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# Draft Drought Management Plan

Non-Technical Summary



## About us, at a glance....



**3.6 million customers**



**We supply 900 million litres a day**



**In 2016/2017 we invested £147 million in our network**



**16,500km of pipes**



**In 2016, 99.96% of all water quality tests complied with regulatory standards**

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# Welcome to our Draft Drought Management Plan

## Welcome to our Draft Drought Management Plan summary brochure.

The Drought Management Plan outlines the way we would respond in a drought situation and the actions we would take as it progresses. This plan, if put into action, has the potential to impact the way our customers use water and the local aquatic environment.

I have been in the industry for nearly 40 years and over this time have seen several major drought situations. While we are better prepared for these events than ever before, we operate in a dry and densely populated area of the country and are still at risk of suffering droughts.

This plan is based on the company's previous experience of drought events but we recognise we might not have all the answers. We would like your comments on the plan and anything you feel we have not taken into consideration.

I hope you find this document helpful, and if you have any questions or comments, please share them with us.

### Mike Pocock

Director of Asset Strategy



## What is a drought? Droughts are natural events that happen when there are extended periods of low rainfall that create a shortage of water for people, the environment, agriculture or industry.

However, every drought is different – in terms of where they happen, how long and severe they are, and the impact they have on customers, communities, businesses and the environment.

With such uncertainty, it is important that we make plans to manage drought, whatever the weather.

### 1.1

#### WHAT IS A DROUGHT MANAGEMENT PLAN?

Our Drought Management Plan for 2018 - 2023 sets out how we will manage a drought, the actions we will take and when we will take them.

The plan outlines what we would do to inform customers about a drought; how we would work with customers to reduce consumption; the restrictions we would place on household and commercial customers; and what we would do to increase supplies by taking more water from the environment.

It does not cover investments into new infrastructure to avoid drought. Investment is sought through the Water Resource Management Plan and Business Planning process which will be consulted on later in the year.

### 1.2

#### WHAT'S HAPPENING NOW?

We've published our draft Drought Management Plan for 2018 - 2023 and are carrying out a public consultation on it now.

You can find this at [www.affinitywater.co.uk/droughtplan](http://www.affinitywater.co.uk/droughtplan)

This plan sets out our early thinking on what we will need to do in a drought to ensure customers have water at their taps while doing what we can to mitigate the impact this has on the environment.

Our plan is based on experience of previous droughts and the views of our customers, communities and regulators.

### 1.3

#### TELL US YOUR VIEWS

Once you've had a chance to read this summary document, we'd welcome your views on whether we've got it right – before we produce our final Drought Management Plan in 2018.

Representations can be made in writing to the Secretary of State before the end of the consultation period on 2nd October 2017. Representations can be made either by post or email:



**Secretary of State for Environment, Food & Rural Affairs**

Drought Plan Consultation  
c/o Water Resources Policy  
Area 3D  
Nobel House  
17 Smith Square  
London  
SW1P 3JR



[water.resources@defra.gsi.gov.uk](mailto:water.resources@defra.gsi.gov.uk)

# 2 Managing a drought

## The majority of the water we supply comes from aquifers around 80 meters below the ground. Aquifers are porous rock that store groundwater.

In our supply area, the aquifer is made of chalk and feeds our local rivers and globally unique chalk streams. When groundwater levels are high, the rivers flow as normal, when they are low, some rivers will begin to dry out.

Groundwater levels are heavily influenced by weather and seasonal variations. However, our operations also affect groundwater levels which is why we pay close attention to the impact this has on the environment. Because we are reliant on groundwater, our Drought Management Plan focuses on our response to low groundwater levels.

40% of our water comes from rivers which are not directly affected by drought restrictions. This gives us valuable security to our supply.

### 2.1 TYPES OF DROUGHT

Our Drought Management Plan sets out what we need to do to maintain customers' water supplies while also protecting the environment.

## There are three main types of drought that we need to plan for:

### A SINGLE SEASON DROUGHT

As we rely on groundwater sources to supply our customers, we may need to take action to preserve these sources such as asking customers to voluntarily reduce water usage. It may also be necessary to introduce some usage restrictions.

### TWO DRY-WINTERS DROUGHT

If we have two back-to-back dry winters many of our water sources are likely to be impacted. Our groundwater levels will be significantly reduced and because of this, there will be lower flows in most local rivers. It's possible that in this instance, water use restrictions for households and businesses will be needed.

### LONGER-TERM DROUGHT

While we have never experienced this type of drought, we do still have to plan for it. If this happened we would potentially have to introduce all the actions in our Drought Management Plan – including emergency actions to take further water from the environment and more onerous water use restrictions for household and business customers.

### 2.2 LEVELS OF SERVICE

#### The average likelihood of introducing usage restrictions on customers

Our Drought Management Plan is based on the frequency of the actions we need to take to maintain customers' water supplies during a drought. We recently consulted on the proposed frequency of restrictions and these were supported by over 60% of customers.

Water supply levels of service are a measure of the likelihood of applying restrictions on customers during drought conditions; they set out how often on average we expect that we will need to take a specified step in response to a drought.

Type of restriction	Level of service/ frequency of occurrence	How it can affect our customers
Temporary Use Ban (TUB) – these restrict certain types of activities that use water	1 in 10 years	Restrictions on using hosepipes for a number of uses, including watering gardens and filling pools or ponds. Applies to household customers only.
Drought Permits – we apply for these to allow us to take more water from rivers and underground aquifers	1 in 40 years	No direct customer impacts – but some local rivers may be affected by additional groundwater abstractions.
Drought Order Restrictions	1 in 40 years	Additional restrictions on a number of water uses, including cleaning of windows, using mechanical vehicle washers and cleaning industrial plant. Applies to household and non-household customers.
Emergency Drought Order – these allow us to abstract more water, which can lead to environmental damage	1 in 120 years	These restrictions would apply to any uses we consider appropriate at the time, depending on the drought situation.

Any improvement to these levels of service to reduce the likelihood of these restrictions, would require investment in the network in order to increase resilience and flexibility. Investment for any changes is sought through the Water Resource Management Plan and Business Plan process.

We would welcome any further feedback and comments on these proposed levels of restrictions.

### 2.3 DEALING WITH EXTREME DROUGHT EVENTS OF A 1 IN 200 YEAR FREQUENCY

When a drought goes beyond the levels included in this plan, we must introduce our emergency plans. These allow us to introduce further restrictions according to the scale of the ongoing situation.

Assuming we have put in all the restrictions and options outlined in our levels of service, we believe that we could operate without the introduction of standpipes and rota supply cuts, and we would be able to maintain supply even in a 1 in 200 year drought event.

This is important because research and experience tells us that the disruption caused by these options would be unacceptable for customers and operations.

### 3

## Drought triggers

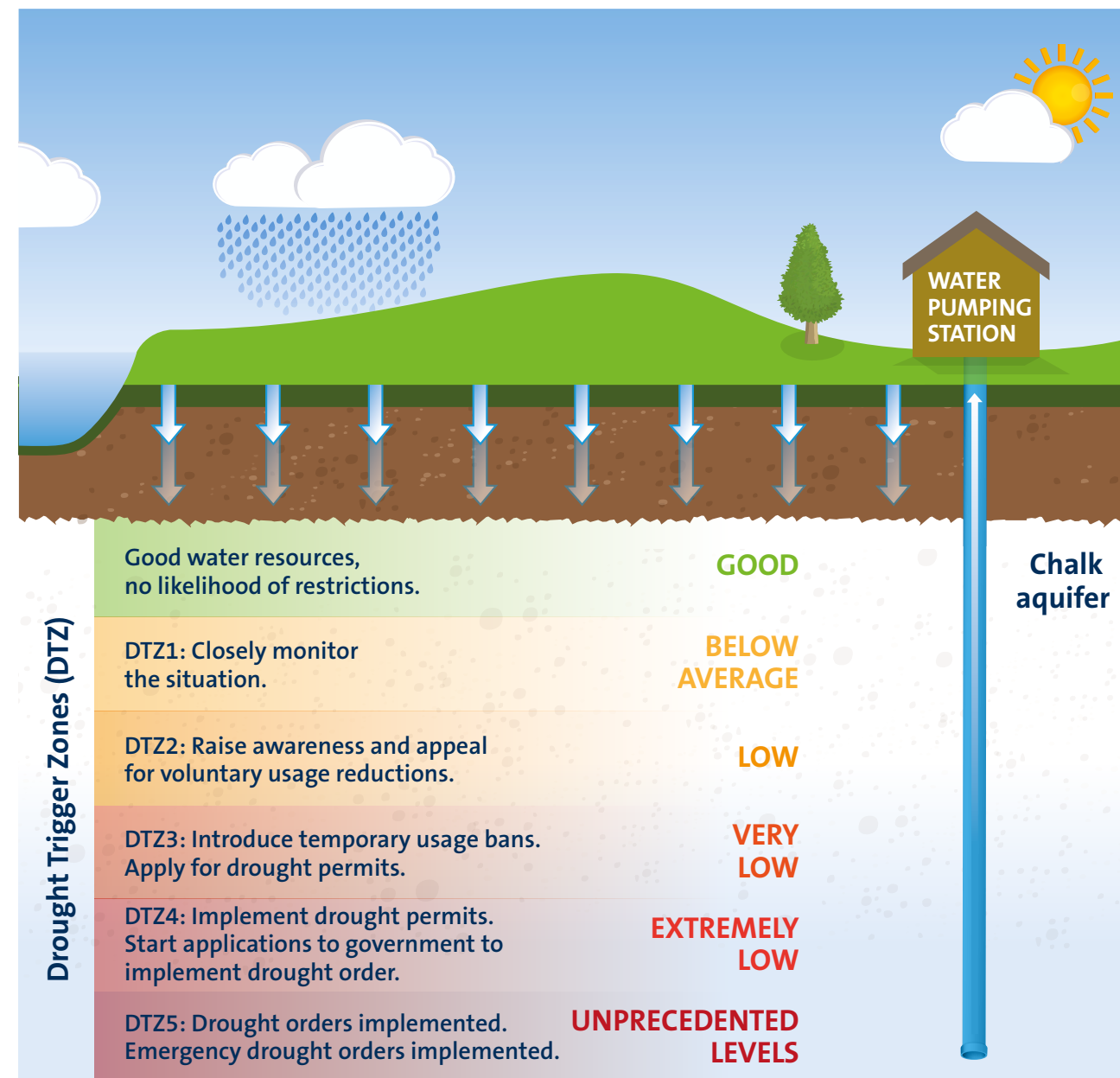
We continuously monitor rainfall, how our water sources are doing, and how much water is being used.

When our water sources reach certain levels, we use ‘triggers’ to determine the actions we need to take – before a drought happens, as a drought develops, during a drought and after levels have recovered.

These triggers also give us enough time to plan and deliver the actions, as well as make sure we communicate what we are doing.

The chart below shows drought trigger zones. The blue line shows what would happen if we were to experience three dry winters in a row and how we would respond if groundwater levels fell into each trigger zone.

On top of the actions outlined below, we would also do more to reduce leakage on our network; carry out work to make our water works as efficient as possible; and closely monitor the environment to assess the impact the drought was having on the aquatic environment.



This diagram is a simplified version of the chart shown on page 45 of the full Drought Management Plan document available here [www.affinitywater.co.uk/droughtplan](http://www.affinitywater.co.uk/droughtplan)

### 4

## Managing demand for water in a drought

These are the range of actions we could take to manage demand for water as a drought progresses. We welcome all comments and feedback on the actions outlined in this section.

#### 4.1 PUBLICITY CAMPAIGNS

At drought zone two, we would launch media and publicity campaigns to inform customers and communities about the potential impact on their water supplies, what they can do to reduce their water use, and what we are doing to ensure there is enough water. Our Water Saving and Education teams would also be increasing their work and activities too, including giving out free water saving devices.

In the event of a drought, we will proactively contact customers who are registered on our priority services register. In addition, we will work with local stakeholders to ensure that we reach as many of our customers in vulnerable situations as possible.

Full details of the current exemptions we are proposing can be found on page 68 of our Drought Management Plan<sup>1</sup>.

#### 4.2 LEAKAGE

We are already reducing leakage at an industry leading rate. However, in the event of a drought we would go even further.

We would ramp up our work on proactively finding and fixing leaks by increasing staffing levels on leakage detection, increasing active leak detection and repair activities, as well as reducing the amount of time taken to repair visible leaks.

#### 4.3 TEMPORARY USE BANS

##### Restrictions on household customers

At Drought Zone 3, Temporary Usage Bans (TUBs) would be introduced. TUBs can restrict the use of water for certain activities, but we only introduce these when absolutely necessary. The restrictions outlined below are covered by a statutory scheme and would be communicated widely through multiple media channels. They prohibit:

- Watering a ‘garden’ using a hosepipe (the term ‘garden’ covers things like parks, verges, sports pitches and allotments)
- Cleaning a private motor-vehicle using a hosepipe
- Watering plants on domestic or other non-commercial premises using a hosepipe
- Cleaning a private leisure boat using a hosepipe
- Drawing water using a hosepipe for domestic recreational use
- Filling or maintaining a domestic pond using a hosepipe; and
- Filling or maintaining an ornamental fountain
- Cleaning walls, or windows, of domestic premises using a hosepipe
- Cleaning paths or patios using a hosepipe
- Cleaning other artificial outdoor surfaces using a hosepipe

Some customers or activities are automatically exempt from Temporary Use Bans – due to disability, safety concerns and commercial considerations – these are reviewed on a case by case basis.

<sup>1</sup> [www.affinitywater.co.uk/droughtplan](http://www.affinitywater.co.uk/droughtplan)



# 4

## Managing demand for water in a drought continued

### 4.4

#### DROUGHT ORDER RESTRICTIONS

##### Further Restrictions on all customers

In addition to Temporary Use Bans, we can apply for a Drought Order from the Secretary of State which would also restrict using water to:

- Water outdoor plants on commercial premises
- Fill or maintain a non-domestic swimming or paddling pool
- Fill or maintain a pond
- Clean non-domestic premises
- Clean a window of a non-domestic building
- Operate a mechanical vehicle-washer
- Clean any vehicle, boat, aircraft or railway rolling stock
- Clean industrial plant
- Suppress dust
- Operate cisterns in any building that is unoccupied or closed

Similar to TUBs, some customers or activities are automatically exempt from non-essential water use restrictions. Full details of the current exemptions can be found in Appendix 4 of our Drought Management Plan.

### 4.5

#### EMERGENCY DROUGHT ORDERS

##### Extremely unlikely, but necessary to include in our plan

Under the scope of emergency drought orders we may apply to the Secretary of State to limit or prohibit the use of water for any purpose we consider appropriate. Emergency Drought Orders have not been needed in the UK by any water company since 1976 – this is an extremely rare occurrence and the significant investment in our network would make a 1976 type drought extremely unlikely.

# 5

## Increasing water supplies in a drought

This section discusses what we would do to increase the amount of water we can supply to customers. We would particularly like your views on our drought permit plans.

### 5.1

#### MAKING THE MOST OF AVAILABLE WATER SUPPLIES

We would make sure as many of our water treatment works are online and running as efficiently as possible. This means reducing or delaying some maintenance or building works that take them offline. It also means making sure we are abstracting and treating the maximum amount of water from rivers and aquifers that we are allowed to.

### 5.2

#### BRINGING OLD SOURCES BACK ONLINE

We would look at how quickly we can bring disused, disconnected or abandoned water sources back into operation, and how much extra water they would give us during a drought - and then take action.

### 5.3

#### WATER TRANSFERS

We have two transfer options to ensure customers have water at their taps whilst doing what we can to minimise the impact this has on the environment:

##### Inside our supply area

- We've developed a 'mini water grid' in our supply area so we can move water from one area to another. We would also give consideration to bringing forward planned infrastructure improvements in places where it is very critical to move water from one area to another.

##### Outside our supply area

- We can ask neighbouring water companies and private companies with water supply licences to provide us with extra water, where this is available.

### 5.4

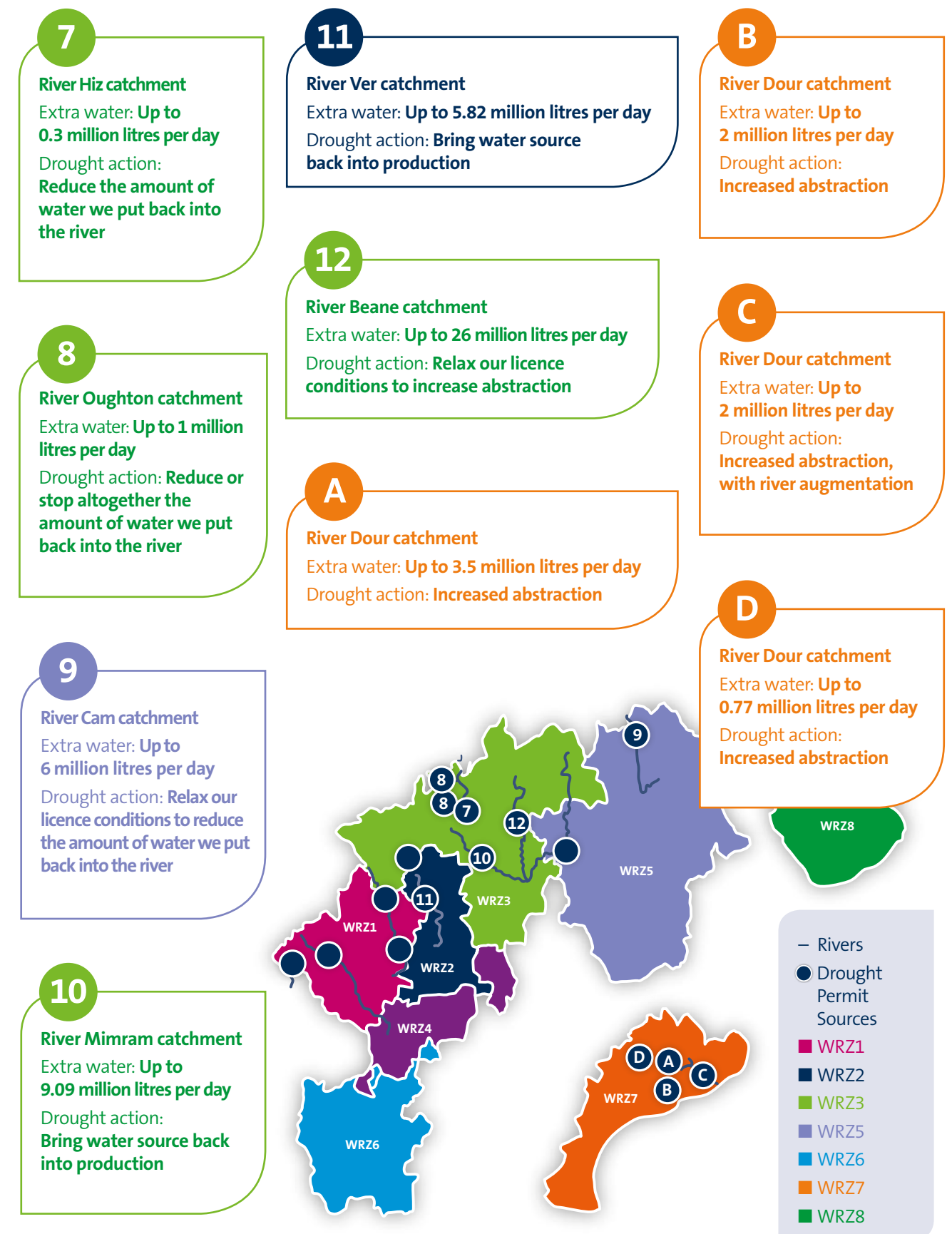
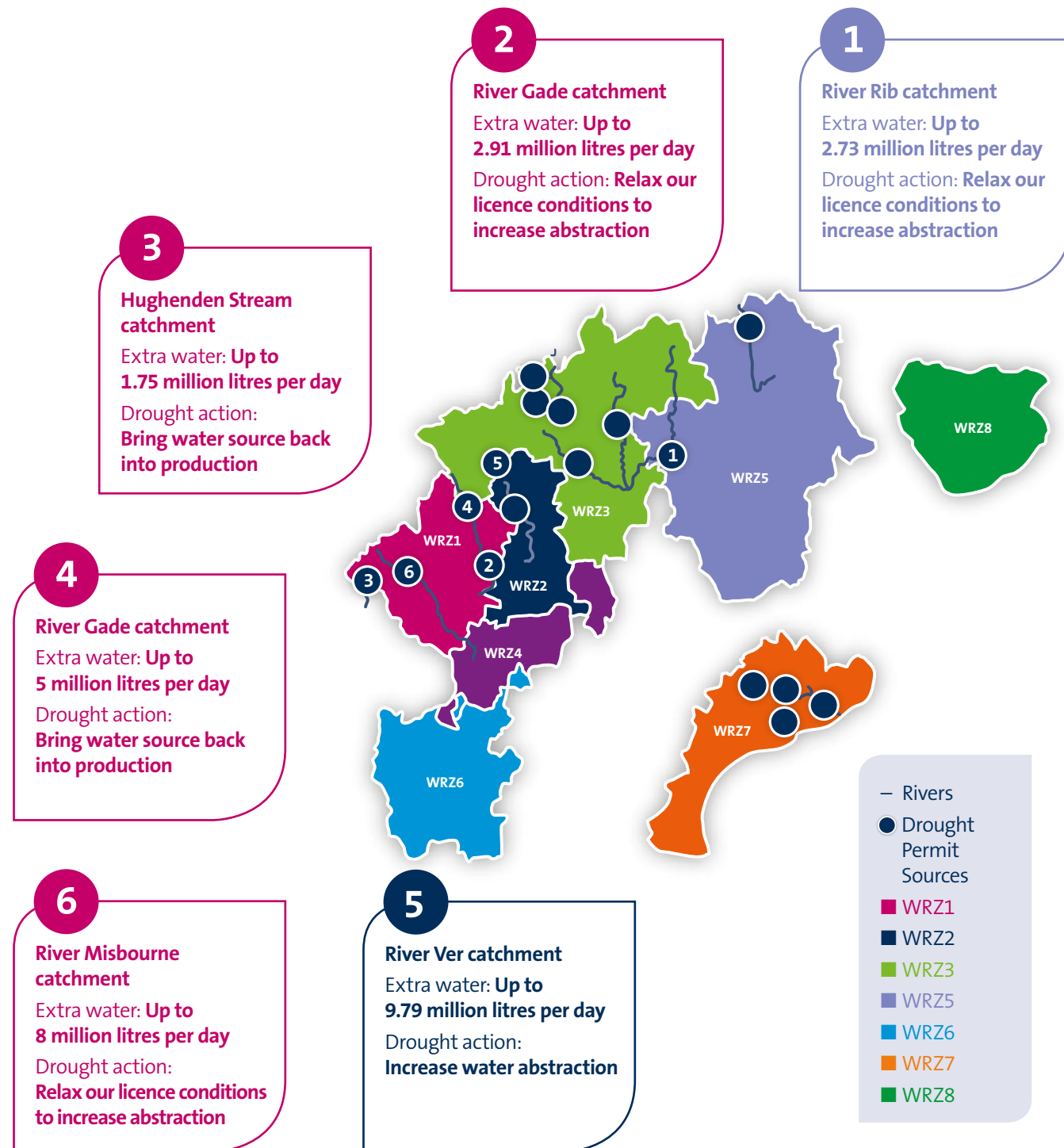
#### DROUGHT PERMITS

We can apply to the Environment Agency for a Drought Permit. These allow us to temporarily take more water from the environment than we are normally allowed to do.

# Increasing water supplies in a drought – Our action plan in stage order continued

We have identified 12 groundwater sources in our Central region and 4 groundwater sources in our Southeast region that combined could give us an extra 86 million litres per day. Each of these groundwater sources are located in a river catchment.

For information on how to view the Environmental Assessment Reports please visit our website [www.affinitywater.co.uk/droughtplan](http://www.affinitywater.co.uk/droughtplan)



## 6

# Protecting the environment

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**Protecting the environment is a fundamental part of our business, and we take our responsibilities very seriously.**

We must apply to the Environment Agency for Drought Permits and the Secretary of State for Drought Orders which, if granted, could allow us to take more water from underground aquifers.

Before we do that, we carry out environmental assessments on these water sources and their catchments to see what potential impact our actions may have on the environment, and how we can minimise these effects.

Our assessments include:

- **Increasing our automated monitoring of ground water sources where we are abstracting more water**
- **Carrying out physical walkover surveys**
- **Measuring water flows**
- **Regularly testing the quality of the water**
- **Undertaking surveys for macroinvertebrates – these small organisms are useful indicators of the health or condition of water bodies.**

## 7

# What happens next?

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**We are running a public consultation on our Drought Management Plan which is your chance to tell us if you agree with what we are proposing. See page 5 or visit our website for how to get involved.**

We would very much like your views on the contents of this our Drought Management Plan. For example:

- What you think about our levels of service and how acceptable you find these
- Your views on how we plan to monitor the impacts this has on the environment
- Your views on the restrictions outlined in the plan
- Anything else you would like to comment on in relation to the way we plan to deal with a drought
- Your views on our proposed drought permit sources.

We will collate all the feedback and representations on our Drought Management Plan and then publish our Statement of Response in Autumn 2017 – this will summarise the consultation responses we have had and detail the changes we will make as a result.

**The final Drought Management Plan will then be adopted and published in 2018.**