News

WATER RESOURCES SOUTH EAST

MARCH 2020

Welcome

"Our approach to the environment and the climate emergency will be one of the top issues which define WRSE and its member companies in the next five years and beyond."

A handful of words perhaps but they speak volumes about the challenge WRSE faces as work gathers pace on producing its first ever regional resilience plan.

Indeed, the weather extremes we have witnessed – in around six months we've gone from facing potential drought in some parts of our region to witnessing devastating flooding after the wettest February on record – is evidence of the topsy-turvy climate that our plan needs to be able to adapt to. The consequence is that drought planning, even during heavy rainfall, is becoming a feature of our scenario planning.

The underlying sentiment of that message was one I was due to deliver at Waterwise's conference, when I would have warned that the South East in particular is at the sharp end of climate change with nothing spare in the tank (page 3).

However, with the spread of Covid 19 around the world we now find ourselves in unprecedented times. It is hard to predict what will happen over the coming months and it will impact on all of us. Our job though is to maintain focus on developing our plan as we must ensure the availability of resilient water resources whatever the future holds.

In other water news the Environment Agency's National Framework for Water Resources has been published (page 4 and 5) which will provide the critical blueprint for future water resources planning. Alongside that WRSE has published its Future Water Resource Requirements document, setting out what water is needed for all sectors, not just for homes and businesses but other major users too. Did you know we have 150+ English Wine Producer Member vineyards in our region and we are the horticultural hub for tomato and soft fruit growers? Now there's more food for thought.

Simon Cocks
Independent Chair, WRSE

Future water requirements document published for consultation

A document which sets out the stark water resource position in the region – and invites interested parties to help solve the critical shortfall in water that will be faced in the future – has been published.

WRSE's Future Water Resource Requirements document provides the initial resource position for the region and, for the first time, for **all** water users.

It shows the stark reality of the water resource challenge being faced – by 2050 there will be a deficit in **public water supplies alone** of around 1 billion litres per day and by 2100 this will have risen to over 1.7 billion litres per day.

It also factors in the water needs of other sectors too, such as agriculture, energy and industry, which its estimated could reach 211 million litres per day by 2100.

Critically, the document also invites third parties to offer up schemes, solutions or ideas they may have for consideration. This could include existing abstraction licences that could be traded with one of the water companies or other abstractors; catchment schemes that could help preserve or increase the amount of water available within a catchment; or demand management options that could help WRSE achieve its ambitious leakage and per capita consumption targets.

Meyrick Gough, WRSE Technical Director, said: *"The scale of this challenge is not one that the water companies that make up WRSE can easily tackle alone. That is why we want to hear from third parties who may have any new sources of water at their disposal that could be of importance to our regional plan, or demand management options that could be considered."*

(Continued on page 2)

STOP PRESS: Covid 19

Many water companies – for reasons of business continuity, resilience and duty of care – have stopped external meetings and are encouraging employees to work from home where possible. WRSE is doing the same and are using online meeting tools to ensure our work can continue during this difficult time.

Statement of resources requirements published for consultation (Continued)

The document is the first step in WRSE developing its regional resilience plan, and outlines:

- The challenges facing the South East region and how they will impact on future water resource availability
- how much additional water we anticipate will be needed in the region up to 2100, both for public water supply and other water users
- the options that have been identified to date to meet public water supply needs and how much water they will provide
- what WRSE will do to update and confirm its assessment of the region's future water needs by February 2021
- an overview of how WRSE will develop the regional plan.

The document can be found at www.wrse.org.uk/public-documents and also poses a number of questions to readers with a request to email responses and any other comments by 17 April 2020.

Quick facts about the South East region

- *Currently, water companies abstract, treat and distribute more than 5 billion litres of water each day*
- *Other sectors such as agriculture, power suppliers and industry rely heavily on water and often abstract it from the same catchments. Together, they currently use just under 155 million litres per day*
- *The region (including London) is worth £798 billion to the economy – 37% of the UK total*
- *It has over 2 million businesses – almost as many as all the other regions of England alone combined*
- *Over 28 million tourist visits were made in 2017, generating £5.4 billion in spend for the region with its cities, cultural centres and dramatic coastlines and chalk downs proving a draw*
- *Over 4 million extra people will be living in the South East by 2045.*

What we've been up to:

TREVOR:

"Joined the Consumer Council of Water national Board meeting to discuss role and work of WRSE and how customers' views will be taken into account"

"Spoke at the River Lea conference on chalk streams"

"Spent day with the Salmon and Trout Conservation body to understand concerns and see the work they are doing to conserve rivers and streams"

"Attended Senor Steering Group of the National Framework for Water Resources"

MEYRICK:

"Attended the Environment Agency's event looking at different approaches to deriving Natural Capital valuations"

"Spoke at the University of Brighton conference on desalination and wastewater reuse around the world - an excellent event showing worldwide application of these technologies"

"Met with the EA to discuss the techniques that will be needed to develop WRMP 29"

"Meeting with our member companies every two weeks as the work picks up pace"

Progress outlined to Stakeholder Advisory Group

The WRSE Stakeholder Advisory Group, which provides essential insight from key stakeholders and other sectors to the development of a regional resilience plan, met recently.

The Stakeholder Advisory Group is an essential part of ensuring WRSE addresses the needs of other sectors (beyond public water supply) and is transparent about the technical work and how its outputs inform the regional resilience plan and water companies' own plans.

The group heard the latest updates from the group's executive directors on various workstreams, as well as giving feedback on what areas or topics should be covered in future. Among the newest members to join was Sarah Perry from Herts and Middlesex Wildlife Trust, who WRSE Director Trevor Bishop met at the annual River Lea Catchment Conference.

Among the workstreams discussed were:

Population and property growth forecasts

Work by Edge Analytics to determine future population and property growth in the region is underway, with data due at the end of April 2020. The WRSE's member companies can then use this data to calculate their own water demand forecasts.

Industrial water use growth forecasts

In the WRSE region this accounts for 136 million litres of water per day – the lowest amount compared with all the other regional groups. While the growth forecasts don't anticipate this will increase significantly, the group was told further work will be required to understand the impact on industry during droughts.

Customers and engagement

WRSE outlined how it will undertake region-wide research on customers' preferences around options to feature in the regional resilience plan, and on which formal consultation will take place.

WRSE is also setting up an engagement process with all WRSE companies' Customer Challenge Groups, the first virtual meeting of which is scheduled for next month.

South East at "sharp end of climate change with nothing spare in the tank" warns WRSE chair

With the annual Waterwise conference postponed until Autumn 2020 due to Covid 19, here's a summary of the key points WRSE Chair Simon Cocks was intending to make.

The South East region is at or close to the limits of sustainable abstractions of water and so WRSE's approach to the environment and the climate emergency will be one of the top issues which define it and its six member companies in the next five years and beyond.

WRSE Chair Simon Cocks said: *"We are at the sharp end of climate change impacts and are at, or close, to sustainable abstraction limits – there is nothing spare in the tank – and so our ability to adapt to a changing climate, in combination with other uncertainties, is arguably our single greatest challenge and will define our legacy."*

Simon Cocks

Encouraging all water users to use less is clearly an area ripe for adaptative behaviours that the water industry, and water companies in the South East in particular, can cultivate.

But it also needs to be recognised that water efficiency is a team sport. He added: *"None of us can deliver what is needed alone, we need a level of collaboration across government, regulators, companies, stakeholders and customers that has not been achieved to date."* This includes mandatory water labelling and tightening up of building regulations for example.

And while the water sector continues to pioneer adaptative thinking and practice, Simon remains concerned that it has much more still to do and may well be "under thinking and under investing in resilience adaptation."

Simon concluded: *"Does our current modus operandi arguably constrain our sector's true potential? I think it does, but only time will tell if we have got the balance right for the next five years between short term efficiency, risk and investing at this critical point in time for the future.*

"In the meantime, we press on with collaboratively developing the best evidenced plan for adaptation resilience while challenging ourselves to think differently, be inquisitive and help liberate the water industry's potential."

Focus on...

...National Framework for Water Resources

The much-anticipated National Framework for Water Resources – the blueprint for making sure the local, regional and national pieces of the water resource planning jigsaw fit together and are future proof – has been published.

The framework sets out the long-term needs of all sectors that depend on a secure supply of water – including public water supplies provided by water companies, direct abstraction for agriculture, electricity production and industry – while also considering the water needs of the environment.

It also outlines what government and regulators expect to see from the five regional groups, made up of the 17 English water companies, to address issues of resilience while also managing and reducing demand.

The headlines from the report make for challenging reading:

- Every day 14 billion litres of water is provided by water companies straight to customers' taps and 1 billion litres of water is used by other sectors such as industry, power and farming – although this can vary across regions and seasons
- If no action is taken between 2025 and 2050 around 3.4 billion extra litres of water per day will be needed for public water supplies alone – and not least to make them more resilient to drought, able to meet the needs of a growing population, replace unsustainable abstractions and improve the environment
- Around 50% of the national need for water is in just one region, the South East.

Jonathan Dennis, Water Resources Manager at the Environment Agency, said: *"If we don't take action, many areas of England will face water shortages by 2050. As consumers we need water to survive; our businesses, industry and famers need it to prosper; and our precious natural environment relies on it to thrive.*

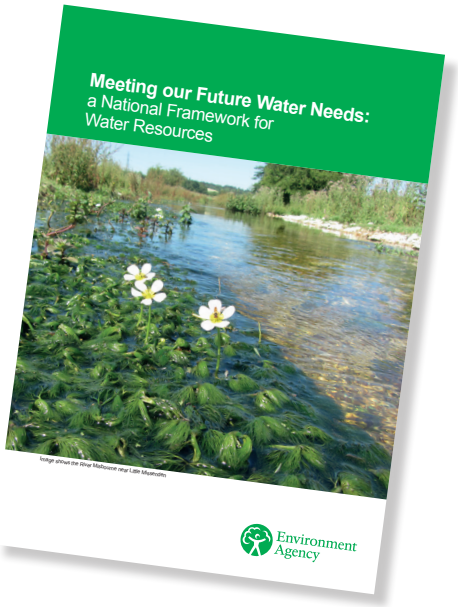
Jonathan Dennis

"These apparently competing demands are equally important and so this report delivers the step-change in strategic and regional collaboration needed and a major re-think of how we plan for water.

"Over the next 12 months the five regional groups will be working to assess their region-specific needs in more detail and identify the solutions that are needed, so that everyone who makes decisions on water supplies will ultimately deliver greater resilience to all users, and the environmental enhancement we all want to see."

Regional planning has become the new approach to water because Water Resource Management Plans – the statutory plans which address future water resources developed by individual water companies for their customers' needs alone – are unlikely to deliver the right strategic solutions for the nation as a whole.

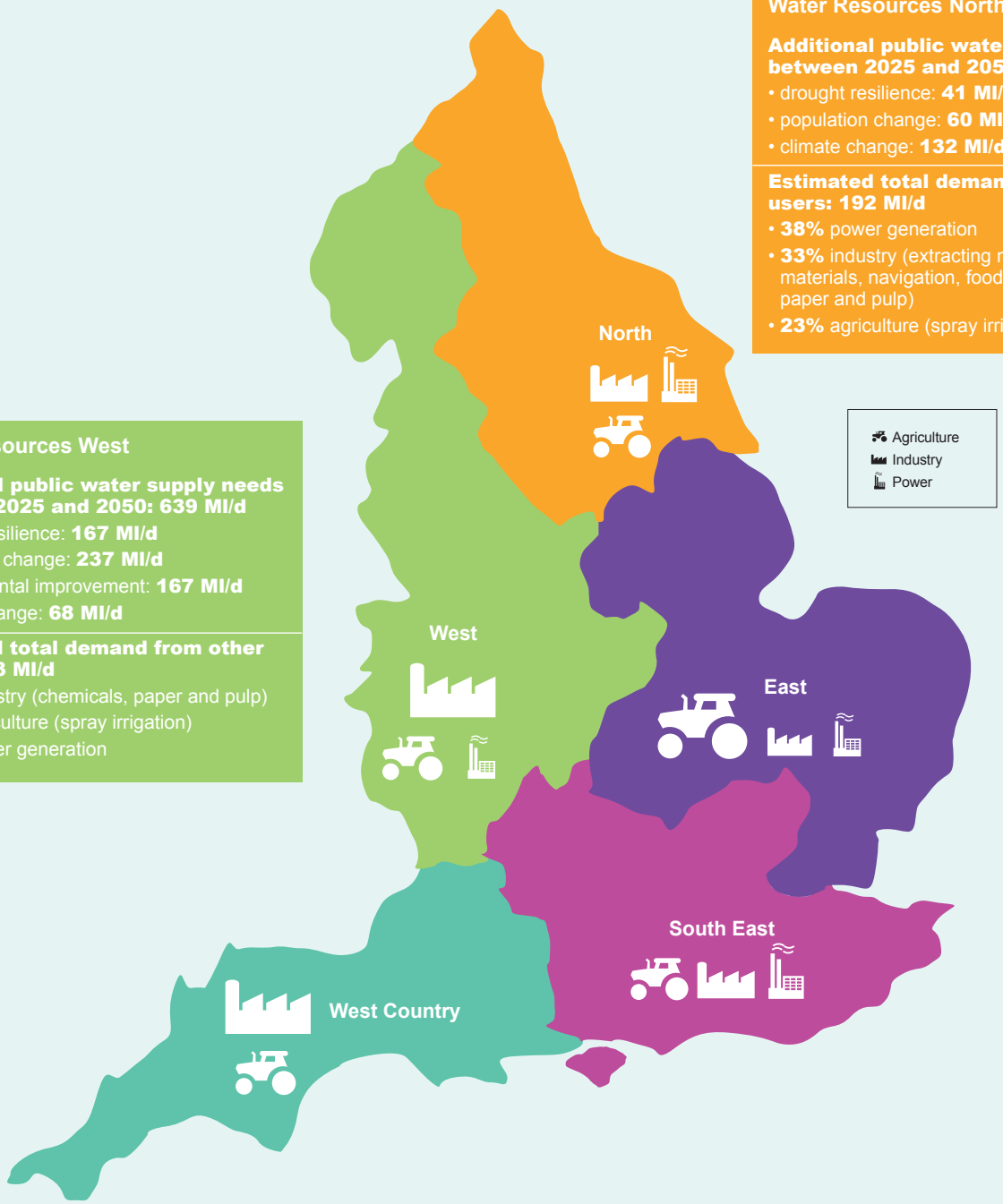
Jonathan added: *"By putting aside company boundaries and considering the needs of the whole region, including other water users and how that then impacts on the national water picture, we can deliver the step-change in resilience and environmental protection required."*



The report's principles, expectations and challenges have been developed and agreed through a collaborative process involving regional groups, other major abstractors and a much wider range of stakeholders – *"a joined-up approach which is needed to address the scale of the challenges we face and realise the opportunities that emerge from water resource planning"* Jonathan added.

The findings also build on previous reports by Water UK and the National Infrastructure Commission and continue to support the case for water resource investment to increase drought resilience, so the nation's water supplies are fit for the future.

Understanding England's future water needs at 2050



Water Resources North

Additional public water supply needs between 2025 and 2050: 233 Ml/d

- drought resilience: **41 Ml/d**
- population change: **60 Ml/d**
- climate change: **132 Ml/d**

Estimated total demand from other users: 192 Ml/d

- **38%** power generation
- **33%** industry (extracting minerals and materials, navigation, food and drink, paper and pulp)
- **23%** agriculture (spray irrigation)

Water Resources West

Additional public water supply needs between 2025 and 2050: 639 Ml/d

- drought resilience: **167 Ml/d**
- population change: **237 Ml/d**
- environmental improvement: **167 Ml/d**
- climate change: **68 Ml/d**

Estimated total demand from other users: 283 Ml/d

- **59%** industry (chemicals, paper and pulp)
- **27%** agriculture (spray irrigation)
- **12%** power generation

West Country Water Resources

Additional public water supply needs between 2025 and 2050: 227 Ml/d

- drought resilience: **71 Ml/d**
- population change: **86 Ml/d**
- environmental improvement: **47 Ml/d**
- climate change: **11 Ml/d**
- other: **12 Ml/d**

Estimated total demand from other users: 193 Ml/d

- **63%** industry (manufacturing mineral products)
- **23%** agriculture (livestock and spray irrigation)

Water Resources South East

Additional public water supply needs between 2025 and 2050: 1765 Ml/d

- drought resilience: **640 Ml/d**
- population change: **459 Ml/d**
- environmental improvement: **431 Ml/d**
- climate change: **111 Ml/d**
- other: **124 Ml/d**

Estimated total demand from other users: 175 Ml/d

- **32%** industry (paper and pulp, golf courses)
- **30%** agriculture (spray irrigation)
- **20%** power generation

Water Resources East

Additional public water supply needs between 2025 and 2050: 570 Ml/d

- drought resilience: **226 Ml/d**
- population change: **193 Ml/d**
- environmental improvement: **75 Ml/d**
- climate change: **76 Ml/d**

Estimated total demand from other users: 444 Ml/d

- **64%** agriculture (spray irrigation)
- **17%** power generation
- **14%** industry (food and drink, paper and pulp)

UKWIR leading `best value' framework for water resources planning

UKWIR, the organisation which manages and delivers a strategic programme of research projects to drive transformational change in the water industry, is tackling the critical issue of water resources planning.

It will produce a new framework for the water industry to develop 'best value' water resources plans – in essence, ones that deliver wider benefits to customers, society and the environment over the long-term, and a marked shift away from the `least cost' approach that has been required in the past.

South West Water's Paul Merchant, Programme Lead for UKWIR, said: *"Water supplies are under increasing pressure because of climate change, population growth and the need to protect and improve the environment, and so the way we plan water resources must change too.*

"This project will ensure that water resources plans are developed in a consistent way and can consider solutions that cross regional and national boundaries, and different legal and regulatory jurisdictions, so that collectively we meet future water needs."

The need for a new approach to water resource planning comes after the National Infrastructure Commission recommended that more investment is needed to increase the UK's resilience to drought and reduce the risk of restrictions such as rota cuts and standpipes being introduced in the future.

To achieve this, the Environment Agency has produced a Water Resources National Framework. (Editor's note: See story on page 4 and 5) which specifies that plans must deliver 'best value'.

UKWIR will publish the framework in July 2020 so it can be used to help develop the draft regional plans which will be published in August 2022, and will be used to directly inform the water companies' statutory draft Water Resources Management Plans which will be published later that year.

Water resources situ healthy after winter deluge

Water resources across the South East have been topped up – and in some cases are above normal levels for the time of year – after a deluge of rain over the Autumn and Winter.

Persistent rainfall, and not least storms Ciara and Dennis, have meant underground aquifers (which make up around 75% of the region's water sources) river flows and reservoir levels are all at normal or above normal levels.

It's particularly good news for Affinity Water, which had warned last September that its central region, which covers parts of north London and Hertfordshire, was in drought. It said a dry winter would herald the need to introduce water restrictions in Spring 2020.

However, overall rainfall since then has been significantly above average and the company says water restrictions are now not needed.

Ian McAulay, CEO of Southern Water and chair of the WRSE's drought group, said extreme events of both drought and flood are becoming more common and more frequent. The consequence is that drought planning even during heavy rainfall is becoming a feature of the group's forward scenario planning.

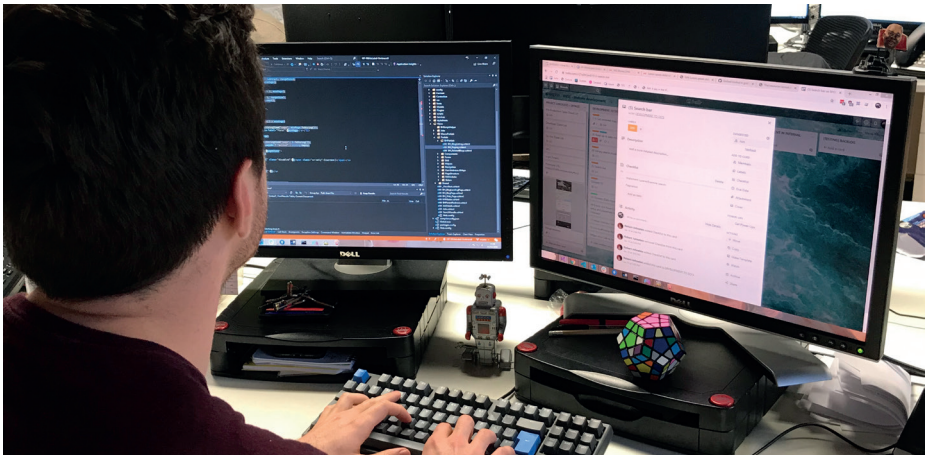
Ian said: *"While flooding presents its own challenges, including for water companies trying to keep their drinking water and wastewater services running 24/7, we know weather patterns are increasingly volatile and can change the water resources outlook from one year to the next, especially in the South East.*

"Overall this means that we must take a resilience approach to future infrastructure planning which combines both challenges."

Meanwhile the National Drought Group, which is chaired by Sir James Bevan, Chief Executive of the Environment Agency, is next due to meet this month and will provide a water resources update at **www.gov.uk/government/news/national-drought-group-ea-chief-executive-statement**

New WRSE website taking shape

A new website that better reflects WRSE's ambitions to develop a regional resilience plan with the input of multiple water users is in the final build stages.



The new WRSE website (wrse.org.uk) will focus on a more simplified approach to WRSE's work with bold visuals and simplified content that is suitable for a wide range of visitors, whether they are a casual browser or an in-depth explorer.

There will also be a suite of tools that allow visitors to be kept up to date, including a section showing what water resource improvements are planned for their area. They will also be able to sign-up for topic-specific or general updates and contribute their views and preferences as the plan is developed.

WRSE's Trevor Bishop said: "Interest in the work of WRSE has rightly increased and there is a clear expectation that we will engage more widely with stakeholders and collaborate with all users of water as we develop our plan.

"That is an ambition shared by WRSE which is why the website has been prioritised for development as it is a critical tool in measuring how good our engagement and consultation activities are.

"By creating features and tools that allow visitors to subscribe for updates, via blog alerts and news sign-ups for example, and with dedicated areas for having their say, we can have `live' two-way dialogue and use those views to help shape our plan as its continually being developed."

The new website is due to go live in the spring, with further development plans in place as WRSE activity ramps up, including integrating social media platforms into the site to expand the reach of its messaging and drive up participation from customers and stakeholders; and a new consultation platform called "Bang the Table".

What's making the news?

MD joins expanding RAPID team

Paul Hickey

Paul Hickey has been appointed Managing Director at RAPID (Regulators Alliance for Progressing Infrastructure Development) the new cross-regulator unit charged with getting strategic water resources schemes `construction ready' by 2025 (Editor's note: see next story).

He has been seconded from the Environment Agency where he was Deputy Director for Water Resources and has been instrumental in driving the new regional planning approach to water resources management.

Paul has been joined by Colin Green from Ofwat who joins as Frameworks Director and Caroline Knight, an Inspector from the Drinking Water Inspectorate, to provide drinking water quality expertise.

RAPID work on the detail for gated process

RAPID is busy developing the detail behind a new gated process for assessing strategic water resources infrastructure.

Three schemes – a desalination plant at Fawley in Hampshire (Southern Water) a wastewater recycling scheme on the River Itchen (Southern Water) and a water transfer from Bournemouth into Hampshire (Southern Water and South West Water) – will navigate RAPID's first stage gate in September 2020. This gate will decide if the schemes should receive further funding to progress their feasibility work.

RAPID has been working with water companies to develop a template for the submission, with Thames Water and Southern Water helping populate the template with dummy data to test its processes and assessment.

The new gated process was a key feature of Ofwat's assessment of water companies' 2020 to 2025 business plans to ensure strategic water resource infrastructure is progressed.

Four companies head to CMA for business plan appeals

Four water companies – Yorkshire Water, Anglian Water, Northumbrian Water and Bristol Water – have asked Ofwat to refer their 2020 to 2025 business plan final determinations to the Competition and Markets Authority (CMA) – with the larger three citing common concerns that their customers have not been listened to; that Ofwat has struck the wrong balance between bill cuts and investment; and that their long-term financial and environmental resilience is jeopardised.

Engagement and technical workstreams update

The Engagement and Communications Board, comprised of senior water company communication and insight specialists, is overseeing an important piece of work that will test customers' preferences on future water resource options.

An Invitation to Tender has been issued to start the process of engaging customers from all six companies' supply areas about regional planning and their preferences about which solutions – both supply and demand management – could help meet the shortfall. The research is due to start once tenders have been evaluated and a contract awarded.

WRSE's Trevor Bishop said: *"All water companies conducted a wide variety of customer engagement for their last round of Water Resource Management Plans and business plans, and many included detailed research that was specific to water resources planning.*

"However, our review of those findings showed that while topics and options discussed were consistent across the six companies, there was some inconsistency in the context that was provided to customers and ambiguity in the language used.

"This piece of region-wide research is a first for all the WRSE member companies and will provide robust and more consistent insight that we can use to inform our regional resilience plan, and indeed the company-specific plans."

In other developments, representatives from the WRSE's member companies' Customer Challenge Groups will join CCW to consider and advise on customer aspects of the work of WRSE. The date for the first meeting is scheduled for 1st April 2020.

Meanwhile, the Programme Management Board (PMB) – the decision-making group for all WRSE's technical work – has seen a significant ramping up of activity. Mott MacDonald has been appointed to manage the programme and here we provide an update on the following workstreams:

Resilience framework

What: The framework used to assess, grade and prioritise risks, giving a risk score to all water-using sectors

When: Spring 2020 – for consultation with stakeholders and regulators on the approach and measures we intend to use

Who: Invitation to Tender to carry out resilience assessment underway ready for work to begin in September 2020

Regional system simulation modelling

What: A simulation model that tells us how the current water network will cope with different events – and what solutions could help make it more resilient

When: August 2020 – model built and input data fed in for running until end of year

Who: Invitation to Tender to develop and run the regional simulation model underway

Policies, preferences and plans

What: Taking account of the bigger picture by factoring in the policies and legislation we need to meet and capturing stakeholder and customer preferences

When: September 2020

Who: Invitation to Tender for customer and stakeholder engagement underway

Population and property forecasts

What: Work to determine future population and property growth in the region

When: End April 2020 for WRSE water companies to then use for their own demand forecasts

Who: Edge Analytics

Environmental Scoping Report

What: Work to combine different environmental assessment criteria for schemes into consistent method for WRSE and water companies to use

When: November 2020

Who: Initial proof of concept completed by Ricardo and Atkins. Invitation to Tender for second phase to go out in March

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