

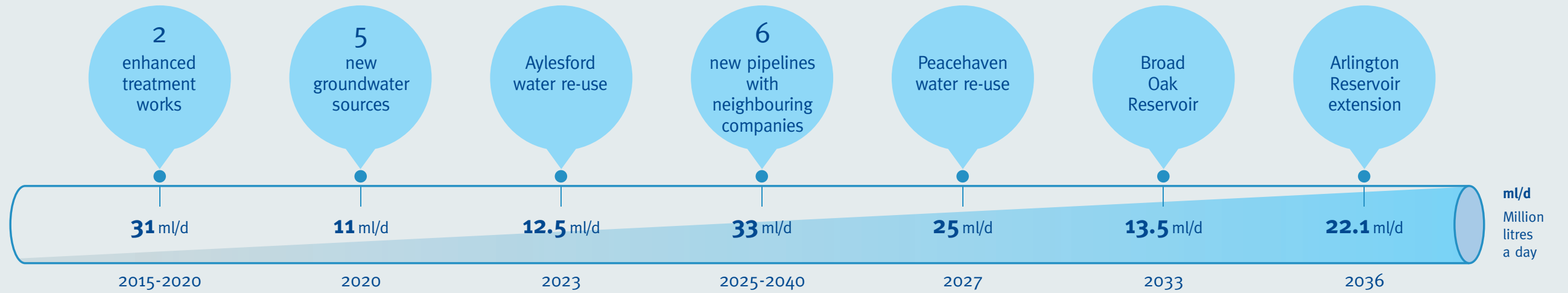
Our 2015-2040 Water Resources Management Plan

A Summary



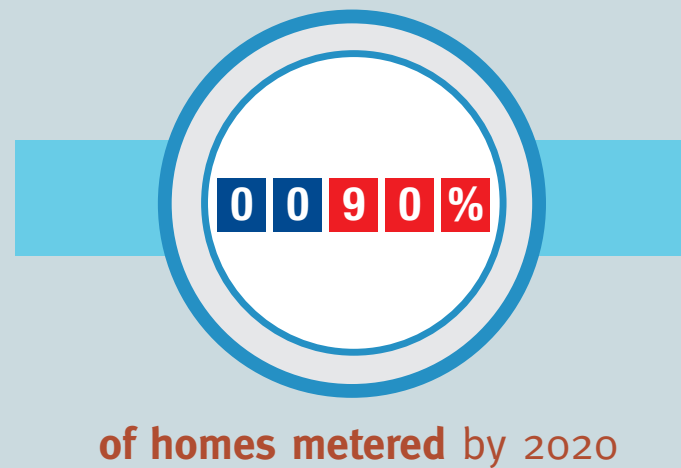
Every drop counts... **increasing supply**

We will invest over **£400 million** in new water resources

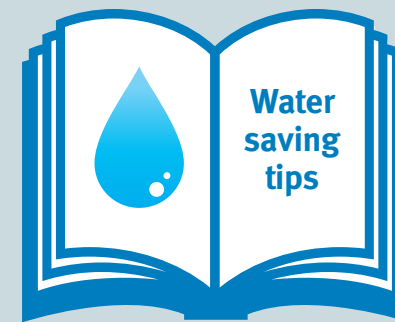


How will we meet water demand over the next 25 years?

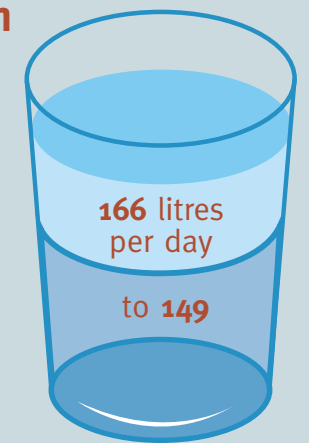
Every drop counts... **reducing demand**



Water education and awareness



Encouraging each of us to use less from



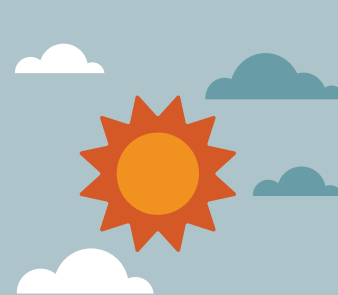
by 2040

Every drop counts... **the challenges**

Growing population



Changing climate



Rich in biodiversity



Higher than average demand



Introduction

South East Water is proud to supply safe, clean drinking water to around 2.1 million people across parts of Kent, Sussex, Surrey, Hampshire and Berkshire.



This booklet summarises this plan and explains:

- [How we prepared our WRMP \(page 6\)](#)
- [The challenges we face in managing water resources in the south east \(page 7\)](#)
- [What we can do to make the resources we have go further such as reducing leaks and further customer metering \(page 10\)](#)
- [New water resources developments including maximising existing sources, increased transfers, water re-use schemes and new storage reservoirs \(page 11\).](#)

Ultimately we want to develop new water resources in genuine partnership with the communities they benefit, and we would welcome your contribution to this.

We produce a Water Resources Management Plan (WRMP) every five years to set out what we will need to do, where, and by when, to secure water supplies for today's and tomorrow's customers.

To put this plan together, we talked with our customers and stakeholders in a range of ways, so we are confident that this plan is based on what is important to them. In fact, it's as much your plan as South East Water's.

In June 2014, with approval from the Department for Environment, Food and Rural Affairs (Defra), we published our Water Resources Management Plan for 2015-2040.

How we have prepared this plan

Stage 1 Forecasting 2011 and 2012

Our forecasts of future customer demand, and our ability to meet it with current resources, showed (if we do nothing) there will be a deficit of up to 137 million litres of water per day during a hot, dry summer by 2040.

Stage 2 Early consultation January 2012 onwards

As we developed the plan, we talked to our customers and stakeholders to consider a large range of options to increase supply and reduce demand.

We also invited representatives from local interest groups and our regulators to join an Environmental Focus Group to steer the plan.

Stage 3 Prepare draft plan March 2013

We prepared and submitted this to the Secretary of State of Environment, Food and Rural Affairs.

Stage 4 Statutory public consultation (12 weeks) 13th May – 5th August 2013

We received 66 responses from individuals and organisations. Their 379 comments focussed mainly on our recommended options (48 per cent) and demand forecast (17 per cent). We considered each comment carefully and made changes to our plan as a result.

Stage 5 Statement of response and revised WRMP November 2013

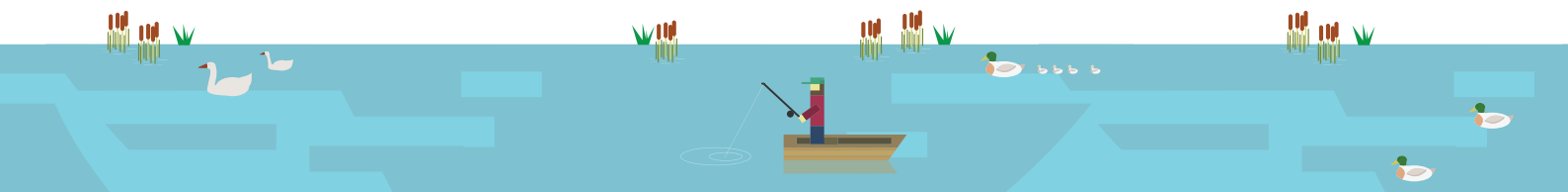
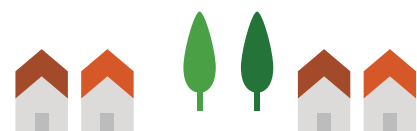
Our statement of response set out how we engaged with customers, local councils, MPs and others across our supply area on our draft plan – and what they told us.

Taking into consideration revisions from Defra and feedback from our public consultation, we produced a revised plan showing the changes we had made.

Stage 6 Final WRMP June 2014

We published our Final Water Resources Management Plan following Government approval.

Our early work on the 2020 plan has already begun.



Supplying water in the south east of England

The challenges

The WRMP helps us prepare for the challenges of supplying water to a region:

- Rich in biodiversity
- With a growing population
- Higher than average demand for water and
- A changing climate.

Need to protect and enhance the environment

As a water company we are intrinsically linked to our natural environment. Our area is particularly rich in biodiversity, for example Sussex has the highest proportion of ancient woodland of any English county.

We work hard to minimise the environmental impacts of our operations, and in partnership with the Environment Focus Group, regulators and local authorities, look for opportunities to manage catchments better and enhance the natural environment.

All water sources have been and will continue to be monitored to ensure they are sustainable and comply with current and future legislation.

Rainfall and climate change

In 2007, the Environment Agency designated the south east of England as being seriously water stressed.

Weather patterns are becoming less predictable. During the last four years alone we have experienced untypically dry and wet weather:

- The 17 months between October 2010 and February 2012 saw exceptionally low rainfall across the majority of our area. By April 2012, groundwater levels were the lowest since records began in 1904
- In contrast between October 2013 and February 2014 the south east experienced its sixth wettest winter since 1910 causing flooding and distress.

Even following a wet winter, the south east of England is only ever 18 months away from the start of a potential drought. This is because we can only store a limited amount of rainfall and much of it flows out to streams, rivers and ultimately the sea. If we had two consecutive dry winters we could be in a position where South East Water would need to consider seriously whether to apply temporary use restrictions (such as hosepipe bans) on our customers the next summer.

Therefore, this plan seeks to improve the mix of supply sources to reduce our reliance on groundwater and improve our resilience to drought and climate change.



Population increase

Population and housing within our area of supply is expected to increase by 19 per cent and 32 per cent respectively by 2040.

We worked closely with all 32 local planning authorities in our company area to ensure growth expectations were reflected in this plan.

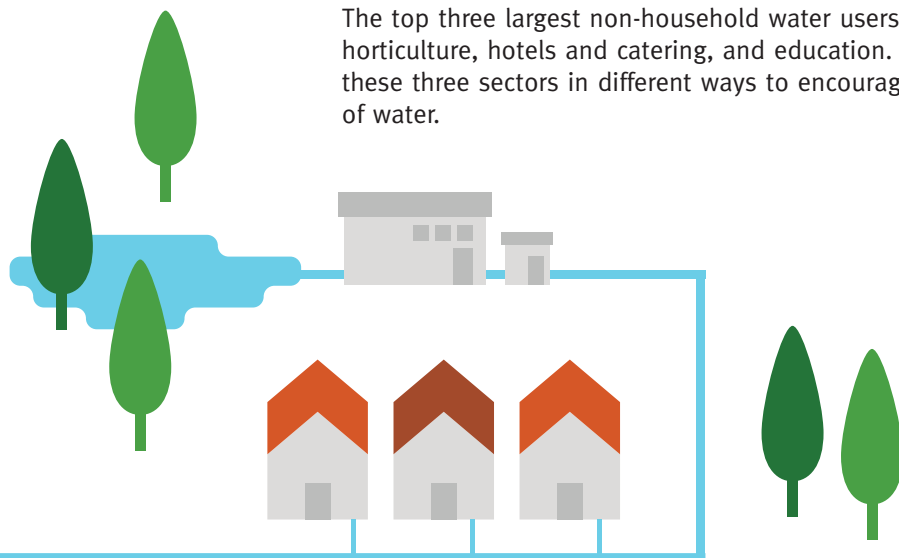
Customers' water use

We are committed to helping our customers become more water efficient.

By supporting customers to permanently change the way they use water, we have been able to delay the need for developing new water resources.

We have made ambitious assumptions about the impacts our demand management work will have over the lifetime of the plan, and are forecasting that customers' use of water will reduce from 166 litres per person per day to an average of 149 litres per person per day by 2040.

The top three largest non-household water users are agriculture and horticulture, hotels and catering, and education. We work with each of these three sectors in different ways to encourage the careful use of water.



Making sure our plans are what customers want

We are committed to executing a plan that, as well as reflecting our priorities, is affordable. We completed 'willingness to pay' research with customers on all the proposed water resources options to ensure we got the balance right.

Our plan to meet future demand

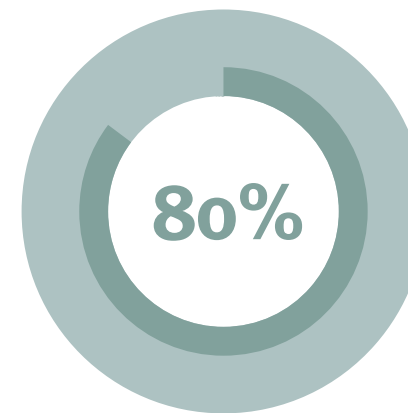
Our final WRMP proposes a range of supply and demand management activities, as well as schemes to develop and share new resources from 2015 to 2040 including:

Making water we have go further:

- Helping our customers to use water wisely
- Reducing leaks
- Increasing the number of customers who have a water meter.

Developing new water supplies

- Five groundwater sources at Forest Row, Coggins Mill and Cowbeech in East Sussex, Maytham Farm in Kent and Aldershot in Hampshire between 2015 and 2020 to deliver 11.3 million litres per day
- Six water transfer schemes to share supplies with our neighbouring water companies from 2020 to 2040 to deliver 33 million litres per day
- Enhancing two existing water treatment works in Berkshire and East Sussex by 2020 increasing supplies by 31 million litres per day
- Three new regional transfers schemes from Kippings to Pembury, Aylesford to Blackhurst and Best Beech to Blackhurst between 2020 and 2025 that will give us more capacity to move existing and new water round our network to meet customer demand across our supply system
- In the longer term, we are investigating the feasibility of two water re-use schemes and two reservoir developments that are due to come into operation between 2023 and 2036.



80 per cent of household customers asked supported the service and costs in the WRMP

This plan includes a good mix of sustainable water sources to reduce our reliance on groundwater and make us more resilient to drought.

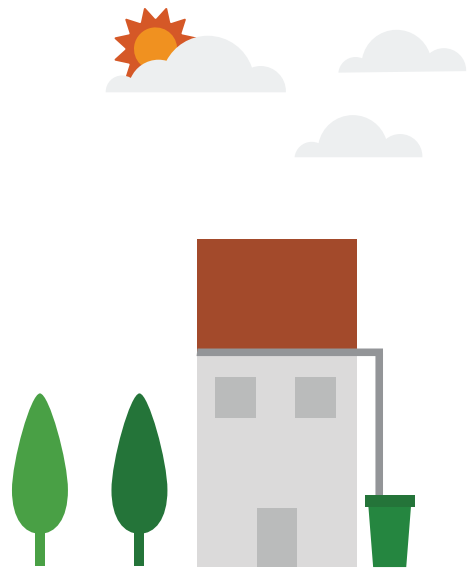
We will be working with you to ensure efficient use of water (through education, leakage reduction and metering) which helps us to manage customer demand.

However, some of the more ambitious projects, such as reservoirs and water re-use plants, need a long lead time to allow for investigations, planning, design and construction before they can become fully operational.

Although our plan is based around our best estimates, as it is looking 25 years ahead we have factored in some of the uncertainties around our planning assumptions so that we can supply a reliable water supply whatever the future may hold.

This plan is based on sound evidence and has been developed following engagement with our regulators, customers, stakeholders and the Government. We are, therefore, confident that this WRMP will meet customer demand, be affordable and ensure our commitment to the natural environment from now until 2040.

Making the water we have go further



Customers have told us they are happy to support our metering programme as well as promoting water efficiency but we need to do more to reduce leakage.

Reducing leaks

This is a top priority for us and our customers. In addition to achieving current savings, we are pursuing a programme to reduce leakage from South East Water's pipe network to 10 per cent by 2040.

We will do this through better monitoring, managing water pressure in our network and responding rapidly to repair our mains when leaks are found.

The Customer Metering Programme which completes in 2020 has helped identify and repair leaks from customer-side pipework. So the programme will also help bring down the amount of water wasted.

Supporting our customers to use water wisely

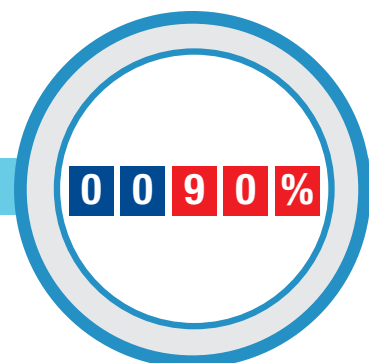
We will continue to help our customers reduce their water use by encouraging them to adopt positive behaviours and to install water saving devices that we offer to them free of charge. We will promote this on our website, through our metering programme, in billing communications, by attending community events and working in partnership with other like-minded organisations in our area.

Customer Metering Programme

Our Customer Metering Programme helps make consumers more mindful of the water they use. In turn it helps us understand water use behaviour and how we can support our customers to make every drop count.

We know these customers not only consider metering to be the fairest way to pay, but have taken action to use water more efficiently, resulting on average in a 15 per cent drop in water consumption per property.

By 2020 90 per cent of households will have a meter



Developing new water supplies

Investment

We review our company business plan every five years and between 2015 and 2020 we intend to invest £475 million to maintain and upgrade our network of pipes and water treatment works, maintain water quality, install meters and protect the environment.

This will include £142 million for developing the new water resources set out on pages 12 and 13 that are required during the period 2015 to 2020. Our investment will continue beyond 2020. In fact, by 2040 we will have invested more than £100 million in new water resources.

New resources

Our work to reduce leakage and encourage water efficiency has continually delayed the need for large infrastructure projects. However, with an increase in population and housing expected by 2040, we need to do more to meet the gap between available resource and demand.

A combination of measures to both manage demand and develop new water supplies is required to ensure a reliable supply of water in the future.



The schemes

Although the schemes we are planning to implement over the next five years (see tables below) ensure we will have sufficient supplies until 2023, after this point a series of larger schemes are required to ensure a reliable water supply:

1. Aylesford water re-use, Kent

By 2023 a new water re-use process in Aylesford, Kent will increase water supply in the area by 12.5 million litres per day.

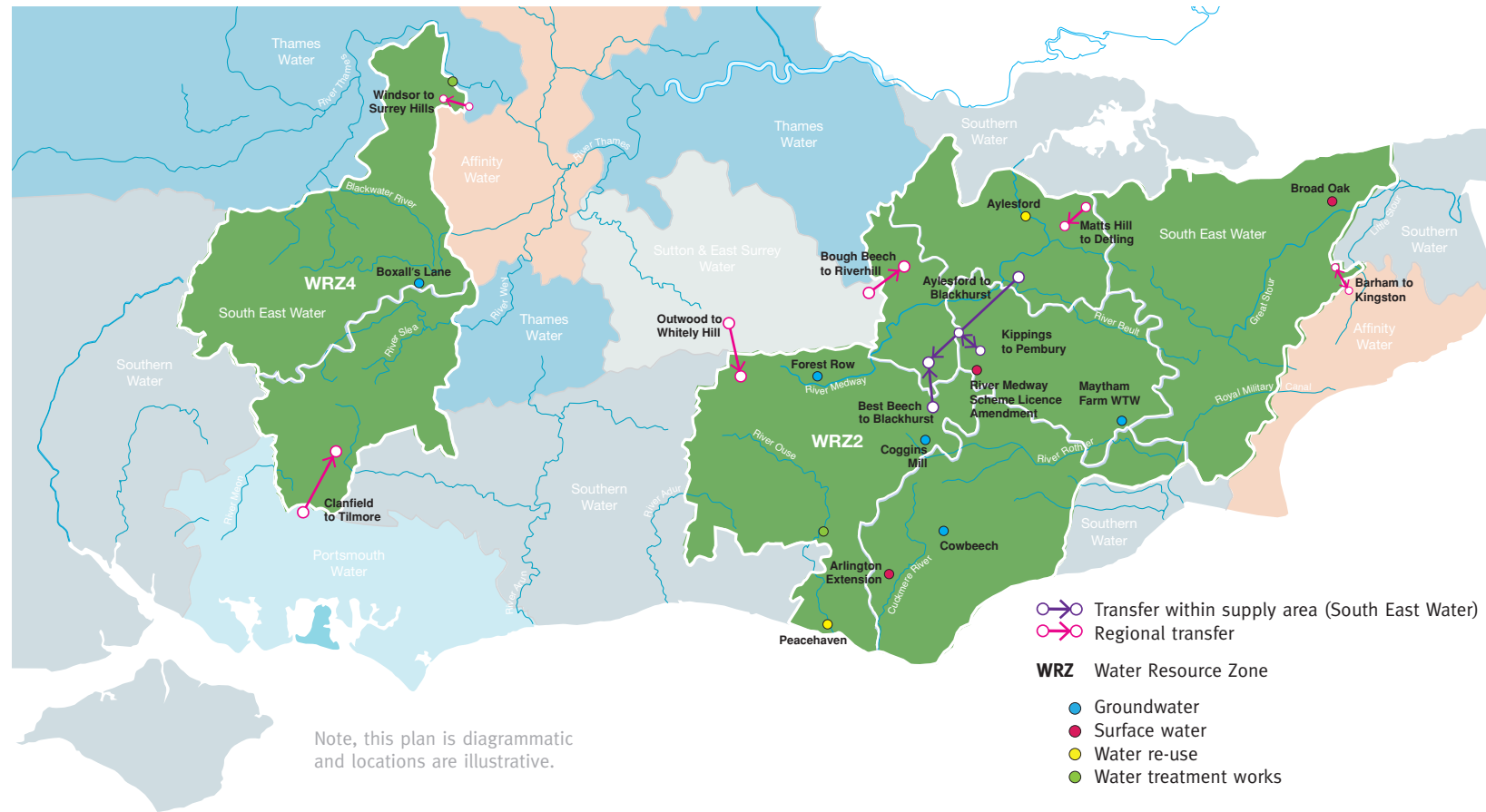
We will continue to work closely with Southern Water to develop this scheme.

2. Broad Oak Reservoir, Kent

Building this new storage reservoir near Canterbury, Kent would supply an extra 13.5 million litres per day by 2033.

We have reduced the size of the proposed reservoir from our 2010 plans to avoid having to flood a SSSI and ancient woodland.

With an intake from the River Great Stour, this scheme will also create new wetland habitat.



Note, this plan is diagrammatic and locations are illustrative.

3. Peacehaven water re-use, Sussex

Developing a new treatment plant adjacent to Southern Water's Newhaven wastewater treatment works will help us produce up to 25 million litres per day by 2027.

Treated wastewater will be released from this new advanced treatment plant into the River Ouse for abstraction upstream at our Barcombe water treatment works.

We will continue to work closely with Southern Water to develop this scheme.

4. Arlington Reservoir extension, Sussex

We intend to build an additional reservoir at Arlington, East Sussex, north of the existing site to increase supply by an additional 22.1 million litres per day by 2036.

Building on the experience and local knowledge gained from managing our existing reservoir, which has been a designated SSSI, this option provides new habitats and recreational opportunities.

Type of scheme	Scheme name	Peak yield ML/d*	Start date
Leakage	Various	4.9	2015
	Total	4.9	
Water efficiency	Various	1.0	2015
	Total	1.0	
Groundwater	Boxalls Lane	1.7	2016
	Cowbeech	1.5	2017
	Forest Row	2.4	2018
	Coggins Mill	1.6	2019
	Maytham Farm	4.3	2019
	Total	11.5	

Type of scheme	Scheme name	Peak yield ML/d*	Start date
Reservoirs	River Medway Scheme (Bewl Reservoir) maximising use of existing resources	1.6	2016
	Broad Oak Water	13.5	2033
	Arlington Reservoir extension	22.1	2036
	Total	37.2	

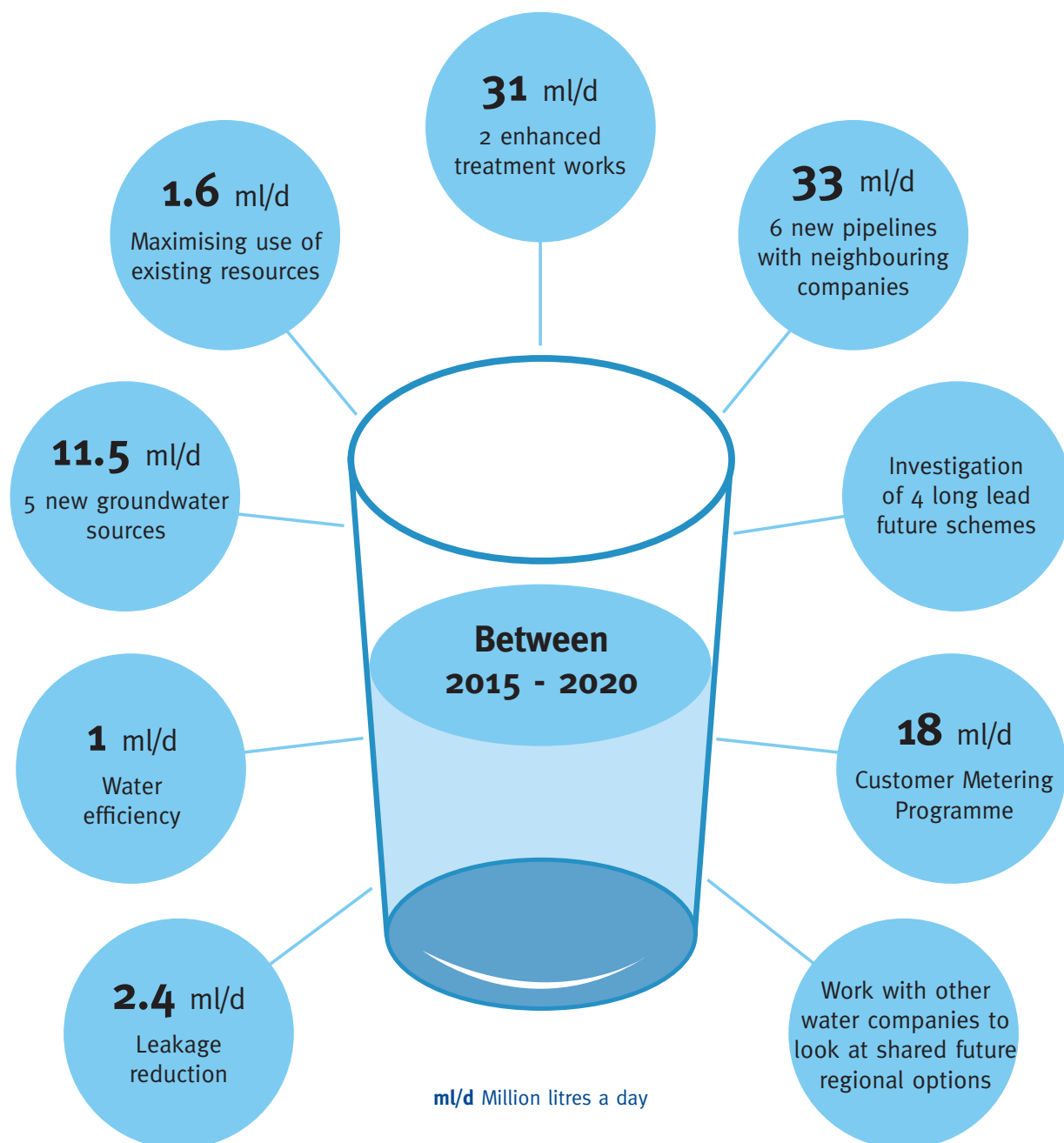
Type of scheme	Scheme name	Peak yield ML/d*	Start date	
Regional transfers	Bough Beech to Riverhill	From Sutton & East Surrey Water	5.0	2023
	Clanfield to Tilmore	From Portsmouth Water	10.0	2040
	Outwood to Whitely Hill	From Sutton & East Surrey Water	5.0	2020
	Kingston	To Affinity Water	-2.0	2021
	Matts Hill to Detling	From Southern Water Services	5.0	2022
	Windsor to Surrey Hills	From Thames Water	10.0	2031
	Total		33.0	

Type of scheme	Scheme name	Peak yield ML/d*	Start date
Water re-use	Aylesford	12.5	2023
	Peacehaven	25.0	2027
	Total	37.5	
Water treatment works	Improving existing works in WRZ2	2.0	2016
	Improving existing works in WRZ4	29.0	2020
	Total	31.0	
Total new water		156.1	
Transfers within supply area	Kippings to Pembury	4.0	2016
	Aylesford to Blackhurst	4.0	2020
	Best Beech to Blackhurst	10.0	
	Total	18.0	
Grand total		174.1	

* This is equivalent to million litres (or megalitre per day). This is one of the units we use to describe the amount of water we can supply to our customers. For an idea of scale, an Olympic swimming pool holds around two and a half megalitres of water.

What's next in 2015-2020?

While this Water Resources Management Plan looks at a long-term view of investment, in the shorter term this graphic below shows what work we are doing to secure water supplies for current and future customers.



How you can find out more and get involved

We would be delighted to come along to your community or interest group, or school to tell you more about water resources management. Please contact us via:

communications@southeastwater.co.uk to find out more.

We will be keeping our website updated with our progress on securing future water supplies with details of how you can get involved in the next Water Resources Management Plan and help secure future water resources.

Useful links

Drought plan – southeastwater.co.uk/droughtplan

Water Resources Management Plan in full – southeastwater.co.uk/WRMP

Environment and Social Achievements Report – southeastwater.co.uk/ESAR

Contact information

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