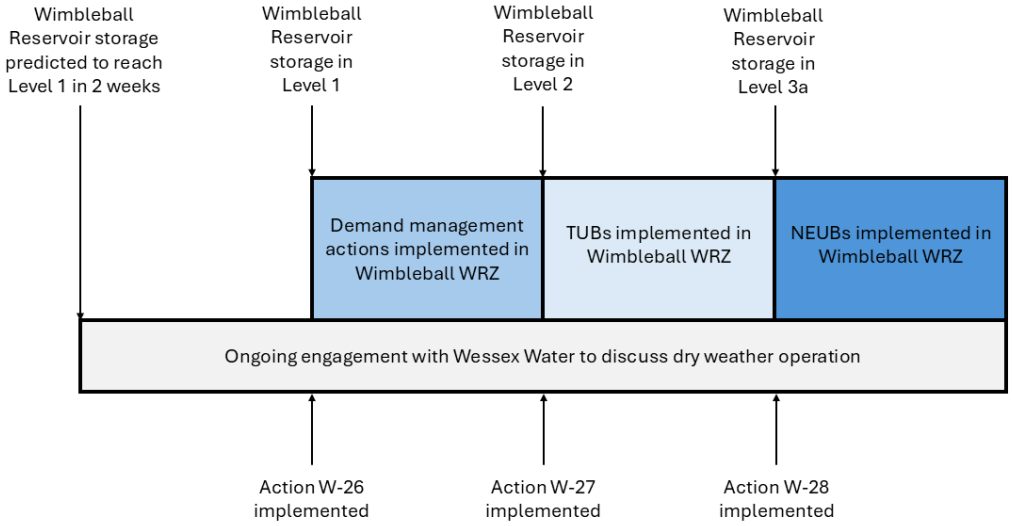
	from the boreholes means that less reliance is put on these transfers during periods of peak demand. It is assumed this action would be implemented relatively early in a drought summer period and then would continue to provide the benefit indefinitely.	
Action Timing	This action will be effective at any time because this is the preferred source (considering other factors e.g. cost, water quality etc) to meet local demand, so generally this abstraction is maximised all year. This would indirectly reduce abstraction from the River Exe and Wimbleball releases by a very small amount as the additional water would not need to be transferred in from WTWs abstracting from the River Exe to support peak summer demand. No negative environmental impact of this action is expected at any time of year.	
Permissions Required	None	
Interested Third Parties	• No impact on other Water Companies or NAVs. • No consultation required with any other external parties.	
Action Group	WIM-L2	Wimbleball Level 2 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Groundwater licences in the East Devon area (Otter Valley) are currently being reviewed, it is possible that the outcome of this may change resource use in this area and hence feasibility of this action.
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Low	Medium Confidence
Environmental Assessment Summary	This action will still comply with all conditions on current abstraction licences and abstractions will not differ significantly from recent actual volumes in drier years. So, it is not expected there will be any additional negative environmental impact from this action.	

A3.2.3.5. W-26: Wessex Water to reduce abstraction from Wimbleball Reservoir L1

W-26: Wessex Water to reduce abstraction from Wimbleball Reservoir L1	
Description	Engagement with Wessex Water to discuss dry weather operation, including requesting reduction in their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.
Location	Wimbleball WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with Wessex Water.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	Approximately 2 Ml/d based on a 5% reduction to recent average May to October abstraction in a dry year. It is assumed this action could be active throughout a drought summer period of approximately 6 months from May to October, or until hydrological conditions improve.
Action Timing	This action will be effective at any time Wimbleball Reservoir is not full and outflows exceed natural inflows. The exact dates would vary year to year based on the hydrological conditions, but typically this could be between May and October. No negative environmental impact of this action is expected at any time of year.
Permissions Required	Agreement with Wessex Water

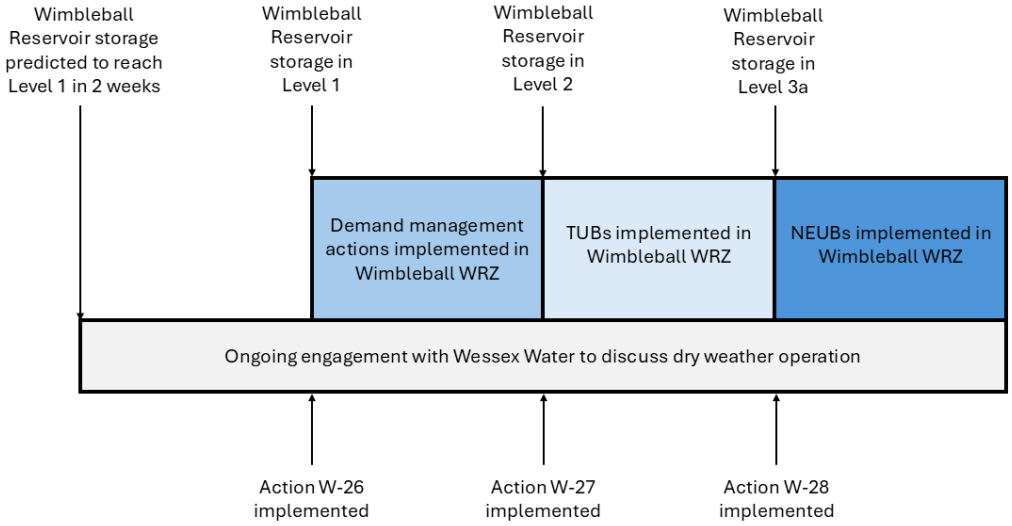
Interested Third Parties	• Wessex Water will need to take action to increase abstraction from alternative sources and/or reduce demand in their WRZ. • No impact on NAVs. • No consultation required with any other external parties.	
Action Group	WIM-L1	Wimbleball Level 1 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Assumption it is feasible for Wessex Water to increase abstraction from alternative sources and/or reduce demand in their WRZ to be able to reduce their abstraction from Wimbleball Reservoir. Need to ensure alignment with Wessex Water Drought Plan.
	Interaction with other actions	No other actions should impact feasibility of this action. Later in a drought similar actions W-27 and W-28 would be implemented.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

A3.2.3.6. W-27: Wessex Water to reduce abstraction from Wimbleball Reservoir L2

W-27: Wessex Water to reduce abstraction from Wimbleball Reservoir L2	
Description	Engagement with Wessex Water to optimise use of reservoir storage in Drought Level 2, requesting further reduction of their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.
Location	Wimbleball WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with Wessex Water.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	Approximately 2 Ml/d based on a 5% reduction to recent average May to October abstraction in a dry year. A target of 5% reduction would be requested, in line with assumed reduced demand due to implemented Level 2 demand restrictions (e.g. TUB) in Wimbleball WRZ. This is in addition to the reduction in abstraction at Drought Level 1 due to action W-26. It is assumed this action could be active throughout a drought summer period of approximately 6 months from May to October, or until hydrological conditions improve.
Action Timing	This action will be effective at any time Wimbleball Reservoir is not full and outflows exceed natural inflows. The exact dates would vary year to year based on the hydrological conditions, but typically this could be between May and October.

	No negative environmental impact of this action is expected at any time of year.	
Permissions Required	Agreement with Wessex Water	
Interested Third Parties	• Wessex Water will need to take action to increase abstraction from alternative sources and/or reduce demand in their WRZ. • No impact on NAVs. • No consultation required with any other external parties.	
Action Group	WIM-L2	Wimbleball Level 2 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Assumption it is feasible for Wessex Water to increase abstraction from alternative sources and/or reduce demand in their WRZ to be able to reduce their abstraction from Wimbleball Reservoir. Need to ensure alignment with Wessex Water Drought Plan.
	Interaction with other actions	No other actions should impact feasibility of this action. This action would be implemented in addition to W-26 at Drought Level 1. Later in a drought similar action W-28 would be implemented.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

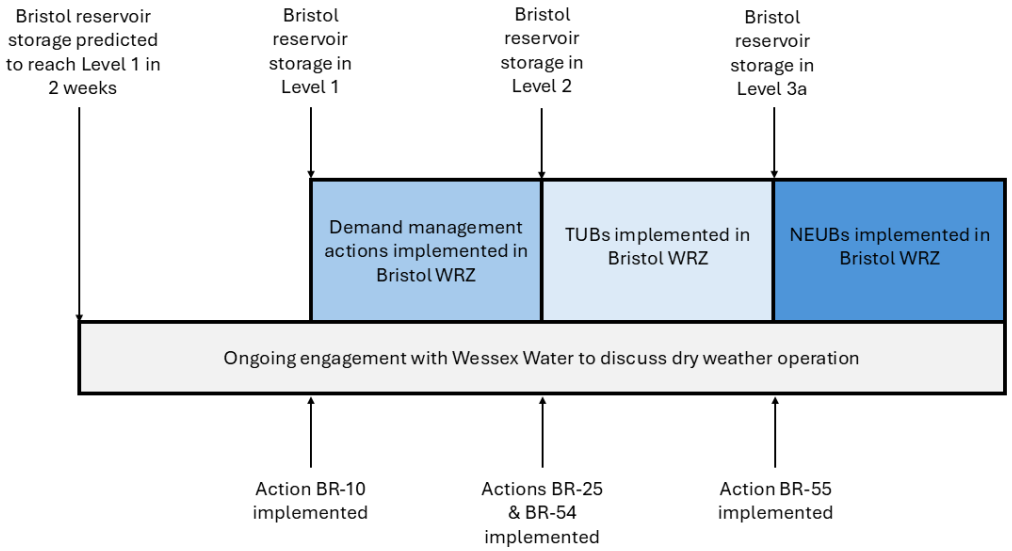
A3.2.3.7. W-28: Wessex Water to reduce abstraction from Wimbleball Reservoir L3a

W-28: Wessex Water to reduce abstraction from Wimbleball Reservoir L3a	
Description	Engagement with Wessex Water to optimise use of reservoir storage in Drought Level 3a, requesting further reduction of their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.
Location	Wimbleball WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with Wessex Water.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	Approximately 1 Ml/d based on a 2.5% reduction to recent average May to October abstraction in a dry year. A target of 2.5% reduction would be requested, in line with assumed reduced demand due to implemented Level 3a demand restrictions (e.g. NEUB) in Wimbleball WRZ. This is in addition to the reduction in abstraction at earlier Drought Levels due to action W-26 and W-27. It is assumed this action could be active throughout a drought summer period of approximately 6 months from May to October, or until hydrological conditions improve.
Action Timing	This action will be effective at any time Wimbleball Reservoir is not full and outflows exceed natural inflows. The exact dates would vary year to year based on the hydrological conditions, but typically this could be between May and October.

	No negative environmental impact of this action is expected at any time of year.	
Permissions Required	Agreement with Wessex Water	
Interested Third Parties	• Wessex Water will need to take action to increase abstraction from alternative sources and/or reduce demand in their WRZ. • No impact on NAVs. • No consultation required with any other external parties.	
Action Group	WIM-L3A	Wimbleball Level 3a actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Assumption it is feasible for Wessex Water to increase abstraction from alternative sources and/or reduce demand in their WRZ to be able to reduce their abstraction from Wimbleball Reservoir. Need to ensure alignment with Wessex Water Drought Plan.
	Interaction with other actions	No other actions should impact feasibility of this action. This action would be implemented in addition to W-26 and W-27 at earlier Drought Levels.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

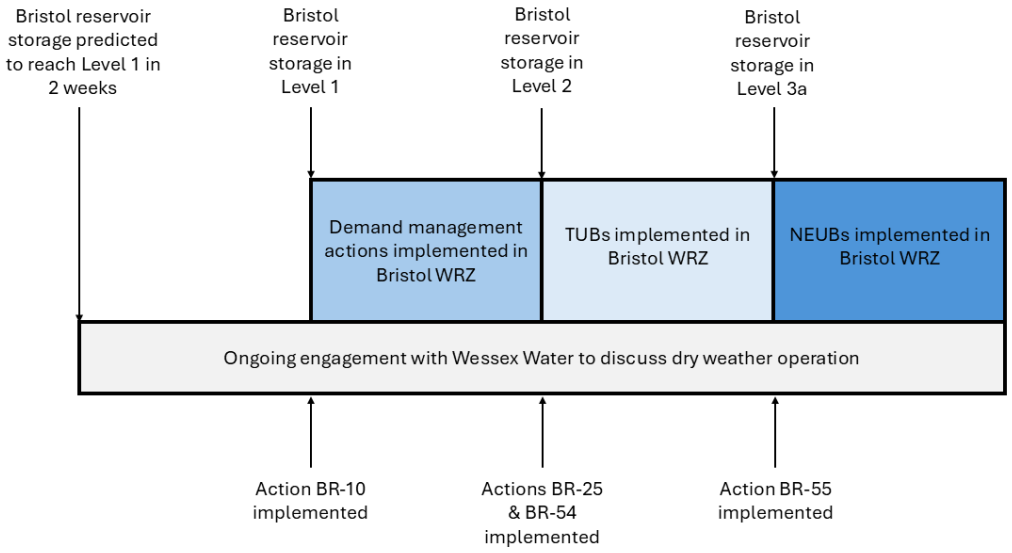
A3.2.4. Bristol WRZ

A3.2.4.1. BR-10: Reduce bulk supplies within established agreement

BR-10: Reduce bulk supplies within established agreement	
Description	Engagement with Wessex Water to discuss peak supply timing and dry weather operation, including ensuring treated water transfers from Bristol WRZ to Wessex WRZ are in line with the agreed profile.
Location	Bristol WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with Wessex Water.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	1 – 2 Ml/d based on average Newton Meadows transfer volumes in 2024-2025. The main transfer is the Newton Meadows export to Wessex Water for Bath supply area. The agreed profile with Wessex Water is 3.75 Ml/d with a peak month (flexible but assumed to be August for modelling purposes) of 11.37 Ml/d giving a DYAA of 4.4 Ml/d. It is assumed this action could be active throughout a drought summer period of approximately 6 months from May to October, until hydrological conditions improve.
Action Timing	This action will be effective at any time Bristol Reservoirs are not full. The exact dates would vary year to year

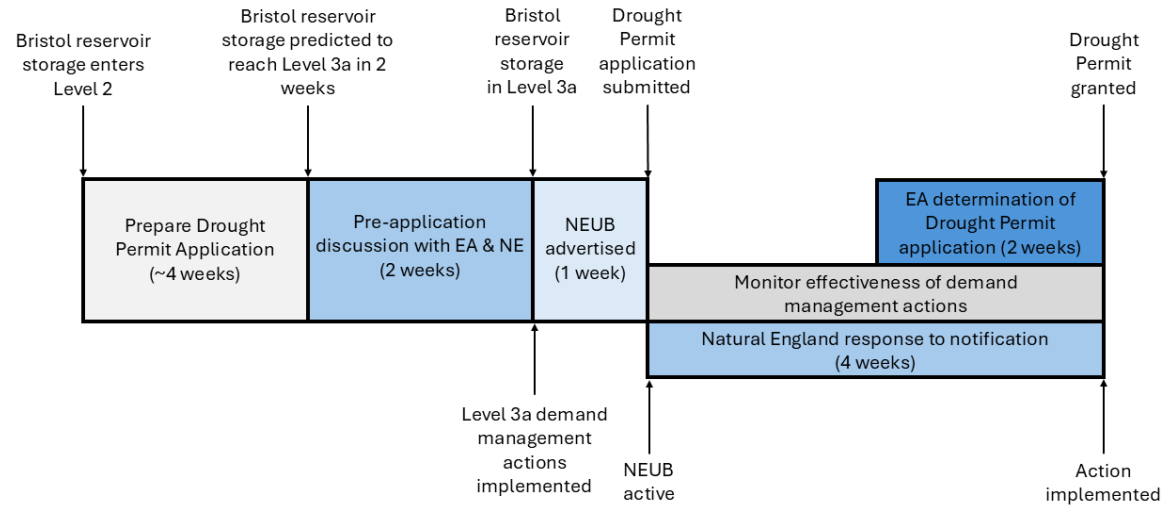
	based on the hydrological conditions, but typically this could be between May and October. No negative environmental impact of this action is expected at any time of year.	
Permissions Required	Agreement with Wessex Water	
Interested Third Parties	• Wessex Water will need to take action to increase abstraction from alternative sources and/or reduce demand in their WRZ. • No impact on NAVs. • No consultation required with any other external parties.	
Action Group	BRL-L1	Bristol Level 1 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Assumption it is feasible for Wessex Water to increase abstraction from alternative sources and/or reduce demand in their WRZ to be able to reduce their transfer from Bristol WRZ. Need to ensure alignment with Wessex Water Drought Plan.
	Interaction with other actions	No other actions should impact feasibility of this action. Later in a drought similar actions BR-25 and BR-55 would be implemented. BR-54 would also be undertaken to increase the Cowbridge transfer from Wessex Water.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

A3.2.4.2. BR-25: Reduce bulk supplies with temporary variation to established agreement L2

BR-25: Reduce bulk supplies with temporary variation to established agreement L2	
Description	Engagement with Wessex Water to optimise transfers in Drought Level 2, including requesting reduction in the treated water transfers from Bristol WRZ to Wessex WRZ as far as feasible within their operating constraints.
Location	Bristol WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with Wessex Water.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	Reduction of DYAA of 0.2 Ml/d, with 0.19 Ml/d reduction most of the year and 0.57 Ml/d reduction to peak month. The main transfer is the Newton Meadows export to Wessex Water for Bath supply area. The agreed profile with Wessex Water is 3.75 Ml/d with a peak month (flexible but assumed to be August for modelling purposes) of 11.37 Ml/d giving a DYAA of 4.4 Ml/d. A target of 5% reduction compared to agreed profile would be requested, in line with assumed reduced demand due to implemented Level 2 demand restrictions (e.g. TUB) in Bristol WRZ. This is in addition to the reduction in abstraction at Drought Level 1 due to action BR-10.

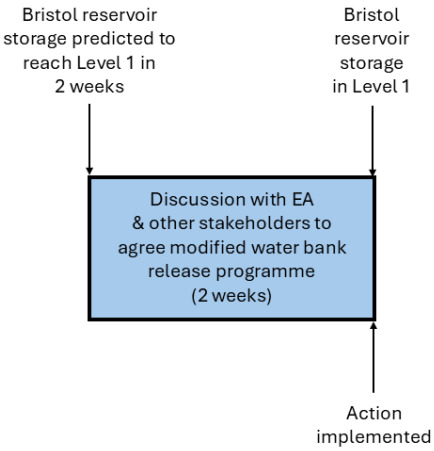
	A 5% reduction to the agreed profile would reduce the transfer to 3.56 Ml/d most of the year, with a peak month of 10.80 Ml/d (4.2 Ml/d DYAA). It is assumed this action could be active throughout a drought summer period of approximately 6 months from May to October, until hydrological conditions improve.	
Action Timing	This action will be effective at any time Bristol Reservoirs are not full. The exact dates would vary year to year based on the hydrological conditions, but typically this could be between May and October. No negative environmental impact of this action is expected at any time of year.	
Permissions Required	Agreement with Wessex Water	
Interested Third Parties	• Wessex Water will need to take action to increase abstraction from alternative sources and/or reduce demand in their WRZ. • No impact on NAVs. • No consultation required with any other external parties.	
Action Group	BRL-L2	Bristol Level 2 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Assumption it is feasible for Wessex Water to increase abstraction from alternative sources and/or reduce demand in their WRZ to be able to reduce their transfer from Bristol WRZ. Need to ensure alignment with Wessex Water Drought Plan.
	Interaction with other actions	No other actions should impact feasibility of this action. This action would be implemented in addition to BR-10 at Drought Level 1. Later in a drought similar action and BR-55 would be implemented. BR-54 would also be undertaken to increase the Cowbridge transfer from Wessex Water.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

A3.2.4.3. BR-27a: Blagdon Reservoir - reduce compensation flow

BR-27a: Blagdon Reservoir - reduce compensation flow	
Description	Reduce the compensation flow released from Blagdon Reservoir to the River (Congresbury) Yeo by 50%. Blagdon Reservoir does not carry out supply releases for abstraction downstream. It is assumed that in 2026 an updated abstraction licence will be issued for Blagdon Reservoir with the compensation flow requirements revised in line with the recent compensation flow trials as agreed with the EA. The expected new compensation flow requirement varies per month: • June 7 Ml/d • July to August 4.5 Ml/d • September to November 3.8 Ml/d • December to May 8.3 Ml/d
Location	Bristol WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate.
Duration	Up to 6 months
Yield	Direct benefit to Blagdon Reservoir storage, retaining an additional volume equal to 50% of the compensation flow every day this action is active. The benefit will vary depending on which months this action is active: • June 3.5 Ml/d • July to August 2.25 Ml/d • September to November 1.9 Ml/d • December to May 4.15 Ml/d

	It is assumed this action is most likely to be implemented during the summer months for up to 6 months, e.g. between June to November, but exact dates would vary year to year based on the hydrological conditions.	
Action Timing	This action will be effective whenever Blagdon Reservoir is not full, i.e. primarily during the summer. It is assumed this action would be implemented later in a more severe drought, so most likely start between approximately June and November and remain in place until there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Blagdon Lake SSSI. • Local Authority: North Somerset Council and Bath & North East Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L3A	Bristol Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for Blagdon Reservoir underway, which may result in changes to reservoir release and abstraction profiles
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on reservoir storage, which varies between years based on hydrological conditions. Sufficient release needs to be maintained to ensure sufficient dilution of fish farm discharge. Compensation flow requirements are still uncertain until the updated licence is granted, expected in 2026.
	Interaction with other actions	Action BR-27b also relates to Blagdon Reservoir but should not impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought. The existing EAR would need to be updated including the latest baseline data.	

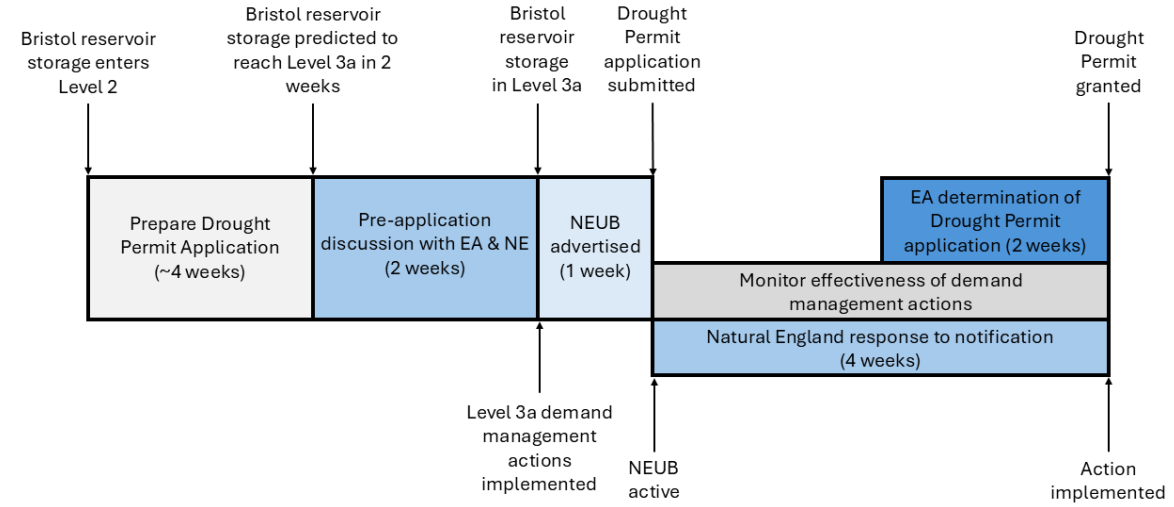
A3.2.4.4. BR-27b: Blagdon Reservoir - delay water bank releases

BR-27b: Blagdon Reservoir – delay water bank releases	
Description	It is assumed that in 2026 an updated abstraction licence will be issued for Blagdon Reservoir with a requirement to make water bank releases as agreed with the EA as part of the recent compensation flow trials. These releases are primarily to ensure movement of sediment downstream. The required water bank releases are expected to be: • A – 30 Ml – September • B – 70 Ml – October • C – 30 Ml – October It is expected the new licence will include a clause that allows some flexibility for the water bank releases to be delayed to later in the year due to operational or hydrological constraints in agreement with local EA. So, it is assumed these releases could be delayed until November or December when it is very likely reservoir storage will have started to recover.
Location	Bristol WRZ
Action Type	Local EA Agreement
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with local EA.
Benefit Delivered	Immediate.
Duration	Up to 3 months
Yield	130 Ml/d direct benefit to Blagdon Reservoir storage, this volume will be retained for up to an extra 3 months when reservoir storage has started to recover, and the release can be provided without risking the security of public water supply. It is assumed the releases would be delayed to November or December, but exact dates would vary year to year

	based on the hydrological conditions and how quickly the reservoir storage recovered.	
Action Timing	This action will be effective during September and October when the water bank releases would normally be carried out in a non-drought year. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Agreement with local EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Blagdon Lake SSSI. • Local Authority: North Somerset Council and Bath & North East Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L1	Bristol Level 1 actions
Risks	**Environment**	AMP8 WINEP investigation for Blagdon Reservoir underway, which may result in changes to reservoir release and abstraction profiles
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on reservoir storage, which varies between years based on hydrological conditions. Water bank release requirements and flexibility are still uncertain until the updated licence is granted, expected in 2026.
	Interaction with other actions	Action BR-27a also relates to Blagdon Reservoir but should not impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought. This action has been selected as a Drought Level 1 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. It is expected that the updated abstraction licence will allow flexibility in water bank release timing when agreed with the local EA. It is assumed that the releases normally made in September or October which are primarily for movement of sediment can be delayed to November or	

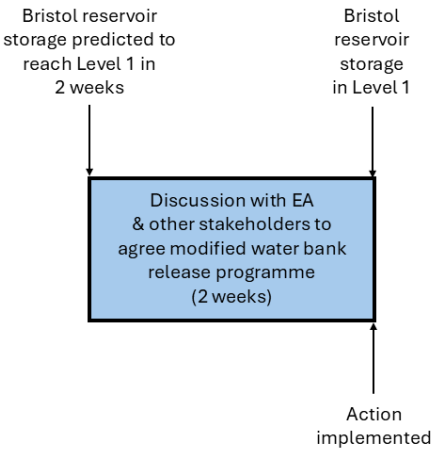
	when reservoir storage has recovered with minimal negative environmental impact.

A3.2.4.5. BR-28a: Chew Valley Lake - reduce compensation flow

BR-28a: Chew Valley Lake - reduce compensation flow	
Description	Reduce the compensation flow released from Chew Valley Lake to the River Chew by 50%. Chew Valley Lake does not carry out supply releases for abstraction downstream. Trials have been undertaken recently to vary compensation flow releases, but it is assumed the required compensation flows will have returned to those specified on the Chew Valley abstraction licence as agreed with the EA. The compensation flow requirement on the abstraction licence varies per month: • May to November 14.32 Ml/d • December to April 6.819 Ml/d
Location	Bristol WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate.
Duration	Up to 6 months
Yield	Direct benefit to Chew Valley Lake storage, retaining an additional volume equal to 50% of the compensation flow every day this action is active. The benefit will vary depending on which months this action is active: • May to November 7.16 Ml/d • December to April 3.41 Ml/d It is assumed this action is most likely to be implemented during the summer months for up to 6 months, e.g. between June to November, but exact dates would vary year to year based on the hydrological conditions.

Action Timing	This action will be effective whenever Chew Valley Lake is not full, i.e. primarily during the summer. It is assumed this action would be implemented later in a more severe drought, so most likely start between approximately June and November and remain in place until there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Chew Valley Lake SPA and Chew Valley Lake SSSI. • Local Authority: Bath & North East Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L3A	Bristol Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for Chew Valley Lake underway, which may result in changes to reservoir release and abstraction profiles
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on reservoir storage, which varies between years based on hydrological conditions. Compensation flow requirements are still uncertain until the updated licence is granted, expected in 2026.
	Interaction with other actions	Action BR-28b also relates to Chew Valley Lake and BR-29 is also within the River Chew catchment, but neither should not impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought. The existing EAR would need to be updated including the latest baseline data.	

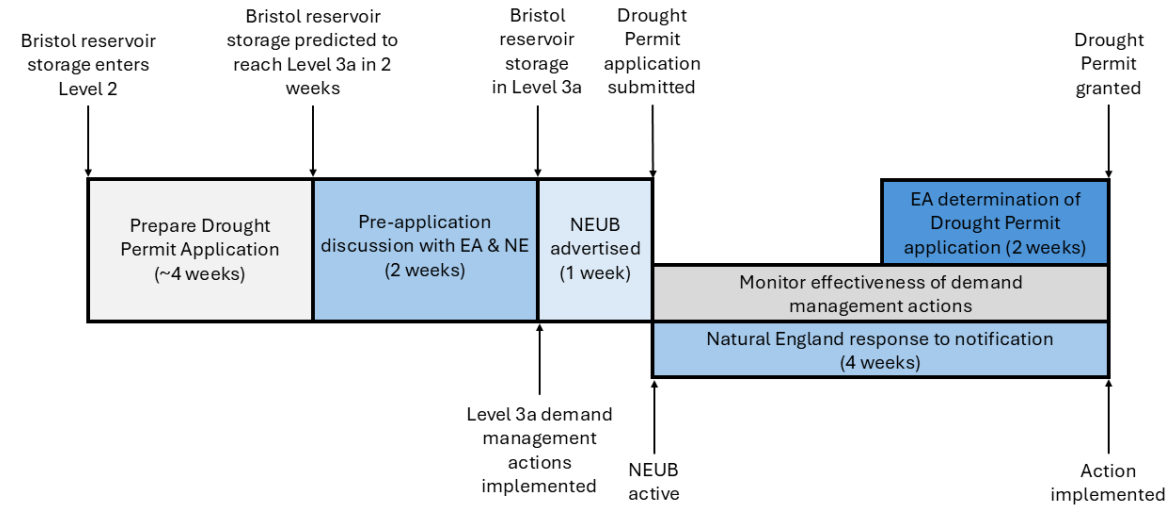
A3.2.4.6. BR-28b: Chew Valley Lake - delay water bank releases

BR-27b: Blagdon Reservoir – delay water bank releases	
Description	It is assumed that in 2026 an updated abstraction licence will be issued for Chew Valley Lake with a requirement to make water bank releases as agreed with the EA as part of the recent compensation flow trials. These releases are primarily to ensure movement of sediment downstream. The required water bank releases are expected to be: • A – 50 Ml – May • B – 50 Ml – May • C – 50 Ml – September • D – 50 Ml – October • E – 100 Ml – October It is expected the new licence will include a clause that allows some flexibility for the water bank releases to be delayed to later in the year due to operational or hydrological constraints in agreement with local EA. So, it is assumed the later releases in September and October could be delayed until November or December when it is very likely reservoir storage will have started to recover.
Location	Bristol WRZ
Action Type	Local EA Agreement
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with local EA.
Benefit Delivered	Immediate.
Duration	Up to 3 months
Yield	200 Ml/d direct benefit to Chew Valley Lake storage, this volume will be retained for up to an extra 3 months when reservoir storage has started to recover, and the release can be provided without risking the security of public water supply.

	It is assumed that earlier in the year, the drought was less severe and therefore it is probable that the two releases in May had already been made. Therefore, it is assumed it is only the September and October releases that would be delayed to November or December, but exact dates would vary year to year based on the hydrological conditions and how quickly the reservoir storage recovered.	
Action Timing	This action will be effective during September and October when the water bank releases would normally be carried out in a non-drought year. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Agreement with local EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Chew Valley Lake SPA and Chew Valley Lake SSSI. • Local Authority: Bath & North East Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L1	Bristol Level 1 actions
Risks	**Environment**	AMP8 WINEP investigation for Chew Valley Lake underway, which may result in changes to reservoir release and abstraction profiles
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on reservoir storage, which varies between years based on hydrological conditions. Water bank release requirements and flexibility are still uncertain until the updated licence is granted, expected in 2026.
	Interaction with other actions	Action BR-28a also relates to Chew Valley Lake but should not impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought. This action has been selected as a Drought Level 1 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor.	

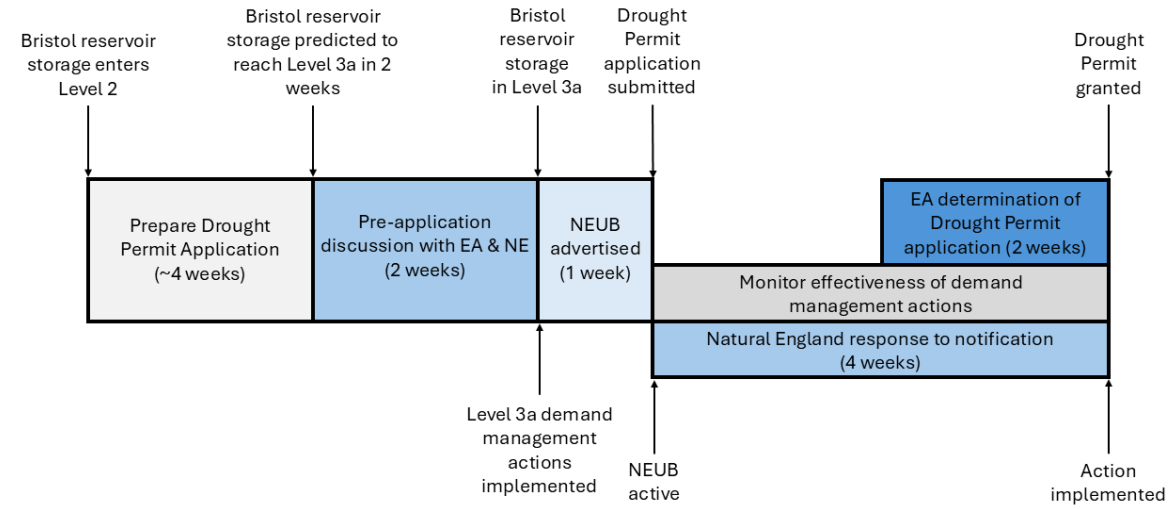
	It is expected that the updated abstraction licence will allow flexibility in water bank release timing when agreed with the local EA. It is assumed that the releases normally made in September or October which are primarily for movement of sediment can be delayed to November or when reservoir storage has recovered with minimal negative environmental impact.

A3.2.4.7. BR-29: Chew Magna Reservoir - reduce compensation flow

BR-29: Chew Magna Reservoir - reduce compensation flow	
Description	Reduce the compensation flow released from Chew Magna Reservoir to the Winford Brook (a tributary of the River Chew) by 50%. Abstraction from Chew Magna Reservoir is transferred by pipe to Chew Valley Lake. Chew Magna Reservoir does not carry out supply releases for abstraction downstream. The compensation flow requirement on the abstraction licence varies per month: • May to September 3.41 Ml/d • October to April 2.273 Ml/d
Location	Bristol WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate.
Duration	Up to 6 months
Yield	Direct benefit to Chew Magna Reservoir storage, retaining an additional volume equal to 50% of the compensation flow every day this action is active. This will also enable the abstraction for transfer to Chew Valley Lake to be maintained, benefitting Chew Valley Lake storage. The benefit will vary depending on which months this action is active: • May to September 1.71 Ml/d • October to Apil 1.14 Ml/d It is assumed this action is most likely to be implemented during the summer months for up to 6 months, e.g. between June to November, but exact dates would vary year to year based on the hydrological conditions.

Action Timing	This action will be effective whenever Chew Magna Reservoir is not full, i.e. primarily during the summer. It is assumed this action would be implemented later in a more severe drought, so most likely start between approximately June and November and remain in place until there is an end to the drought. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Chew Valley Lake SPA and Chew Valley Lake SSSI. • Local Authority: Bath & North East Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L3A	Bristol Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for Chew Magna Reservoir and Chew Valley Lake underway, which may result in changes to reservoir release and abstraction profiles within the River Chew catchment
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on reservoir storage, which varies between years based on hydrological conditions
	Interaction with other actions	Actions BR-28a and BR-28b are also within the River Chew catchment, but neither should not impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought.	

A3.2.4.8. BR-30: Cheddar Ponds - reduce compensation flow

BR-30: Cheddar Ponds - reduce compensation flow	
Description	Reduce the compensation flow released from Cheddar Ponds to the River (Cheddar) Yeo by 50%. Abstraction from Cheddar Ponds is transferred by pipe to Cheddar Reservoir. Cheddar Ponds does not carry out supply releases for abstraction downstream. The compensation flow requirement on the abstraction licence varies per month: • 1 December to 14 May 6.819 Ml/d • 15 May to 30 November 11.365 Ml/d
Location	Bristol WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate.
Duration	Up to 6 months
Yield	Direct benefit to Cheddar Ponds storage, retaining an additional volume equal to 50% of the compensation flow every day this action is active. This will also enable the abstraction for transfer to Cheddar Reservoir to be maintained, benefitting Cheddar Reservoir storage. The benefit will vary depending on which months this action is active: • 1 December to 14 May 3.41 Ml/d • 15 May to 30 November 5.68 Ml/d It is assumed this action is most likely to be implemented during the summer months for up to 6 months, e.g. between June to November, but exact dates would vary year to year based on the hydrological conditions.

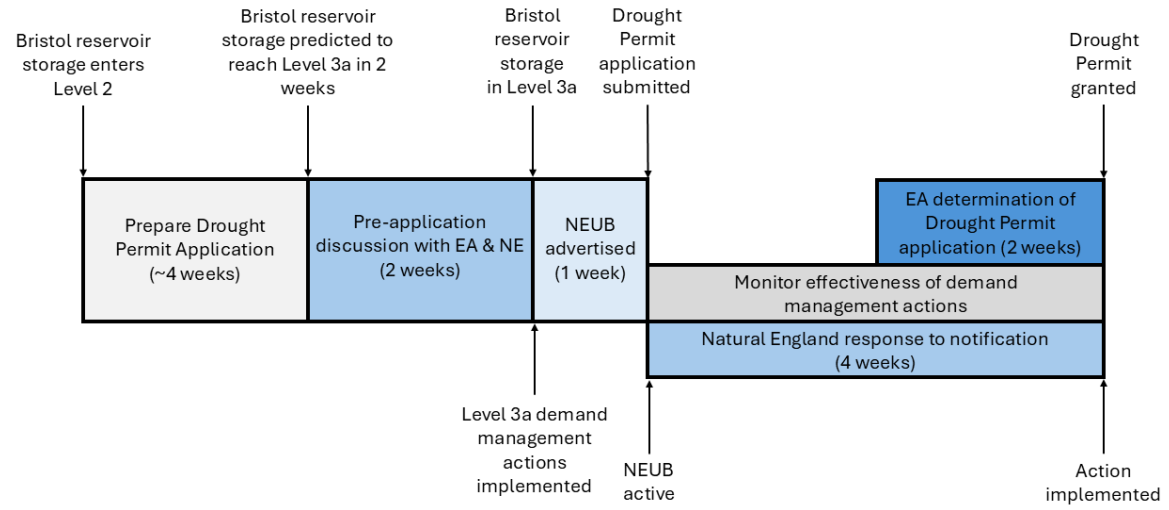
<table>
<tr><td>Action Timing</td><td colspan="2">This action will be effective whenever Cheddar Ponds is not full, i.e. primarily during the summer. It is assumed this action would be implemented later in a more severe drought, so most likely start between approximately June and November and remain in place until there is an end to the drought.

More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.</td></tr>
<tr><td>Permissions Required</td><td colspan="2">Drought Permit issued by EA</td></tr>
<tr><td>Interested Third Parties</td><td colspan="2">• No impact on other Water Companies or NAVs.
• Natural England due to Cheddar Reservoir SSSI.
• Local Authority: Somerset Council.
• Various fishing clubs use Bristol reservoirs e.g. BRFFA</td></tr>
<tr><td>Action Group</td><td>BRL-L3A</td><td>Bristol Level 3a actions</td></tr>
<tr><td rowspan="4">Risks</td><td>Environment</td><td>AMP8 WINEP investigation for Cheddar Yeo underway, which may result in changes to reservoir release and abstraction profiles within the catchment</td></tr>
<tr><td>Social & Economic</td><td>No known significant risks</td></tr>
<tr><td>Resource</td><td>Timing when action would be implemented depends on reservoir storage, which varies between years based on hydrological conditions</td></tr>
<tr><td>Interaction with other actions</td><td>Actions BR-31a, BR-31b and BR-47 relate to the River Axe transfer to Cheddar Reservoir, which is also within the Cheddar Yeo catchment, but they should not impact feasibility of this action.</td></tr>
<tr><td>Environmental Impact</td><td>Moderate</td><td>Low Confidence</td></tr>
<tr><td>Environmental Assessment Summary</td><td colspan="2">SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment:
• 1.2 Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water sensitive sites.
• 2.1 Protect and enhance the quality of the water environment and water resources.
• 2.2 Provide a sustainable water supply in times of drought.

The existing EAR would need to be updated including the latest baseline data.</td></tr>
</table>

A3.2.4.9. BR-31a: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October

BR-31a: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October	
Description	Abstract water from the River Axe, pre-treatment and transfer into Cheddar Reservoir during October through existing infrastructure. The current abstraction licence allows abstraction from the River Axe and transfer into Cheddar Reservoir during November to April. Maximum limits are 38.64 Ml/d and 4,750 Ml per calendar year, with 1.33 times the excess of flow at Henley gauging station above 13.64 Ml/d available for abstraction, with abstraction ceasing when Henley gauging station flow is less than 13.64 Ml/d. The annual limit may also need to be increased in proportion with this extended transfer period. Two variations of the action to extend the River Axe pumped storage scheme in October have been proposed (BR-31a and BR-47). BR-47 uses October for early commissioning of the treatment process only, so likely to provide 2 weeks less of benefit compared to this option if the treatment process was optimised quickly. It is expected that the more detailed environmental assessment will help indicate if the environmental impact varies significantly between these two actions to confirm which Drought Level, they are appropriate to implement at. If they are both judged to have the same environmental impact, then BR-31a would be preferred because it would provide greater flexibility and benefit.
Location	Bristol WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	

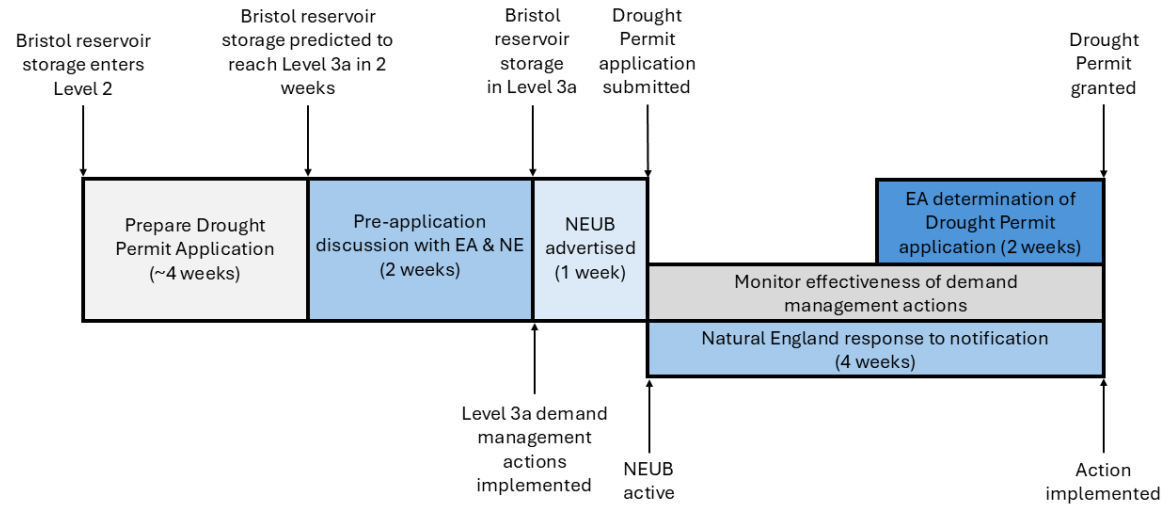


Implementation Details	Action does not require any infrastructure changes. Action can be implemented in October after Drought Permit is granted.	
Benefit Delivered	Immediate	
Duration	1 month	
Yield	Approximately 20 Ml/d for one month direct benefit to Cheddar Reservoir storage from addition of transferred water. Estimate is based on daily maximum abstraction in recent dry years. It is proposed to maintain the prescribed flow and percentage take condition on the current abstraction licence, so abstraction will be limited if natural river flows are low. Natural river flow varies from year to year based on the hydrological conditions. So, in more persistent droughts there may be little benefit achievable from this action (such as in October 2022). This abstraction is also often limited by river water quality, primarily turbidity, so it has been assumed that less than the licenced daily maximum is able to be abstracted for the additional month.	
Action Timing	This action will only be implemented in October (in the second year of a long-running drought) and will only be effective if river flow is high enough to allow abstraction above the prescribed flow. Two variations of the action to extend the River Axe pumped storage scheme have been proposed (BR-31a and BR-31b): extending it into either October or May respectively. It is expected that the more detailed environmental assessment will help indicate if the environmental impact varies significantly between these months to confirm if both are appropriate Level 3a actions.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Cheddar Reservoir SSSI. • Local Authority: Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L3A	Bristol Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for Cheddar Yeo underway, which may result in changes to reservoir release and abstraction profiles within the catchment
	Social & Economic	No known significant risks
	Resource	Effectiveness of action depends on available abstraction, which varies between years based on river flow conditions
	Interaction with other actions	Action BR-31b extends the pumps storage scheme into May so may be used with this action or may be used

		independently depending on the exact drought scenario. This action would replace action BR-47 (early commissioning of River Axe abstraction) if it was considered being used at the same time and was a severe enough drought to be triggered. Action BR-30 is also within the Cheddar Yeo catchment that Cheddar Reservoir is in but should not impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS.	

A3.2.4.10. BR-31b: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May

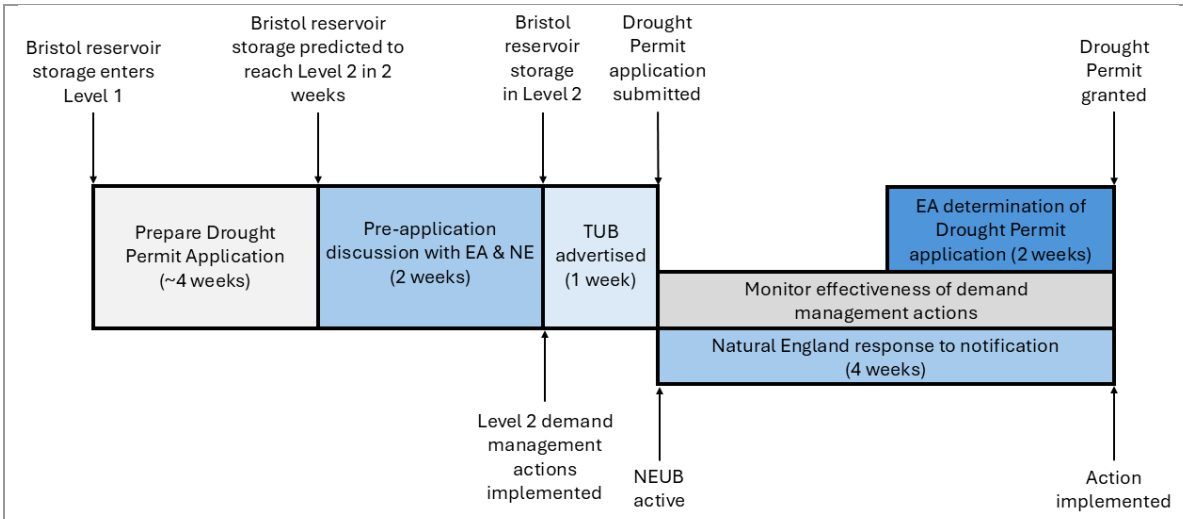
BR-31b: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May	
Description	Abstract water from the River Axe, pre-treatment and transfer into Cheddar Reservoir during May through existing infrastructure. The current abstraction licence allows abstraction from the River Axe and transfer into Cheddar Reservoir during November to April. Maximum limits are 38.64 Ml/d and 4,750 Ml per calendar year, with 1.33 times the excess of flow at Henley gauging station above 13.64 Ml/d available for abstraction, with abstraction ceasing when Henley gauging station flow is less than 13.64 Ml/d. The annual limit may also need to be increased in proportion with this extended transfer period.
Location	Bristol WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented in May after Drought Permit is granted.
Benefit Delivered	Immediate
Duration	1 month
Yield	Approximately 20 Ml/d for one-month direct benefit to Cheddar Reservoir storage from addition of transferred water. Estimate is based on daily maximum abstraction in recent dry years. It is proposed to maintain the prescribed flow and percentage take condition on the current abstraction licence, so abstraction will be limited if natural river flows are low. Natural river flow varies from year to year based on the hydrological conditions. So, in more persistent droughts there may be little benefit achievable from this action. This abstraction is also often limited by river water



	quality, primarily turbidity, so it has been assumed that less than the licenced daily maximum is able to be abstracted for the additional month.	
Action Timing	This action will only be implemented in May and will only be effective if river flow is high enough to allow abstraction above the prescribed flow. Two variations of the action to extend the River Axe pumped storage scheme have been proposed (BR-31a and BR-31b): extending it into either October or May respectively. It is expected that the more detailed environmental assessment will help indicate if the environmental impact varies significantly between these months to confirm if both are appropriate Level 3a actions.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Cheddar Reservoir SSSI. • Local Authority: Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L3A	Bristol Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for Cheddar Yeo underway, which may result in changes to reservoir release and abstraction profiles within the catchment
	Social & Economic	No known significant risks
	Resource	Effectiveness of action depends on available abstraction, which varies between years based on river flow conditions
	Interaction with other actions	Action BR-31a extends the pumps storage scheme into October and BR-47 is for early commissioning of the abstraction, so either may be used with this action or may be used independently depending on the exact drought scenario. Action BR-30 is also within the Cheddar Yeo catchment that Cheddar Reservoir is in but should not impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS.	

A3.2.4.11. BR-47: River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction

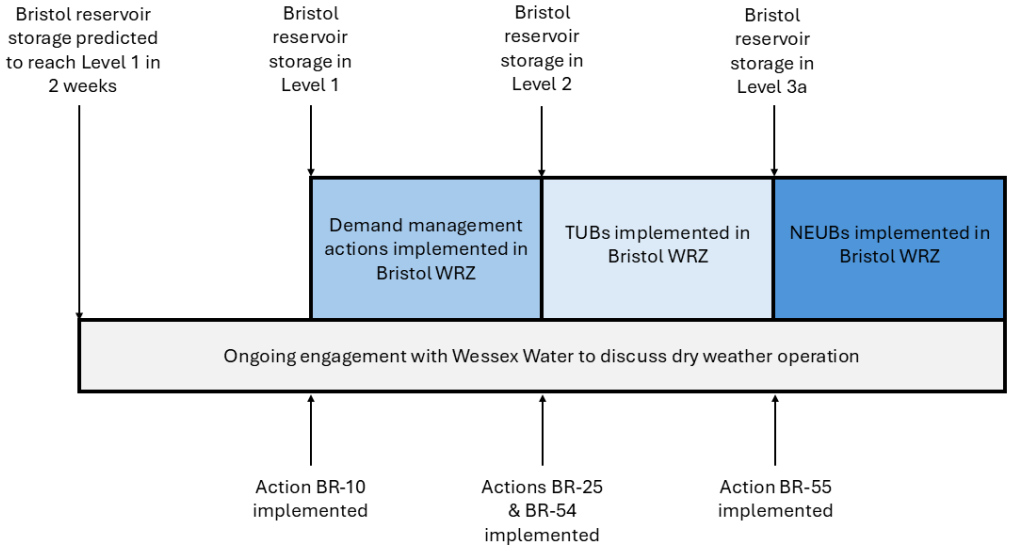
BR-47: River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction	
Description	The current abstraction licence allows abstraction from the River Axe, pre-treatment and transfer into Cheddar Reservoir during November to April. However, because the abstraction is not used all year and often not used every year, commissioning the treatment works often takes several weeks of optimising the process to treat the river water sufficiently to meet the quality standards to allow transfer to Cheddar Reservoir. This action proposes to carry out abstraction during October for commissioning purposes only. The full abstraction would be discharged as close as possible to the abstraction point after being run through the pre-treatment process. This would allow the treatment process to be fully optimised for current river water conditions so that it could be discharged immediately into Cheddar Reservoir on 1st November when the normal licence would allow. The abstraction could be started at approximately 8 Ml/d and slowly increase to closer to the normal daily maximum abstraction specified on the licence (38.64 Ml/d). It would take a few hours for abstracted water to pass through the treatment process and be discharged. The annual limit may also need to be increased in proportion with this extended transfer period. Two variations of the action to extend the River Axe pumped storage scheme in October have been proposed (BR-31a and BR-47). BR-31a extends the pumped storage season fully into October, so could provide an extra 2 weeks of benefit compared to this option if the treatment process was optimised quickly. It is expected that the more detailed environmental assessment will help indicate if the environmental impact varies significantly between these two actions to confirm which Drought Level, they are appropriate to implement at. If they are both judged to have the same environmental impact, then BR-31a would be preferred because it would provide greater flexibility and benefit.
Location	Bristol WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 2
Implementation Timetable	



Implementation Details	Action does not require any infrastructure changes. Action can be implemented in October after Drought Permit is granted.	
Benefit Delivered	November	
Duration	1 month	
Yield	Approximately 20 Ml/d for 2 to 4 weeks benefit to Cheddar Reservoir storage, by transfer being able to start immediately in November, rather than the first few weeks of November abstraction being unable to be transferred to Cheddar Reservoir until the treatment process has been optimised. Estimate is based on daily maximum abstraction in recent dry years. It is proposed to maintain the prescribed flow and percentage take condition on the current abstraction licence, so abstraction will be limited if natural river flows are low. Natural river flow varies from year to year based on the hydrological conditions. So, in more persistent droughts there may be little benefit achievable from this action (such as October 2022). This abstraction is also often limited by river water quality, primarily turbidity, so it has been assumed that less than the licenced daily maximum is able to be abstracted for the additional month.	
Action Timing	This action will only be implemented in October and will only be effective if river flow is high enough to allow abstraction above the prescribed flow. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Cheddar Reservoir SSSI. • Local Authority: Somerset Council. • Various fishing clubs use Bristol reservoirs e.g. BRFFA	
Action Group	BRL-L2	Bristol Level 2 actions

Risks	**Environment**	AMP8 WINEP investigation for Cheddar Yeo underway, which may result in changes to reservoir release and abstraction profiles within the catchment
	Social & Economic	No known significant risks
	Resource	Effectiveness of action depends on available abstraction, which varies between years based on river flow conditions
	Interaction with other actions	Action BR-31b extends the pumps storage scheme into May so may be used with this action or may be used independently depending on the exact drought scenario. This action would be replaced by action BR-31a (extending pumped storage scheme into October) if it was considered being used at the same time and was a severe enough drought to be triggered. Action BR-30 is also within the Cheddar Yeo catchment that Cheddar Reservoir is in but should not impact feasibility of this action.
Environmental Impact	Minor / Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. This action has been selected as a Drought Level 2 scheme because it is considered that a more detailed EAR would find the potential negative environmental impact to be minor. During early commissioning, all abstracted water will be discharged close to the abstraction point, with a delay of a few hours after being passed through the pre-treatment plant. The abstraction flow can also be increased slowly until maximum flow is reached so the difference in river flow should not be significant. This action would take place in October, when river flows are likely to be getting higher and the prescribed flow condition will still be in place, limiting abstraction if flows are still low. A significant increase in INNS risk is not expected because no new pathways are being introduced and changes to water depth and wetted area in the River Axe would be within the normal range of variation during and between years and only reduce flow for a very short time (a few hours) which INNS are unlikely to respond to.	

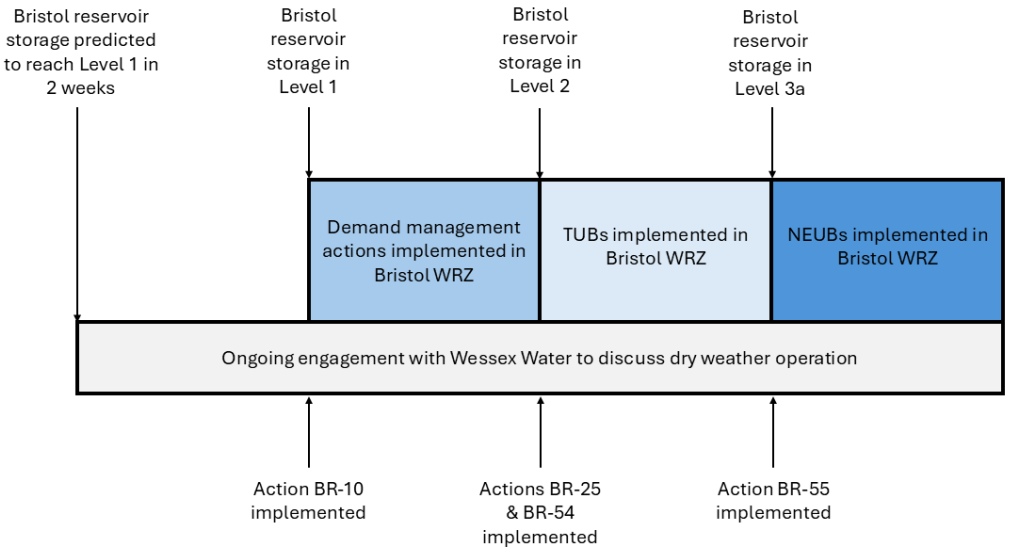
A3.2.4.12. BR-54: Increase Cowbridge transfer from Wessex Water

BR-54: Increase Cowbridge transfer from Wessex Water	
Description	Engagement with Wessex Water to increase Cowbridge raw water import from Wessex Water to Shipton Moyne WTW. Current agreement is for Wessex Water to provide 1.5 Ml/d to Shipton Moyne via the Cowbridge transfer if water levels in Didmarton borehole are under a control curve profile for time of year; or otherwise provide water on a best endeavours basis as requested up to 3 Ml/d. The only source that currently supplies Shipton Moyne WTW is the Long Newnton 1 borehole (part of the Malmesbury Group of abstraction licences), but the maximum WTW output exceeds the maximum achievable borehole abstraction.
Location	Bristol WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 2
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with Wessex Water.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	Approximately 2 Ml/d. Based on estimates of achievable maximum Shipton Moyne WTW output (approximately 6 Ml/d) and assumed Long Newnton borehole maximum yield in dry conditions (4.5 Ml/d) based on performance during recent dry years.

	It is assumed this action could be active throughout a drought summer period of approximately 6 months from May to October, until hydrological conditions improve.	
Action Timing	This action will be effective any time maximum abstraction from Long Newnton borehole cannot fully supply the Shipton Moyne WTW supply area. The exact dates would vary year to year based on the hydrological conditions, but typically this could be between May and October. No negative environmental impact of this action is expected at any time of year.	
Permissions Required	Agreement with Wessex Water	
Interested Third Parties	• Wessex Water will need to take action to increase abstraction from alternative sources and/or reduce demand in their WRZ. • No impact on NAVs. • No consultation required with any other external parties.	
Action Group	BRL-L2	Bristol Level 2 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Assumption it is feasible for Wessex Water to increase abstraction from alternative sources and/or reduce demand in their WRZ to be able to increase their transfer to Bristol WRZ. Need to ensure alignment with Wessex Water Drought Plan.
	Interaction with other actions	No other actions should impact feasibility of this action. BR-10, BR-25 and BR-55 would also be undertaken at various Drought Levels to decrease the Newton Meadows transfer to Wessex Water.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

A3.2.4.13. BR-55: Reduce bulk supplies with temporary variation to established agreement L3a

BR-55: Reduce bulk supplies with temporary variation to established agreement L3a	
Description	Engagement with Wessex Water to optimise transfers in Drought Level 3a, including requesting reduction in the treated water transfers from Bristol WRZ to Wessex WRZ as far as feasible within their operating constraints.
Location	Bristol WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 3a
Implementation Timetable	

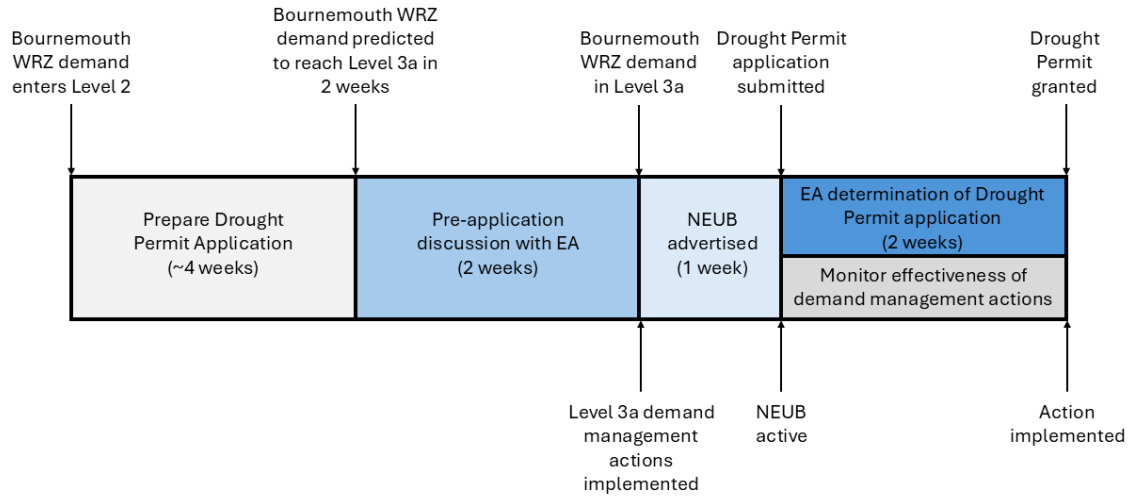


Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as agreed with Wessex Water.
Benefit Delivered	Immediate
Duration	Up to 6 months
Yield	Additional reduction of DYAA of 0.1 Ml/d, with 0.09 Ml/d reduction most of the year and 0.28 Ml/d reduction to peak month. The main transfer is the Newton Meadows export to Wessex Water for Bath supply area. The agreed profile with Wessex Water is 3.75 Ml/d with a peak month (flexible but assumed to be August for modelling purposes) of 11.37 Ml/d giving a DYAA of 4.4 Ml/d. A target of 2.5% reduction compared to agreed profile would be requested, in line with assumed reduced demand due to implemented Level 3a demand restrictions (e.g. NEUB) in Bristol WRZ. This is in addition to the reduction in transfer at earlier Drought Levels due to action BR-10 and BR-25.

	A 2.5% reduction to the agreed profile would reduce the transfer (after the prior reduction by 5% due to action BR-11) to 3.47 Ml/d most of the year, with a peak month of 10.52 Ml/d (4.2 Ml/d DYAA). It is assumed this action could be active throughout a drought summer period of approximately 6 months from May to October, until hydrological conditions improve.	
Action Timing	This action will be effective at any time Bristol Reservoirs are not full. The exact dates would vary year to year based on the hydrological conditions, but typically this could be between May and October. No negative environmental impact of this action is expected at any time of year.	
Permissions Required	Agreement with Wessex Water	
Interested Third Parties	• Wessex Water will need to take action to increase abstraction from alternative sources and/or reduce demand in their WRZ. • No impact on NAVs. • No consultation required with any other external parties.	
Action Group	BRL-L3A	Bristol Level 3a actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on hydrological conditions, which varies between years. Assumption it is feasible for Wessex Water to increase abstraction from alternative sources and/or reduce demand in their WRZ to be able to reduce their transfer from Bristol WRZ. Need to ensure alignment with Wessex Water Drought Plan.
	Interaction with other actions	No other actions should impact feasibility of this action. This action would be implemented in addition to BR-10 and BR-25 at earlier Drought Levels. BR-54 would also be undertaken to increase the Cowbridge transfer from Wessex Water.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

A3.2.5. Bournemouth WRZ

A3.2.5.1. BN-05: Stanbridge boreholes – increase daily abstraction limit

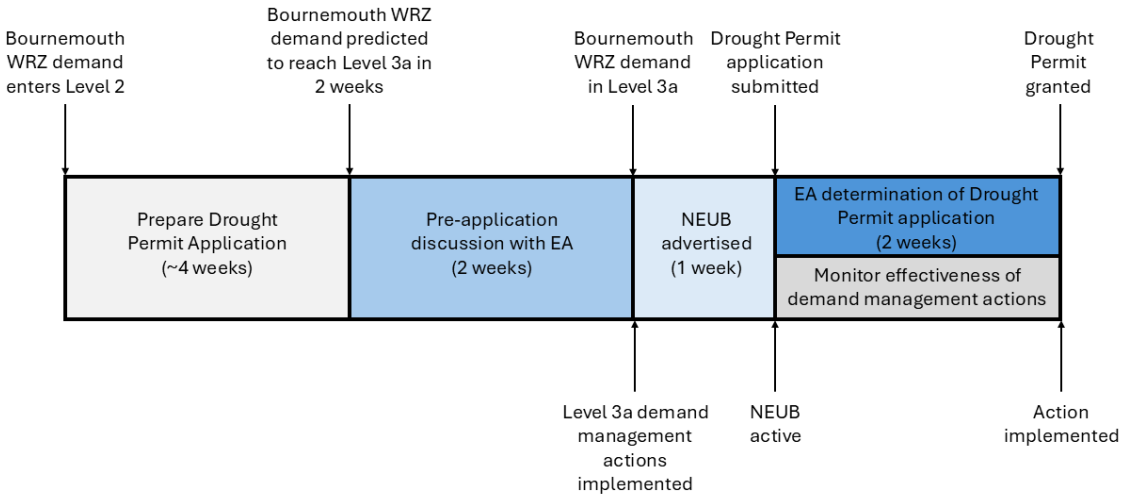
BN-05: Stanbridge boreholes – increase daily abstraction limit	
Description	Increase daily abstraction above current licence limit of 12.5 Ml/d to 17.5 Ml/d with current infrastructure and without borehole 3 and increase annual limit proportionally from 4562.5 Ml/year. The Stanbridge licence allows abstraction from four boreholes and is primarily constrained by the daily licence limit. Without any infrastructure changes, it would be possible to abstract at a maximum daily rate of 17.5 Ml/d if not licence constrained. Borehole 3 is currently disused and would be infeasible to bring back into active use quickly enough to meet demand peak periods in a drought. This licence also includes conditions relating to three stream support boreholes triggered by low flows in the River Allen catchment, which abstract into the River Allen for the benefit of the riparian environment. No changes to these arrangements are proposed under this Drought Permit.
Location	Bournemouth WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate when WRZ demand increases above normal WTW operating output.
Duration	Approximately 2 months

Yield	5 Ml/d direct benefit to Stanbridge WTW maximum output. It is assumed that abstraction at the higher daily rate can be sustained during constant abstraction over a couple of months as this licence was originally for 25 Ml/d. However, it is possible that water levels in the boreholes may drop in a more severe drought or other hydraulic or water quality issues are encountered which limit yield. It is assumed by the time this action is implemented in a severe drought, it is likely to be active for approximately 2 months.	
Action Timing	This action will be effective when the WRZ demand increases above normal WTW operating output i.e. during very high peaks in the summer. The exact dates would vary year to year based on the hydrological conditions, but typically this would be between May and August. Given the lead in time to acquiring a Drought Permit it is likely that this action would be implemented for approximately 2 months in late summer. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to River Avon SAC. • Local Authority: Dorset Council.	
Action Group	BNW-L3A	Bournemouth Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for River Stour underway, which may result in changes to abstractions within the River Stour catchment
	Social & Economic	No known significant risks
	Resource	Timing when action can be implemented depends on when demand peaks, which varies between years based on weather conditions. Assumes sustainable yield over a period of months, particularly during drought conditions.
	Interaction with other actions	No other actions should impact feasibility of this action. BN-04 and BN-12 could be implemented further downstream on the River Stour.
Environmental Impact	Moderate	Low Confidence

Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought.

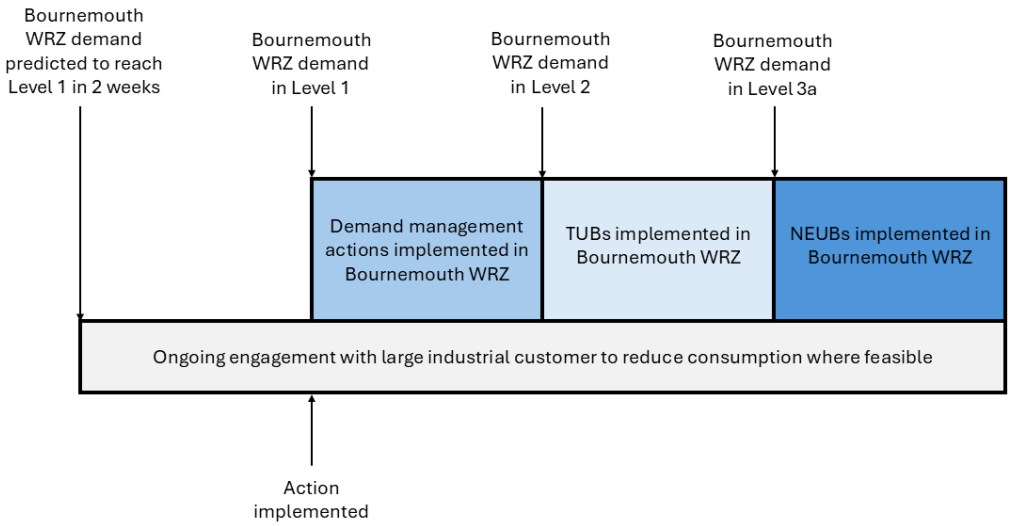
A3.2.5.2. BN-12: River Stour at Longham - increase weekly abstraction limit

BN-12: River Stour at Longham - increase weekly abstraction limit	
Description	The existing River Stour abstraction licence allows abstraction into Longham Lakes, for subsequent transfer to Alderney WTW. It currently has a weekly abstraction limit of 310.22 Ml, but in April 2028 the licence reduces this limit to 222.72 Ml/week, assuming no modifications are made to this licence to adjust this, prior to this date. Recent abstraction weekly volumes, particularly in droughts have exceeded the 2028 limit. This permit would increase the weekly limit to 300 Ml/week, based on the recent actual maximum daily abstraction. The yearly abstraction limit is also reduced in 2028, it is believed that this will not be a key constraint, but depending on the characteristics of a particular drought, it could be necessary to increase this as well. No changes to other River Stour at Longham licence conditions are proposed at this level of drought.
Location	Bournemouth WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as Drought Permit is granted.
Benefit Delivered	Immediate when WRZ demand increases above normal WTW operating output (from April 2028).
Duration	Approximately 3 months
Yield	Approximately 11 Ml/d increase to River Stour available abstraction. It is assumed by the time this action is implemented in a severe drought, it is likely to be active for approximately 3 months.



Action Timing	This action will be effective when the WRZ demand increases above normal WTW operating output i.e. during summer peaks, particularly if sustained over more than a couple of days. The exact dates would vary year to year based on the hydrological conditions, but typically this would be between May and August. Given the lead in time to acquiring a Drought Permit it is likely that this action would be implemented for approximately 3 months in late summer. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	Drought Permit issued by EA	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to River Avon SAC and Solent and Dorset Coast SPA. • Local Authority: Dorset Council & Bournemouth, Christchurch and Poole Council.	
Action Group	BNW-L3A	Bournemouth Level 3a actions
Risks	**Environment**	AMP8 WINEP investigation for River Stour underway, which may result in changes to abstractions within the River Stour catchment
	Social & Economic	No known significant risks
	Resource	Timing when action can be implemented depends on when demand peaks, which varies between years based on weather conditions. Assumes River Stour water quality and flow remains sufficient to maintain increased abstraction rates.
	Interaction with other actions	No other actions should impact feasibility of this action. BN-05 could be implemented further upstream on the River Stour at the same time as this action. BN-04 may be implemented to reduce the prescribed flow constraint on the River Stour at Longham licence at Drought Level 3b.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 2 environmental assessment: • 1.3 Reduce the spread or presence of INNS. • 2.1 Protect and enhance the quality of the water environment and water resources. • 2.2 Provide a sustainable water supply in times of drought.	

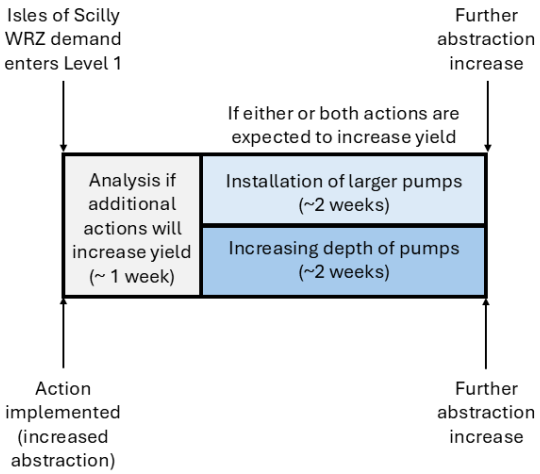
A3.2.5.3. BN-14: Reduce supply of treated water to large industrial customer

BN-14: Reduce supply of treated water to large industrial customer	
Description	Request a large industrial customer to reduce consumption to the minimum volume specified in their supply contract for prolonged dry weather and drought, or as far as feasible within their operating constraints.
Location	Bournemouth WRZ
Action Type	External Action
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Action does not require any infrastructure changes. Action can be implemented as soon as is agreed with the customer.
Benefit Delivered	Immediate
Duration	Up to 4 months
Yield	Approximately 3.25 Ml/d compared to average abstraction, which generally remains consistent through the year with little daily variation. It is assumed this action could be active throughout a drought summer period of approximately 4 months until total WRZ demand reduces.
Action Timing	This action will be effective when the WRZ demand increases above normal WTW operating output i.e. during summer peaks. The exact dates would vary year to year based on the hydrological conditions, but typically this would be between May and August. No negative environmental impact of this action is expected at any time of year.
Permissions Required	Agreement with commercial customer
Interested Third Parties	• No impact on other Water Companies or NAVs. • Large industrial customer.

Action Group	BNW-L1	Bournemouth Level 1 actions
Risks	**Environment**	No known significant risks
	Social & Economic	The customer is classed as Critical National Infrastructure and therefore reducing its water consumption could impact on the wider economy and industry. Therefore, they may not be able to reduce their water consumption to the requested level.
	Resource	Timing when action would be implemented depends on when demand peaks, which varies between years based on weather conditions.
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Low	High Confidence
Environmental Assessment Summary	This action does not include taking any additional water from the environment or any infrastructure changes so it is not expected there will be any negative environmental impact from this action.	

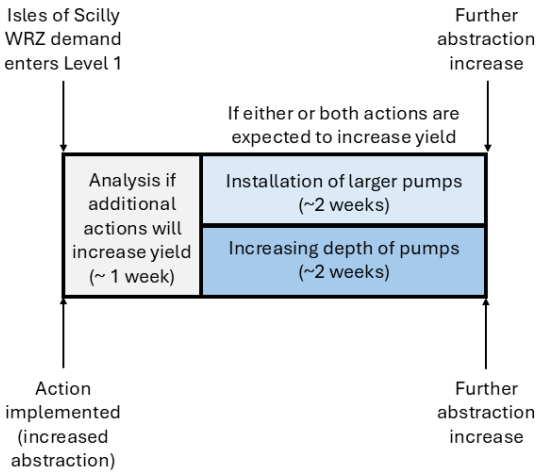
A3.2.6. Isles of Scilly WRZ

A3.2.6.1. IS-12: St Mary's - increase abstraction from boreholes within existing licence conditions

IS-12: St Mary's - increase abstraction from boreholes within existing licence conditions	
Description	Increase abstraction from St Mary's boreholes on Lower Moors and High Moors licences within current licence conditions. For Lower Moors area abstract preferentially from Rocky Hill borehole. This abstraction is constrained by pump capacity, so this action may include installing a bigger pump and/or increasing its depth. Pump depth or size is not specified on the current abstraction licence. For Higher Moors area abstract preferentially from Venns borehole. Increasing pump depth or size is not likely to increase yield for this borehole. Further analysis is required to determine if there is a net benefit of increasing abstraction from Venns borehole because its yield may be limited by abstraction from Hales borehole.
Location	Isles of Scilly WRZ
Action Type	Internal Action
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Increasing abstraction will take place as demand increases. Once demand enters Drought Level 1 an analysis of abstraction will take place to determine if larger or deeper pumps are required to fully maximise abstraction within the current abstraction licence conditions.
Benefit Delivered	Immediately
Duration	Up to 6 months
Yield	Approximately 0.07 Ml/d.

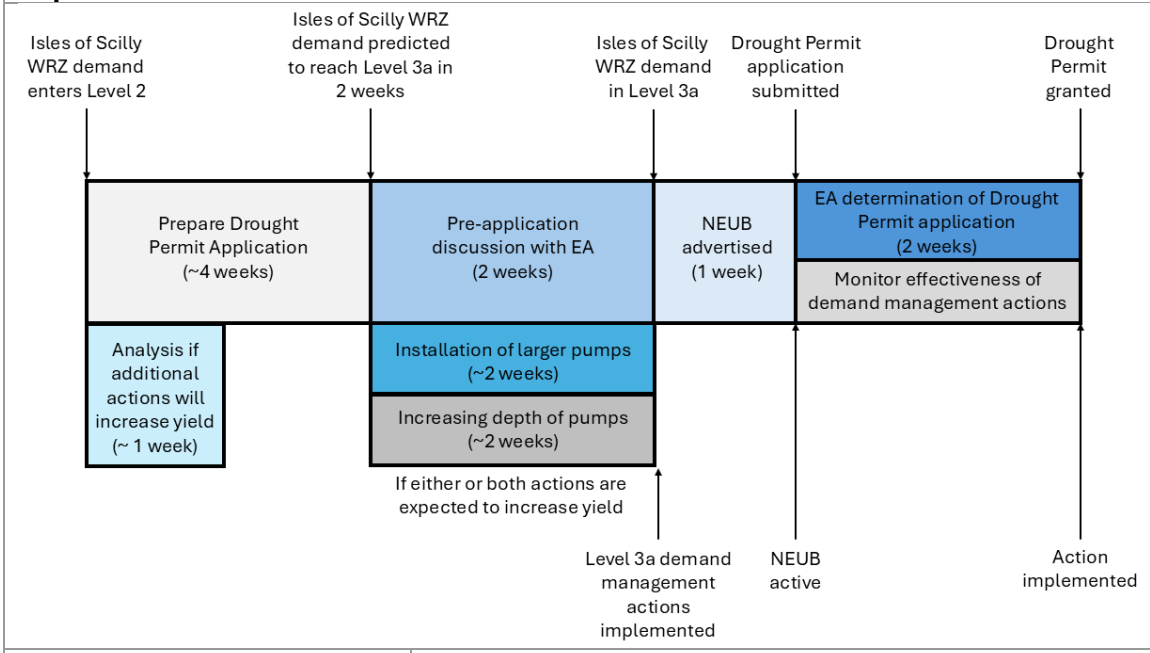
	Based on achievable maximum WTW output of approximately 0.8 Ml/d with allowance for acceptable blending ratio required for groundwater and desalination (from saline boreholes and direct sea intake).	
Action Timing	It is assumed this action will be implemented early in a drought and could be active for up to 6 months. The exact dates would vary year to year based on the hydrological conditions, but most likely during the summer when demands are highest e.g. April to October. No negative environmental impact of this action is expected at any time of year as abstraction would remain within current licence conditions.	
Permissions Required	None	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Isles of Scilly SAC, Isles of Scilly SPA, Lower Moors SSSI, and Higher Moors & Porth Hellick SSSI. • Local Authority: Council of the Isles of Scilly. • Duchy of Cornwall	
Action Group	IOS-L1	Isles of Scilly Level 1 actions
Risks	**Environment**	No known significant risks
	Social & Economic	Potential purchase and installation expense of larger abstraction pump and/or moving it deeper for Rocky Hill borehole.
	Resource	Timing when action would be implemented depends on when demand is highest, which varies between years based on hydrological conditions
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Low	Medium Confidence
Environmental Assessment Summary	This action will still comply with all conditions on current abstraction licences and abstractions will not differ significantly from recent actual volumes in drier years. So, it is not expected there will be any additional negative environmental impact from this action.	

A3.2.6.2. IS-14: Tresco - increase abstraction from boreholes within existing licence conditions

IS-14: Tresco - increase abstraction from boreholes within existing licence conditions	
Description	Increase abstraction from Tresco boreholes on Tresco South licence within current licence conditions. Abstract preferentially from “Borehole by Lake” borehole. Increasing pump depth or size is not likely to increase yield for this borehole. Further analysis is required to determine if additional abstraction from Bridgefield borehole is feasible due to potential impact on SSSI.
Location	Isles of Scilly WRZ
Action Type	Internal Action
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Increasing abstraction will take place as demand increases. Once demand enters Drought Level 1 an analysis of abstraction will take place to determine if larger or deeper pumps are required to fully maximise abstraction within the current abstraction licence conditions.
Benefit Delivered	Immediately
Duration	Up to 6 months
Yield	Approximately 0.028 Ml/d. Based on estimated achievable borehole maximum yield, likely not limited by WTW output of approximately 0.17 Ml/d.
Action Timing	It is assumed this action will be implemented early in a drought and could be active for up to 6 months. The exact dates would vary year to year based on the hydrological conditions, but most likely during the summer when demands are highest e.g. April to October.

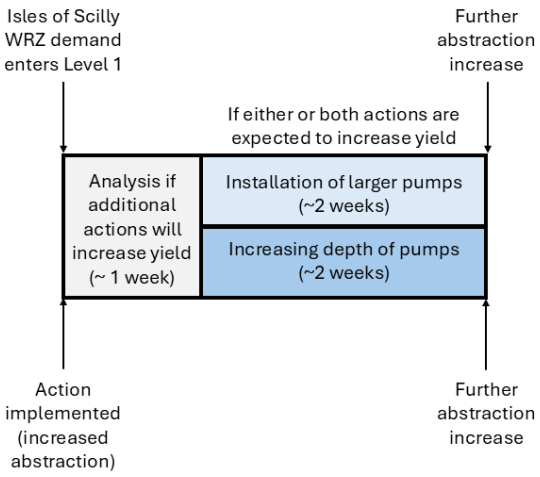
	No negative environmental impact of this action is expected at any time of year as abstraction would remain within current licence conditions.	
Permissions Required	None	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Isles of Scilly SAC, Isles of Scilly SPA, and Great Pool SSSI. • Local Authority: Council of the Isles of Scilly. • Duchy of Cornwall • Tresco Estate	
Action Group	IOS-L1	Isles of Scilly Level 1 actions
Risks	**Environment**	No known significant risks
	Social & Economic	No known significant risks
	Resource	Timing when action would be implemented depends on when demand is highest, which varies between years based on hydrological conditions
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Low	Medium Confidence
Environmental Assessment Summary	This action will still comply with all conditions on current abstraction licences and abstractions will not differ significantly from recent actual volumes in drier years. So, it is not expected there will be any additional negative environmental impact from this action.	

A3.2.6.3. IS-18: St Martins - increase abstraction from boreholes to greater than 20m3/d

IS-18: St Martins - increase abstraction from boreholes to greater than 20 m3/d	
Description	Increase abstraction from St Martins boreholes to greater than 20 m3/d. Abstraction licences are only required where daily abstraction from a source exceeds 20 m3/d. Currently the abstraction from boreholes on St Martins are less than 20 m3/d so no abstraction licences are held by SWW for this island. Increasing abstraction above 20 m3/d would require an abstraction licence or Drought Permit. If this additional volume is only required during more severe droughts, it is assumed that a Drought Permit is a more appropriate option. Abstraction up to 20 m3/d can be achieved from boreholes in current use without changing pump size or depth. But to maximise abstraction above 20 m3/d, it may be necessary to increase the depth and/or size of the abstraction pumps.
Location	Isles of Scilly WRZ
Action Type	Drought Permit
Drought Level Implemented	Drought Level 3a
Implementation Timetable	
	
Implementation Details	Increasing abstraction will take place as demand increases. Once demand enters Drought Level 2 an analysis of abstraction will take place to determine if larger or deeper pumps are required to abstract more than 20 m3/d.
Benefit Delivered	Immediately
Duration	Up to 6 months
Yield	Approximately 0.009 Ml/d.

	Based on estimated achievable borehole maximum yield and maximum WTW output of approximately 0.025 Ml/d.	
Action Timing	It is assumed this action would be implemented later in a drought and could be active for up to 6 months. The exact dates would vary year to year based on the hydrological conditions, but most likely during the summer when demands are highest e.g. April to October. More detailed environmental assessment will help indicate if there is significant variation in environmental impact of this action at different times of year.	
Permissions Required	None	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Isles of Scilly SAC & Isles of Scilly SPA. • Local Authority: Council of the Isles of Scilly. • Duchy of Cornwall	
Action Group	IOS-L3A	Isles of Scilly Level 3a actions
Risks	**Environment**	No known significant risks
	Social & Economic	Potential purchase and installation expense of larger abstraction pumps and/or moving them deeper in boreholes
	Resource	Timing when action would be implemented depends on when demand is highest, which varies between years based on hydrological conditions
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Moderate	Low Confidence
Environmental Assessment Summary	SEA Objectives assessed as possible Moderate negative impact following Level 1 environmental assessment: • 2.2 Provide a sustainable water supply in times of drought.	

A3.2.6.4. IS-19: St Agnes - increase abstraction from boreholes, but remain less than 20 m3/d

IS-19: St Agnes - increase abstraction from boreholes, but remain less than 20 m3/d	
Description	Increase abstraction from St Agnes boreholes, where abstraction remains less than 20 m3/d. Abstraction licences are only required where daily abstraction from a source exceeds 20 m3/d. Currently the abstraction from boreholes on St Agnes are less than 20 m3/d so no abstraction licences are held by SWW for this island. Increasing abstraction up to 20 m3/d would not require an abstraction licence or Drought Permit. Increasing pump depth or size is not likely to increase yield for the boreholes currently in use. The WTW maximum output of 12 m3/d is the key constraint for this island, which is not feasible to improve within the timescales of a drought.
Location	Isles of Scilly WRZ
Action Type	Internal Action
Drought Level Implemented	Drought Level 1
Implementation Timetable	
	
Implementation Details	Increasing abstraction will take place as demand increases. Once demand enters Drought Level 1 an analysis of abstraction will take place to determine if larger or deeper pumps are required to fully maximise abstraction within the current abstraction licence conditions.
Benefit Delivered	Immediately
Duration	Up to 6 months
Yield	Approximately 0.003 Ml/d. Based on estimated achievable borehole maximum yield within 20 m3/d limit, but constrained primarily by maximum WTW output of approximately 0.012 Ml/d.

Action Timing	It is assumed this action will be implemented early in a drought and could be active for up to 6 months. The exact dates would vary year to year based on the hydrological conditions, but most likely during the summer when demands are highest e.g. April to October. No negative environmental impact of this action is expected at any time of year as abstraction would remain under 20 m3/d.	
Permissions Required	None	
Interested Third Parties	• No impact on other Water Companies or NAVs. • Natural England due to Isles of Scilly SAC & Isles of Scilly SPA. • Local Authority: Council of the Isles of Scilly. • Duchy of Cornwall	
Action Group	IOS-L1	Isles of Scilly Level 1 actions
Risks	**Environment**	No known significant risks
	Social & Economic	Potential purchase and installation expense of larger abstraction pumps and/or moving them deeper in boreholes
	Resource	Timing when action would be implemented depends on when demand is highest, which varies between years based on hydrological conditions
	Interaction with other actions	No other actions should impact feasibility of this action.
Environmental Impact	Low	Medium Confidence
Environmental Assessment Summary	This action will not increase abstraction over 20 m3/d and abstractions will not differ significantly from recent actual volumes in drier years. So, it is not expected there will be any additional negative environmental impact from this action.	