

Our current performance 2015
to 2020

PR19 Supporting Appendix 18

3 September 2018

Pure knowh₂ow

What does this appendix do?

This document supports the submission of South East Water's business plan for 2020-2025 and provides:

- a summary of our actual and forecast performance for the period 2015 to 2020.

The evidence you will find in this appendix

The following evidence is included in this document:

- Our performance across our customer, compliance and sustainability outcomes; and any rewards and penalties that have been applied
- our financial performance for the period
- justification for the financial adjustments we need to make for the 2020 to 2025 period.
- Lessons learnt in this period and how these have shaped our 2020 to 2025 plan.

Need further information?

Please email yourwateryoursay@southeastwater.co.uk if you require further information or wish to clarify anything in this document.

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Executive Summary

Setting the scene

For the 2015 to 2020 period our business plan was based around 'outcomes'. An outcome sets out, in the broadest sense, what we want to achieve in all areas of our performance as opposed to just meeting a list of key performance measures. A further new initiative was to measure delivery of many of these outcomes by using customer satisfaction scores to track our performance.

We developed a total of 25 outcomes, which in turn were underpinned by performance commitments for our 2015 to 2020 business plan. These performance commitments were a mix of regulatory targets and customer satisfaction scores - the latter a reflection of the innovative approach on how we wanted to be held to account for our service, and which we continue to evolve.

Combined, these are supporting the delivery of customers' priorities; are making sure we remain compliant with all of our legal obligations; and that we are making investment decisions that protect the service of the future.

What we have delivered for customers

Our performance for the 2015 to 2020 period so far has delivered:

- An **improvement** in customer satisfaction scores for:
 - the appearance of their drinking water
 - the taste and odour of their drinking water
 - leakage
 - water pressure
 - water restrictions
 - customer direct interaction with us
- A **maintained** customer satisfaction score of 4.6 out of 5, for water supply interruptions, despite significant operational challenges during this period
- Safe, high-quality tap water that meets stringent standards and maintains customers' trust in water - underpinned by a continuous reduction in the number of customer contacts about discolouration and stable performance on taste and odour issues
- a top-performer industry position for our leakage performance
- Upper quartile performance and low level of customer complaints

- stable assets and a secure supply of water with no water use restrictions - despite extended periods of dry weather impacting on our sources
- our wide ranging environmental and statutory obligations
- completion of our metering programme
- launch of our 'in your area portal' for customers to track activity that may impact them
- new contracts for 2015 to 2020 from framework suppliers and improved efficient delivery
- metering programme is due to be completed by the March 2019 so that approximately 90% of household properties will be metered

What has been the impact on customers?

The use of customer satisfaction as a measure of our performance has challenged us to re-assess every aspect of our business and service, and how this can impact our customers and their satisfaction with the service we provide.

It has also led to a cultural change in the business so that it informs every decision and action we take, truly putting customers at the heart of our business.

The upshot is that our satisfaction scores for our customer outcomes are continually improving – particularly in relation to overall satisfaction with the level of leakage, which we are pleased with.

We are also pleased that despite increasing expectation from customers generally all our satisfactions metrics have either increased or remained stable.

Performance summary

For some of these outcomes we are able to earn financial rewards or incur penalties for performance that does not meet our commitments. This appendix sets out the detail on the result of incentive for each performance commitment.

The learning and performance achieved during 2015 to 2020 has helped shape our plan for 2020 to 2025.

1. Setting the scene

1.1 Introduction

For the 2015 to 2020 price review process our business plan was based on our own ambition to become a more customer-centric business.

We developed a business plan that was based around 'outcomes'. An outcome sets out, in the broadest sense, what we want to achieve in all areas of our performance as opposed to just meeting a list of key performance measures. A further new initiative was to measure delivery of many of those outcomes by using customer satisfaction scores to track our performance.

1.2 How we developed our 2015 to 2020 outcomes

We engaged with customers to understand their priorities, and determine their views on the level of service they wanted to receive, and how much they were prepared to pay for that level of service.

That engagement revealed a set of clear priorities for customers for the 2015 to 2020 period:

- **Clean water** - customers took the quality of their tap water for granted and trusted us to supply a water supply that is safe, clean with an acceptable appearance, taste and odour
- **Low leakage** - customers thought leakage levels were too high and wasted a valuable resource; it's a problem we needed to fix, and certainly before we asked them to conserve water when there are shortages, or take more from the environment
- **Effective service** - In general, customers were happy with how we operated our business for them, but they expected to be able to choose how and when they did business with us, and wanted more information around water efficiency advice and water quality
- **Affordable bills** - a priority for the majority of customers was low, affordable bills. In general, they were not willing to pay for any significant improvements in current levels of service
- **Reliable supplies** - customers generally took the reliability of their tap water for granted but saw it as our role to meet their current and future demands for water – by adopting the twin-track approach of saving water and developing new supplies.

We then developed outcomes that would support the delivery of customers' priorities.

Also important was making sure we remained compliant with all of our legal obligations, and made investment decisions that protected the service of the future.

We developed three broad categories of outcomes for our business plan:

- Customer outcomes - these reflected the priorities of our customers
- Compliance outcomes - these ensured we would meet all our legal obligations
- Sustainability outcomes - these ensured we operated a socially, ethically, environmentally and financially responsible and sustainable business

In total, we developed 25 outcomes under these three broad categories, which represented the highest number in the industry relating specifically to water supply.

This was a deliberate strategy as we wanted to ensure all the material components of the activity we committed to deliver was supported by a dedicated promise.

1.3 Developing the performance measures, rewards and penalties for our outcomes

For each of the 25 outcomes we then developed specific performance commitments. These performance commitments were a mix of regulatory targets and customer satisfaction scores - the latter a reflection of the innovative approach on how we wanted to be held to account for our service, and which we continue to evolve.

For some of these 25 outcomes we are able to earn financial rewards or incur penalties for performance that does not meet our commitments. These rewards and penalties were also shaped by our customers as we engaged with them on our 2015 to 2020 business plan.

It is on this basis that our current performance is assessed. Each year, we report our progress against these performance commitments – and whether any reward or penalty has been made - in our Performance, People and Planet report. This is scrutinised by the independent South East Water Customer Panel and latterly the Customer Challenge Group, issued to our regulators and key stakeholders, and published on our website to ensure there is transparency around how well we are doing

2. Our current and forecast performance

The following table summarises both our performance to date and forecasts what we expect our future performance to be up to by 31st March 2020.

We are pleased to report that the expected outcomes and performance commitments for the 2015 to 2020 period have been delivered or are on target for delivery.

Some of the outcomes have a five-year target and so our assessment is based on whether our performance is consistent with achieving that five-year target.

Table 1: Summary of our actual and forecast performance

Outcome	Incentive	Units	2015/16		2016/17		2017/18		2018/19		2019/20	
			Target	Actual	Target	Actual	Target	Actual	Target	Forecast	Target	Forecast
Customers consider the appearance of their water is acceptable	Reward/penalty	Customer satisfaction score	4.6	4.4	4.6	4.5	4.6	4.5	4.6	4.6	4.6	4.6
		Number of discolouration contacts per 1,000 population	0.97	0.97	0.78	0.96	0.58	0.82	0.58	0.70	0.58	0.58
Customers consider the taste and odour of their water is acceptable	Reward/penalty	Customer satisfaction score	4.3	4.1	4.3	4.2	4.3	4.2	4.3	4.3	4.3	4.3
Customers consider the level of leakage is acceptable	Reward/penalty	Customer satisfaction score	4.0	3.4	4.0	3.8	4.0	3.8	4.0	3.9	4.0	4.0
		Leakage target (Ml/d)	91.8	88.1	90.6	88.6	90.0	87.7	89.1	87.5	88.1	87.3
Customers consider their direct interaction experience to be positive	Reward/penalty	Customer satisfaction score	4.5	4.2	4.5	4.3	4.5	4.3	4.5	4.4	4.5	4.5
		SIM score (out of 100)	n/a	82	n/a	84.6	n/a	85.6	n/a	86.6	>80	87.7
Customers consider bills to be value for money and affordable	Reputational	%	n/a	71	n/a	74	n/a	71	n/a	73	>80	75
Customers consider their	Reward/penalty	Customer satisfaction score	4.5	4.2	4.5	4.2	4.5	4.3	4.5	4.4	4.5	4.5

Outcome	Incentive	Units	2015/16		2016/17		2017/18		2018/19		2019/20	
			Target	Actual	Target	Actual	Target	Actual	Target	Forecast	Target	Forecast
water supply is of sufficient pressure		Number of properties at risk of low pressure	60	53	60	49	60	47	60	47	60	47
Customers consider the frequency and duration of supply interruptions is acceptable	Reward/penalty	Customer satisfaction score	4.7	4.6	4.7	4.6	4.7	4.6	4.7	4.7	4.7	4.7
		Average time lost per property (minutes)	12.7	32.05	12.3	12.9	12	44.6	12	10	12	10
Customers consider the frequency of water use restrictions is acceptable	Reward/penalty	Customer satisfaction score	4.4	4.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
		Meeting the water resource deficit (M/d)	0	0	0	0	0	0	0	0	0	0
We are compliant with water quality regulations	Penalty only	% mean zonal compliance	100	99.96	100	99.95	100	99.95	100	99.95	100	99.95
No. of breaches of abstraction licences, discharge consents and environmental permits	Reputational	Number	0	25	0	5	0	215	0	0	0	0
No. of pollution incidents (category 1-2)	Reputational	Number	0	0	0	2	0	1	0	0	0	0

Outcome	Incentive	Units	2015/16		2016/17		2017/18		2018/19		2019/20	
			Target	Actual	Target	Actual	Target	Actual	Target	Forecast	Target	Forecast
No. of breaches of health and safety regulations	Reputational	Number	0	0	0	0	0	0	0	0	0	0
No. breaches of national security obligations	Reputational	Number	0	0	0	0	0	0	0	0	0	0
No. of compliance breaches of other statutory obligation and licence conditions	Reputational	Number	0	0	0	1	0	0	0	0	0	0
Above ground asset performance	Penalty only	Assessment	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Number of sites at risk of flooding	Reputational	Number	n/a	55	n/a	33	n/a	7	n/a	3	0	0
Water mains bursts	Penalty only	Number	2,429	2,307	2,429	3,032	2,429	2,747	2,429	2,429	2,429	2,429
Kg of carbon emissions per customer per year	Reputational	kgCO ₂ e	n/a	36.8	n/a	37.2	n/a	37.2	n/a	36.2	37.7	36.4
We will monitor our abstractions at low flows at environmentally sensitive sites	Reputational	MI/d	n/a	n/a	n/a	-0.18	n/a	-0.24	n/a	0	n/a	0

3. Our customer satisfaction outcomes performance

3.1 Introduction

We believe the introduction of customer satisfaction as a measure of performance was not only innovative, but an exemplar of how the industry should benchmark itself when it came to understanding a customer's experience of both the product and service they received. Indeed we welcome the increased focus satisfaction measures now have within the methodology for PR19.

The behaviours these measures drive are very different to the behaviours driven by output like performance commitments. To illustrate, it allows us to convey simple measures to our staff and our supply chain, every interaction whether direct or indirect will impact customers satisfaction with SEW. This might be from the appearance of our sites and vans, how we talk to customers, how we handle road disruption through to school talks and community events. All underpinned by the service we offer.

It therefore became the launch pad for many of the initiatives we have delivered in this five-year period, as we recognised that to deliver our outcomes - and increase customer satisfaction - we had to take customers beyond their water bill. Among those initiatives were:

- A Board-led new mission, vision and values that placed customer satisfaction at the core of our decision-making, actions and behaviours – *'to be the water company people want to be supplied by and want to work for'*
- our cultural change programme which:
 - Developed our new Pure Know H₂O brand – from the research carried out during the early stages of our brand work we saw that there was a link between satisfaction and value for money. Customers who were satisfied were more likely to think a product was a fair price. Translating this into our business we wanted to show the technical work 'behind the scenes' that is done to get water to customers. We also looked at company uniforms and vans to the tone of voice we use in our conversations - to take us from a less visible utility to a proactive and passionate capable community-based business

- delivered behavioural and customer satisfaction training for our people so they are empowered to engage customers and communities with confidence; and recognise it's not just about what we do, but **how** we do it that we're judged on
- developed a new employee performance review system based on the new vision and values – included both whether objectives have been delivered and how they were delivered
- dedicated activities and campaigns on leakage (section 3.3.3) and value for money (section 3.3.8)
- continuous engagement with customers and stakeholders after water supply failures to identify where improvements can be made
- multiple new channels developed, including an interactive map to keep customers updated when something goes wrong with their water supply, greater online account management capability,
- increase in our social media presence and customer magazine trial (section 3.3.8)

The upshot is that satisfaction scores for our customer outcomes are continually improving – particularly in relation to customers' satisfaction with the level of leakage.

That finding is also reflected in our level of complaints which are at their lowest levels – in 2017/18 we had 76 per cent less complaints than we did in 2015/16, and which has seen us move from a lower quartile to upper quartile performer in the industry.

3.2 Measuring customer outcomes via satisfaction

Since April 2015 we have undertaken monthly satisfaction surveys with 133 customers by phone to track customer satisfaction with our service. The customers are randomly selected based on postcodes in our supply area, with segmentation then applied to the data sample (for example, age, gender, socio-economic groups) by the independent research team carrying out the phone surveys. The sample size was chosen to ensure we achieved a statistically significant sample size for each 12 month period.

Customers are asked a series of questions and score us, on a scale of 1 to 5 (1 being 'completely dissatisfied' and 5 being 'completely satisfied') in terms of their satisfaction around the following seven areas:

- The appearance of their drinking water
- the taste and odour of their drinking water

- leakage
- water pressure
- water supply interruptions
- water restrictions
- their direct interaction with us.

Our satisfaction scores for our customer outcomes are continually improving – particularly dramatic in relation to overall satisfaction with the level of leakage, as outlined below.

3.3 Satisfaction performance and measurement

3.3.1 Customers consider the appearance of their drinking water to be acceptable Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with the appearance of drinking water has improved significantly since 2015/16. We are projecting performance to further improve by 2020 as a result of continued interactions with customers. We are pleased with our performance as we know customers place the highest priority on having safe, high quality drinking water.

Table 2: Customers consider the appearance of their drinking water acceptable performance

Score out of 5	2015/16	2016/17	2017/18	2018/19	2019/20
Target	4.6	4.6	4.6	4.6	4.6
Actual/forecast	4.4	4.5	4.5	4.6	4.6

Recent activities to maintain that high level of satisfaction have included proactive measures in our network to reduce the issues with discolouration (see section 6.2.1).

We have also reviewed and streamlined our customer interactions in this area, including:

- updating our website to provide information and video content for customers who may experience issues with the appearance of their drinking water
- developing live ‘in your area’ information and advice about discolouration events

- routing all calls through our technical call centre to ensure that all contacts are handled by fully trained operational staff, with up-to-the minute information on issues and actions to resolve
- Including back-to-basics articles in our customer magazine trial that explained where water comes from, and what customers can do to protect its quality in the home.

3.3.2 Customers consider the taste and odour of their drinking water to be acceptable

Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with the taste and odour of drinking water has improved significantly since 2015/16. We are projecting performance to further improve by 2020 as a result of continued interactions with customers.

Table 3: Customer consider the taste and odour of their drinking water to be acceptable performance

Score out of 5	2015/16	2016/17	2017/18	2018/19	2019/20
Target	4.3	4.3	4.3	4.3	4.3
Actual/forecast	4.1	4.2	4.2	4.3	4.3

As with our outcome on appearance, we have maintained relatively stable levels of customer satisfaction with this outcome during the period.

Taste and odour contacts are subdivided into a number of categories – namely chlorine, musty/earthy, petrol/ diesel and other. As the majority of customer contacts are regarding the chlorine taste and odour of the water, we developed a taste and odour strategy that focuses on this, and which adopts a number of internal standards specifically to understand the impacts on customers. These standards act as triggers for further investigation and are based on the number of contacts per 1,000 population and contact rate at a zonal and District Metered Area (DMA) level as detailed in Table 4 below:

Table 4: Taste and odour contacts

Taste and Odour contacts per WSZ		
Action	Rate/1,000pop tn	No contacts/yr
Requires urgent action	>1.6	>30
Requires investigation and action	0.8-1.6	15-30
No action required	<0.8	<15

Other activities to maintain current high levels of satisfaction have included proactive measures in our network to reduce taste and odour issues (see Appendix 6: Water Quality). We have also reviewed and streamlined our customer interactions in this area, as already outlined in section 3.3.1. In addition the initiatives implemented to support discolouration also provide benefits for dealing with taste and odour contacts such as “in your area” web page and magazine.

3.3.3 Customers consider the level of leakage to be acceptable

Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with the level of leakage has improved significantly since 2015/16. We are projecting performance to further improve by 2020 as a result of continued interactions with customers and our operational improvements discussed further below.

Table 5: Customers consider the level of leakage to be acceptable performance

Score out of 5	2015/16	2016/17	2017/18	2018/19	2019/20
Target	4.0	4.0	4.0	4.0	4.0
Actual/forecast	3.4	3.8	3.8	3.9	4.0

This measure relies entirely on a subjective view of leakage from our customers’ point of view. We were the only water company that set this type of outcome delivery incentive (ODI).

Unsurprisingly our customers’ views on leakage are often ambivalent. We receive lots of “don’t know” responses when testing their satisfaction with our performance; they can also be influenced by negative media reports on other companies’ leakage performance and the industry generally.

As a consequence, this aspect of our leakage ODI requires considerable effort in communications and engagement, beyond normal leakage activity and meeting our leakage target each year, to make a marked improvement to the satisfaction score.

We have undertaken a number of initiatives to highlight the extensive work we are already doing with the aim of changing any misconceptions customers may have about our work to find and fix leaks; while engaging with them on the economic, environmental and social challenges of driving leakage levels far beyond the Sustainable Economic Level of Leakage (SELL).

Case study: Aldershot leakage campaign

During early 2017 we undertook a trial campaign in the Aldershot GU11 and GU12 postcode areas to see if we could improve customer satisfaction specifically on leakage.

We undertook pre-campaign research into satisfaction with our services more generally, but also around leakage specifically, in the targeted areas before rolling out and implementing a positive, proactive multi-channel communication campaign. This included:

- Bus stop advertising using cinematic style posters about The Leak Squad
- a six-page pull-out story of the 24/7 work to find and fix leaks; this and a Stop Tap sticker with our Leak Squad number on it was sent direct to 10,000 properties in the target postcodes
- newspaper advertising using the same 'cinematic style' artwork
- dedicated web page to support the campaign www.theleaksquad.co.uk
- social media messaging

We then undertook post-campaign research to see if there had been a shift in how customers view satisfaction around leakage, and more generally.

The initial research results revealed an improvement in customer satisfaction - from 3.7 out of 5 before the campaign began to 4.04 out of 5 after the campaign had ended, from those customers who recalled seeing it. We need to analyse the results further to increase our confidence in attributing the improvement directly to our campaign but the results indicate there is a positive impact.

There is though some good evidence to suggest it did raise the profile of our leakage work, with the direct mail and bus stop advertising appearing to be the most recognisable and recalled form of communication by customers; while we saw encouraging reach numbers via Facebook (21,174) and Twitter (19,986); and the Report a Leak web page getting 4,245 unique views.

Other initiatives have included issuing thank you cards to customers who report leaks and promoting our "leak squad" at our water treatment works open days to help customers see the work we do on leakage; the latter activity has resulted in a significant improvement in customers' satisfaction scores between the beginning and the end of each open day.

In tandem with that we have improved our operational response to repairing leaks so that our pipes are mended more quickly.

As well as fixing the leakage on our pipes, we have trialled extensions to our supply pipe policy to reduce leakage on customers’ supply pipes and we are looking to extend that further for the rest of the 2015 to 2020 period. Where we have repaired a customer’s supply pipe, customer satisfaction scores are 5 out of 5.

3.3.4 Customers consider their direct interaction with South East Water is positive
Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with direct interaction has improved significantly since 2015/16. We are projecting performance to further improve by 2020 as a result of the continued focus on the customer-centric working.

Table 6: Customers consider their direct interaction with South East Water is positive performance

Score out of 5	2015/16	2016/17	2017/18	2018/19	2019/20
Target	4.5	4.5	4.5	4.5	4.5
Actual/forecast	4.2	4.3	4.3	4.4	4.5

Customers rarely need to interact with us but, when they do, they want it to be easy and simple and convenient for them. Dealing with customers’ issues once and promptly - and making sure that service is personalised to their individual needs - has underpinned much of the ‘reducing complaints’ success story we’ve seen continue in this five-year period.

However, while a substantial amount of effort went into improving our processes, it was the cultural shift we made with our staff - towards a customer-centric way of working and which empowered them to have the skills, expertise and confidence to own and fix customers issues before they became complaints - that has delivered the most in terms of our performance.

Service Incentive Mechanism

That’s reflected in our service incentive mechanism (SIM) score which for 2017/18 was 85.6 out of 100, up from 84.6 in 2016/17. We are particularly pleased to see continued improvement in our qualitative SIM scores which means we are now above the industry average.

Over the years many customers have told us of their frustration with getting one bill from us for drinking water services, and another bill from Southern Water for wastewater services. During 2017/18 we teamed up with Southern Water to launch 'One Bill' – a single bill from us that includes Southern Water’s wastewater charges too. This was a significant project which saw a complex billing transition go smoothly for 465,466 customers.

Nonetheless, with a project of this scale it has meant that we have seen a slight increase in written complaints during 2017/18, with 1,498 complaints compared to 1,400 the previous year. While we are disappointed to see any increase, we recognise that initiating a project of this complexity brings with it an increased risk of complaints. We are confident that now the one bill transition is complete we can continue our long-term improvement in reducing complaints - currently a 76 per cent reduction over a four-year period and that the receipt of one bill from this point forward will increase satisfaction.

We want to make sure that all our staff are customer-centric and not just our call centre staff, with this in mind we implanted a Revive 5/5 automated customer survey following completion of any technician visit to a customer’s property, to make sure customers were satisfied with the service they had received. To help improve communications with customers on operational work we have created two new tools for scheduling appointments and tracking of work. This is to make sure we are able to keep customers up to date and inform them when the work is complete.

3.3.5 Customers consider bills to be value for money and affordable

Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with value for money has seen varied performance since 2015/16. We are projecting performance to improve by 2020 as a result of the continued interactions with customers.

Table 7: Customers consider their direct interaction with South East Water is positive performance

	2015/16	2016/17	2017/18	2018/19	2019/20
Target	n/a	n/a	n/a	n/a	>80%
Actual/forecast	71%	74%	71%	73%	75%

Customer satisfaction with value for money/affordability is measured through our annual tracker survey – a tool to help us understand customers’ priorities and how they might change over time.

To date the postal and online survey has been completed by 11,479 customers with the following results:

Table 8: Results of customer satisfaction survey

	2015/16	2016/17	2017/18	2018/19	2019/20
	Actual	Actual	Actual	Forecast	Forecast
Number of surveys completed	6,029	3,105	2,345	n/a	n/a
% response rate	11%	16%	13%	n/a	n/a
% satisfied with value for money and affordability	71%	74%	71%	73%	75%

2015/16 saw a higher return rate due to a larger number of surveys sent to customers, 50,000 compared to the 20,000 in subsequent years. This decrease was due to feedback from a research agency that the statistical robustness of the results does not improve significantly with more surveys sent. As you can see from the table above the percentage response rate has remained static.

While we are disappointed not to have made a more substantial improvement in our score, we recognise that satisfaction with value for money/affordability can be difficult for customers to score more positively when their only interaction with us may be receiving their water bill. That’s why we have:

- made considerable investment in moving from being a silent utility to one that promotes its “Pure know h2ow” about water with a bold and attractive new brand image to help increase our visibility in the communities we serve
- increased our engagement with customers – via online, new-style customer magazine trial, school talks, community talks, water treatment tours and promotional campaigns – to tell them more about their water supply, where their water comes from and how we make sure the water we deliver is the best quality

There is no better example than the open days we hold at our water treatment works of how more engaged customers can mean better value for money results.

During these events we ask customers whether they think we provide a value for money service – before and after their tour of our treatment works. The results consistently show that once customers have received an insight into the process that we undertake to bring water to their taps they are happy that they receive good value for money, as the following example from our 2018 tours show:

Table 9: Value for money survey results

When considering whether South East Water provides a value for money service, on a scale of 1 to 5, where 1=very poor and 5= excellent, what score would you give us before and after today's event	All Responses	
	Before	After
1 = Very Poor	0.0%	0.0%
2 = Poor	6.4%	0.0%
3 = Average	22.7%	3.6%
4 = Good	40.0%	36.4%
5 = Excellent	30.9%	60.0%
No answer	0.0%	0.0%

These results also mirror what we were told when we were researching our new “Pure know h2ow” brand with customers; they wanted us to be more visible in the community and would have an increased value for money score if they understood the work that we did.

As a result we plan to keep these important water conversations going, sharing our water knowledge and helping customers increase their understanding of water too so that we can achieve our five year target of 80 per cent satisfaction for this measure.

Case study: Customer magazine trials

In July 2016 and January 2017, we trialed two different styles of customer magazines - both in tone, content and design - in separate postcode areas to test their suitability for engaging and informing customers about our “pure knowh₂ow” expertise; and ability to improve customer satisfaction with our service.

The magazines were sent to circa 20,000 households; we then surveyed 800 customers to test which magazine they were most receptive to. Magazine readers gave significantly higher satisfaction scores than non-readers for:

- Overall satisfaction
- value for money
- appearance
- leakage
- customer service.

Magazine 1 was simpler in its descriptions using more graphics and less factual information.

Magazine 2 was more “Scientific American” providing considerable in-depth factual content and deeper evidence based explanation.

Results show:

- Customers rated magazine 2 higher in terms of how informative it was (4.29) compared to magazine 1 (3.76)
- readership levels were higher for magazine 2 (69) compared to magazine 1 (43)
- when comparing the scores of those who have read magazine 1 or 2 there was a bigger satisfaction difference around issues such as leakage and taste and odour; the additional information given in magazine 2 also prompted higher scores around overall satisfaction and value for money.

We have used this learning to re-design our magazine which we will use in different forms to further spread key water messages.

3.3.6 Customers consider their water supply is of sufficient pressure

Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with the pressure of water supplied has improved significantly since 2015/16. We are projecting performance to further improve by 2020 as a result of continued interactions with customers.

Table 10: Customers consider their water supply is of sufficient pressure performance

Score out of 5	2015/16	2016/17	2017/18	2018/19	2019/20
Target	4.5	4.5	4.5	4.5	4.5
Actual/forecast	4.2	4.2	4.3	4.4	4.5

This outcome relates specifically to customers' satisfaction with the pressure of their water at the kitchen tap.

Our analysis of customer contacts and complaints about water pressure revealed the majority were related to other 'in-home' issues, often caused by customers' own actions.

As a result we ran a data mapping exercise to show how customer satisfaction results translated 'geographically' by mapping them to our actual pressure performance to see if there was any correlation. The results showed there is no significant correlation between District Metered Areas (DMA) average pressures and customer satisfaction. Section 4.3 details our performance in this area.

3.3.7 Customers consider the frequency and duration of water supply interruptions is acceptable

Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with the duration of water supply interruptions has remained stable since 2015/16. We believe this is reflective of the continuity and reliability of water supplies that the vast majority of our customers experience. We are projecting performance to further improve by 2020 as a result of continued interactions with customers and focus on interruptions operationally.

Table 11: Customers consider the frequency and duration of water supply interruptions performance

Score out of 5	2015/16	2016/17	2017/18	2018/19	2019/20
Target	4.7	4.7	4.7	4.7	4.7
Actual/forecast	4.6	4.6	4.6	4.7	4.7

In 2016/17 we introduced an "updates in your area" function on our website, which improved our digital communications with customers during water supply interruptions; this was a response to a key lesson learned from previous interruptions

in that well-informed customers tend to be more satisfied with our response to operational challenges.

Case study: Hailsham and Freeze Thaw Events

One of these incidents related to the failure of a critical asset, while the other was caused by an extreme and rapid freeze thaw event.

Critical asset failure

At 03:15 on the 10th May 2015 an 18” spun iron pipe burst on the A22 near Hailsham, East Sussex. The burst resulted in significant amounts of water flooding the immediate area, which made excavation and the subsequent repair difficult and lengthy. Once the pipe failed it was difficult to control the burst. Water emptied out of the network and around 10,000 properties in Hailsham lost their water supply. The incident ran for 45 hours and affected 33,900 properties for varying durations.

Freeze thaw event

By contrast it was the rapid thaw that followed the ‘beast from the east’ – which arrived in early March 2018 – that led to a supply interruption event of unexpected magnitude. In particular the impact from leaks and bursts on customers’ private supply pipes drove a rapid increase in demand over a period of one day, which we have never witnessed before. This emptied a number of our reservoirs and caused significant disruption to customers’ water supplies – just under 27,000 of our customers experienced an extended interruption, with nearly 6,000 having no water for more than 48 hours.

We provided Ofwat and published the research findings associated with the freeze thaw and have included these in our strategy for dealing with events.

The core finding from both of these events, irrespective of the nature or duration of the event was that customers who felt well informed exhibited much higher levels of satisfaction.

3.3.8 Customers consider the frequency of water use restrictions is acceptable

Performance and forecast

As a result of the initiatives we have delivered so far, satisfaction with the frequency of water use restrictions saw an increase in 2016/17 and remained stable. We are projecting performance to remain stable until 2020 as a result of continued messaging to customers.

Table 12: Customers consider the frequency of water use restrictions is acceptable performance

Score out of 5	2015/16	2016/17	2017/18	2018/19	2019/20
Target	4.1	4.1	4.1	4.1	4.1
Actual/forecast	4.2	4.4	4.4	4.4	4.4

This outcome relates specifically to customers’ satisfaction with the frequency of water use restrictions such as temporary use bans – hosepipe bans.

A dry winter during 2016/17 due to lack of rainfall saw us proactively managing our resources to move water around our region to maintain supplies to customers without the need for temporary water restrictions. The 2017/18 winter started dry again, but we saw increased rainfall later in that year which meant our water resources were in a good position to meet demand. During these times we sponsored the weather on the Kent Online website where water efficiency messaging was carried out. We also carried out social media and website messaging for our Drought action plan.

3.4 Customer outcomes: performance summary and outperformance payments and underperformance penalties

The performance outlined in the tables above has resulted in a financial reward of £0.023m, the profile reflects the period of early learning and trialling of initiatives to move the scores. 2015/16 was a reputational only year and therefore there was no outperformance or underperformance. This financial data is summarised in table 37 in section 8.2.1 of this document.

Table 13: Customer outcomes: performance summary and outperformance payments and underperformance penalties

ODI (£m)	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Customers consider the appearance of their water to be acceptable	n/a	0.000	0.000	0.000	0.000	0.000
Customer consider the taste and odour of their water to be acceptable	n/a	0.000	0.000	0.000	0.000	0.000
Customers consider the level of leakage to be acceptable	n/a	-0.037	-0.037	0.000	0.000	-0.073
Customers consider their direct interaction experience to be positive	n/a	-0.008	-0.008	0.000	0.000	-0.017
Customers consider their direct interaction experience to be positive - SIM	n/a	n/a	n/a	n/a	n/a	0.000
Customers consider their water supply to be of sufficient pressure	n/a	-0.053	-0.027	0.000	0.000	-0.080
Customers consider the frequency and duration of supply interruptions is acceptable	n/a	0.000	0.000	0.000	0.000	0.000
Customers consider the frequency of water use restrictions to be acceptable	n/a	0.048	0.048	0.048	0.048	0.193
Total	n/a	-0.050	-0.023	0.048	0.048	0.023

3.5 How we have used the learning to create the 2025 plan

We are proposing to evolve the satisfaction measures away from the “average customer” satisfaction into satisfaction of different customer segments based on their attitudes towards water. We recognised that to move satisfaction scores you need to have more information than you can collect via average score analysis, we needed it deeper, as close to an individual customer as we could achieve so we could then use the right channels, messages and incentives to help increase their satisfaction.

Research has shown there are six different segments that our customer base can be grouped into (see Appendix 1 Engagement);

- Global Advocates
- Just Me and Mine
- Careful Neighbours
- Busy Juggler
- Living for Today
- Mindful Optimists

This has already begun to deliver insight in that different segments display differing levels of satisfaction across different service attributes and therefore allows us to understand who we need to engage with about what to improve satisfaction.

For the past 13 months our monthly satisfaction surveys have included a range of golden questions needed to place the customer into their attitudinal segment, this has created a base line for the performance commitments for the next five year period.

The table below shows the six segments satisfaction scores for each of the current satisfaction measures and the combined average of all seven measures, the average will be the reported performance commitment, however we will report the other measures in our Performance, People and Planet report. This insight has been used to develop our outcomes and performance commitments for 2020 to 2025, see Appendix 2 Performance commitments and outcome delivery incentives.

2015 to 2020 to Date	Mindful optimists	Global advocates	Living for today	Just me and mine	Busy jugglers	Careful neighbours
Appearance	4.38	4.61	4.41	4.29	4.58	4.43
Taste & odour	4.15	4.29	4.19	4.24	4.41	4.17
Leakage	3.46	3.82	3.64	3.49	4.03	3.61
Contact	4.17	4.39	4.18	4.07	4.47	4.23
Water pressure	4.25	4.38	4.21	4.35	4.34	4.17
Interruptions	4.51	4.68	4.55	4.54	4.74	4.54
Restrictions	4.29	4.44	4.34	4.07	4.48	4.14
Combined 7 measures	4.17	4.37	4.22	4.15	4.43	4.18

3.6 Monitoring and reporting

A dedicated steering group of business-wide representatives was formed to review performance against our customer satisfaction targets.

As well as analysing the results numerically we also review the comments provided by customers to identify common themes that express either positive or negative sentiment. In addition we performed ad-hoc satisfaction surveys following incidents to better understand the experience from a customer's perspective.

Using the scores and comments we have been able to identify areas of our business – be it around our processes, performance or people – that require further investigation. By reviewing the customer feedback in such detail we have been able to implement improvements as well as identify areas for investment and customer education.

We have decided to further the scope of the Steering Group to review all potential customer insight, rather than just focussing on the insight we gain around our satisfaction measures and performance.

This reformed Engagement Insight Steering Group collectively reviews customer satisfaction, customer vulnerability, customer engagement through business-as-usual transactions, survey feedback, social media sentiment as well as the findings from any research activities and horizon scanning work, the analysis of our environment in the mid to long term to identify changes to that environment. Our newly developed "Engagement Dashboard" is used to report on this activity.

The satisfaction scores are also shared with the Board on a monthly basis via the business performance report. This report summarises all the ODIs for continuous monitoring and discussion at the Board meeting.

Overall, the customer satisfaction measures have challenged us to re-assess every aspect of our business and service, and how this can impact on our customers – and driven the cultural change needed in the business on how we measure key areas of our service and performance in the following ways.

4. Customer performance commitments

4.1 Introduction

As set out above, for our 2015 to 2020 business plan we proposed measuring delivery of many of our outcomes by using customer satisfaction scores to track our performance. At the same time, given this approach was innovative and untested, we included a mix of more traditional targets, and these are summarised below.

4.2 Leakage

Performance and forecast

For this outcome, our target is to reduce our actual leakage to 87.3 ml/d by 2020. Our performance around this measure is as follows:

Table 14: Leakage reductions

MI/d	2015/16	2016/17	2017/18	2018/19	2019/20
Target	91.8	90.9	90.0	89.1	88.1
Actual/forecast	88.1	88.6	87.7	87.5	87.3

In late 2014 we undertook a strategic review of our leakage management activities and assessed options for managing leakage in the 2015 to 2020 period; this included a range of innovative new solutions and investing in state-of-the-art technology.

The resulting strategy, developed in collaboration between our asset management and operational teams and industry experts, aimed to achieve our aim of being regarded as an industry leader in leakage management. It focused on improving key aspects of leakage management, increasing DMA operability, investing in innovative new technology and reducing leakage levels below the performance commitment set out in our 2014 Water Resources Management Plan.

The strategy was based on implementing two packages of measures:

- “Essential” - to maintain leakage levels and related assets. It included investment in equipment, system development and integration, asset maintenance and replacement programme and improvements to DMA integrity;
- “Additional” – to make a step change enabling us to reduce leakage further and improve efficiency of leakage management. It relied on good practice

improvements and included calm networks, asset condition monitoring, enhancing modelling capability and additional investment in technology.

These measures, implemented at an annual cost of £1.5m per year, were in addition to active leakage detection and repairs which cost around £17m per year.

Our actual leakage performance has been substantially better than our performance commitment as a result of that investment and our staff finding record numbers of leaks.

In 2016/17 our total leakage was 88.6 MI/d against the commitment of 90.9 MI/d for that year; and in 2017/18 our total leakage was 87.7 MI/d against the commitment of 90.0 ml/d for that year. This continued improvement is the result of our enhanced leakage strategy and activity.

Reducing leakage however is not easy; most of the leaks that occur are small and not visible but our technological and system advances have allowed us to find more, smaller invisible leaks. So far, this has allowed us to defer two groundwater schemes proposed in our 2014 Water Resources Management Plan and resulted in a positive environmental benefit.

We plan further reductions in total leakage before the current planning period ends in 2020, including a trial of a project to reduce leakage from customers' supply pipes, which if successful, we will roll out in future years.

Lessons Learnt from AMP6

2015 to 2020 has been a journey involving new techniques and we are learning how to trial and adopt new technologies effectively, including new procurement, leakage supply chain innovation days and leakathons. This is a gathering of internal and external leakage experts, set in a one or two day forum where they are supplied in teams, with real live leakage data on demand night use etc. They are asked to derive the appropriate leakage strategy for that area and then compared and discussed with that produced from other teams. The requirement is to look for what is possible to challenge the current thinking on how to achieve leakage reductions.

These trials have allowed us to build the learnings into a leakage prediction model that allows us to understand what might be possible in terms of leakage reductions.

How we have used the learning to create the 2025 plan

This measure will continue to be in our outcomes package, however will be measured and reported on a 3 year average. A yearly performance will be published in our Performance, People and Plant report alongside the 3 year average for complete transparency.

We are aiming to reduce the amount of water lost by leakage by 15 per cent based on a yearly performance, when worked out on a 3 year average the reduction is 10 per cent. This will take us to a level of leakage beyond the current frontier performance and so we will need to use the skills we have developed this period in terms of bringing new technologies into operation as well as using the resilient customer approach to help customers repair leaks in their own home.

4.3 Number of properties at risk of low pressure

Performance and forecast

For this outcome, our target is to reduce the number of properties at risk of experiencing low pressure. Our performance around this measure is as follows:

Table 15: Properties at risk of low pressure

Number of Properties	2015/16	2016/17	2017/18	2018/19	2019/20
Target	60	60	60	60	60
Actual/forecast	53	49	47	47	47

We have continued to invest in schemes which will reduce the number of properties at risk, and are pleased to have made significant improvements in this area, which is also reflected in our higher customer satisfaction scores too (see section 3.3.4).

While we work to reduce the number of properties receiving low pressure, we continue to try to identify other properties that may become at risk of poor water pressure as demands change to ensure the figure remains below 60 in the future.

Lessons Learnt from AMP6

We are already at the upper quartile for this measure but we have pushed the numbers down further to improve the service to all our customers. The majority of our properties failing low pressure are larger single properties on a high point, at a similar height to the supplying reservoir and often connecting them to a pumped system is not cost effective. However we have installed smaller pumps and storage tanks on a few properties to improve pressures and remove these properties from our register which is very cost effective and has resolved long standing customer frustration. We plan to offer this going forward to improve services to other customers where other solutions are not cost effective.

We have also removed a larger area (21 properties) from our low pressure register with a £250,000 scheme to install some mains reinforcement and a new booster. The scheme has resolved some long standing pressure issues to some large properties in a very rural area fed from a tower and has been very successful.

How we have used the learning to create the 2025 plan

This measure will be modified to be Low pressure – number of properties below minimum standard of pressure (per 10,000 connections) to be in line with how the measure is reported on the Discover water website.

We will continue to plan and implement the most cost effective solutions over 2020 to 2025 to resolve low pressure issues and improve our overall target per 1,000 connections.

4.4 Interruptions - Average time lost per properties

Performance and forecast

For this outcome, our target is to reduce the length of interruptions to 10 minutes by 2020. Our performance around this measure is as follows:

Table 16: Interruptions – average time lost per properties performance

Minutes	2015/16	2016/17	2017/18	2018/19	2019/20
Target	12.7	12.3	12	12	12
Actual/forecast	32.05	12.9	44.6	10	10

Lessons Learnt from AMP6

Our strategy at the beginning of the period was to reduce planned interruptions to zero, reduce baseline interruptions to circa 5 mins and then to put considerable effort into preventing the one-off large asset failure such as a trunk main burst from having a material impact on service and therefore causing us to fail the target.

We successfully achieved the first two objectives, demonstrating that we are able to plan work effectively to prevent any interruptions occurring – 99 per cent of the bursts that occur we achieve an interruption target of <5 mins.

We have achieved this largely through our network strategy which:

- provides tools to understand how to rezone water
- responds faster and more effectively via improved scheduling and increased visibility and management of the process
- reviews strategic stock and resource locations
- reviews alternative water options
- improved communications to customers

Larger interruptions are still proving a challenge, the majority of these are caused by a failure of a strategic main although we have had one incident related to the freeze thaw event that was driven in the main by increased demand on customers' pipework.

We also had a large trunk main failure in Hailsham described in section 3.3.7.

All significant interruption events are reviewed, these two large events have fed many learnings and the freeze/thaw event in particular has seen the creation of an independently audited action plan and the learning have fed the operational resilience strategy detailed in the Appendix 9: Resilience in the round.

How we have used the learning to create the 2025 plan

We have taken and developed a number of initiatives to improve the impact of baseline interruptions and in particular the single large failures. We have developed an Operation Resilience strategy including improved interconnectivity of the network to provide alternative sources of water. We have also begun to develop some truly innovative approaches to the larger asset failures. The first step is to ensure the maintenance of the network is optimised to target mains with the greatest potential to fail and to cause disruption and we have been undertaking and refining this approach for many years. However the Hailsham event was on a main that had no indication of potential failure and so even the most effective replacement strategy will still not remove this risk. We have therefore looked at both the causes of the failure in terms of pressure fluctuation and begun the development of an innovative logistics tool to allow more effective deployment of the resources required.

The large impact of customer side leakage seen in freeze thaw, around 80 per cent of event leakage, is a key component to our resilience customer concept, where we would aim to educate customers in how they can become resilient to incidents, such as lagging their pipes in preparation for winter.

4.5 Meeting the water resources deficit

Performance and forecast

For this outcome, our target is to have a zero deficit of water. Our performance around this measure is as follows:

Table 17: Water resource deficit

MI/d	2015/16	2016/17	2017/18	2018/19	2019/20
Target	0	0	0	0	0
Actual/forecast	0	0	0	0	0

The security of supply index (SOSI) measures how well we comply with this requirement, allowing us to assess all the water that is available and factoring in how much of that water is being lost through leakage. We then calculate customer demand for water based on current use and forecasts for future demand for water. We deduct our security of supply index score from 100 to give us our deficit.

To achieve this performance we needed to deliver all the key components of our Water Resources Management Plan namely metering and resource developments.

Lessons Learnt from AMP6

The lessons we have learnt and how we have used them are dealt with in detail in our WRMP and Water Resource Appendix.

How we have used the learning to create the 2025 plan

Due to the new drought resilience ODI this measure will be removed from our Outcomes package ODI. For information about our new drought plan please see Appendix 7 Water Resources.

4.6 Customer performance commitments: performance summary and outperformance payment

The performance outlined in the tables above has resulted in a financial penalty of £-0.081m. This financial data is summarised in table 37 in section 8.2.1 of this document

ODI (£m)	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Leakage	0.846	0.409	0.189	0.189	0.000	1.633
Number of Properties at risk of low pressure	0.002	0.003	0.004	0.004	0.004	0.017
Interruptions – Average times lost per property	-0.932	0.000	-1.331	0.266	0.266	-1.731
Meeting the water resource deficit	0.000	0.000	0.000	0.000	0.000	0.000
Total	-0.084	0.412	-1.138	0.459	0.270	-0.081

5. Our compliance outcomes performance

5.1 Introduction

Our water supply service needs to be built on strong legal and regulatory performance so we can provide wider confidence in the service we provide.

We developed a suite of compliance outcomes to reflect our responsibilities around water quality, the environment, health and safety, security and legal activities.

5.2 We are compliant with water quality regulations

5.2.1 Mean zonal compliance

Performance and forecast

Mean Zonal Compliance is a measure of the water quality at customers' taps against both the European Directive and national parameters in Schedule 1 of the Water Supply (Water Quality) Regulations. The measure is comprised of the average of the MZC percentage figures for 39 different parameters that are tested to establish the quality of water. The frequency of sampling is set out in the regulations at a water supply zone level and is dependent on the nature of the parameter and is proportional to the population within each a supply zone. Given the nature of the mean zonal compliance calculation, which looks at the percentage of samples failing, the impact of a failure increases as the overall sample size decreases.

Customers consistently tell us that water quality is among the top priorities for their water supply service which is why we have targeted our investment and activities in those vital assets which protect water quality.

Our approach was underpinned by setting ourselves a target of achieving 100 per cent Mean Zonal Compliance by 2020 of all the samples we take and test. Mean Zonal Compliance being a measure of the pass rate of all water samples taken.

Our performance around this measure is calculated on a calendar year basis ie January to December and is as follows:

Table 18: Mean Zonal compliance performance

(% pass rate)	2015	2016	2017	2018	2019
Target	100%	100%	100%	100%	100%
Actual/forecast	99.96%	99.95%	99.95%	99.95%	99.95%

In 2017 there were only 24 samples taken from customers' taps in which a parameter failed to meet the required standards; this represents a significant improvement on the previous three years' performance which saw an annual average of 48 sample failures at customers' taps.

The greatest improvement has been seen for total coliforms which dropped from an average of 20 per year to six in 2017 as a result of improvements at our water treatment works, in the network and disinfection techniques at the customer's property.

Iron has reduced from an average of 11 failures per year to seven in 2017 as a result of the sequential flushing and SeaQuest installations which form part of our discolouration strategy.

Despite the reduction in the number of failures, the Mean Zonal Compliance performance remains at 99.95 per cent as a result of the low sampling frequency for eight of the 24 sample failures; this increases the relative impact of each failure for a particular parameter on the overall Mean Zonal Compliance.

It should also be noted a significant proportion of these failures have come as a result of issues identified within the customer's domestic plumbing, and so we've worked closely with them during home visits to identify any deficiencies and ensure their own plumbing meets the high standards required by the water fittings regulations.

Performance for the two remaining years is expected to be maintained in line with current performance, at 99.95 per cent.

Lessons Learnt from AMP6

We have learnt that the initiatives we have put in place are effective at reducing water quality issues and that our maintenance is being targeted effectively. We are also now seeing that customers own plumbing and how they operate water systems in their home is beginning to have a disproportionate effect on the quality of their water.

How we have used the learning to create the 2025 plan

The Mean Zonal Compliance measure will be superseded by the Compliance Risk Index (CRI) which takes account of issues occurring as a result of domestic plumbing, as well as also including the results of our performance at our water treatment works and storage reservoirs, to provide a more complete picture of water quality across our supply area. More details on CRI are included within Appendix 6: Water Quality.

Key though to our new approach is the adoption of the resilient customer concept which is fully detailed within Appendix 9: Resilience in the round.

The concept relies on the mutual benefits to resilience that can be achieved if we work with customers to help them understand the issues and work towards a shared goal. Its particular relevance to water quality is that we have streams of engagement that look to improve how customers look after the water in their home, including storing water, the pipework itself and also how they could potentially unknowingly pollute the water. We have created a toolbox of skills to help change behaviour ranging from the more traditional informative magazine as mentioned above to the use of behavioural science techniques to help change this behaviour.

5.3 We are compliant with our environmental obligations

Many of our environmental duties and obligations are enshrined in UK and European legislation which provides a strong operational foundation on which to deliver many of our activities.

It also provides confidence to customers and stakeholders that we are focussing on their priorities of delivering safe, clean drinking water while protecting the environment.

Our performance is scrutinised by the Environment Agency which routinely visits and audits our operational sites, licences and data.

5.3.1 Number of breaches of abstraction licences, discharge consents and environmental permits

Performance and forecast

For this outcome, our target is to have zero breaches. Our performance around this measure is as follows:

Table 19: Licence and permits compliance

Performance measure		2015-16	2016-17	2017-18	2018-19	2019-20
Discharge consent breaches (number)	Target	0	0	0	0	0
	Actual/forecast	8	4	6	0	0
Annual abstraction licence breaches (number)	Target	0	0	0	0	0
	Actual/forecast	1	1	0	0	0
Daily abstraction licence breaches (number)	Target	0	0	0	0	0
	Actual/forecast	16	0	209	0	0

The two annual licence breaches seen during the period were at two different sites, the amount over abstracted was a very small and there was no damaging impact to the environment.

We have seen a large number of daily licence breaches through the period, for the largest incident an investigation and incident report was created for the Environment Agency who issued us with a warning letter, no further action will be taken following this. We continue to monitor our sites and polices to ensure we are following good practice.

Lessons Learnt from AMP6

For each of these breaches an investigation was carried out and corrective measures were made to improve and maintain control of the amount of water being abstracted for drinking water supplies - an approach which is discussed and agreed with the Environment Agency.

The issues we have identified in these areas relate to two issues, procedural controls and asset performance. In all cases we have implemented controls to ensure no reoccurrence and then deployed these learnings more widely to prevent similar issues at other sites. Where we have seen issues with asset performance we have made alteration to the asset or the controls associated with those assets and similarly deployed the learnings across the asset base.

How we have used the learning to create the 2025 plan

Due to the number and range of new environmental performance commitments included in our new outcomes package we have decided to report these measures as KPIs in our Performance, People and Planet report from 2020.

5.3.2 Number of pollution incidents (category 1- 2)

Performance and forecast

For this outcome, our target is to have zero breaches. Our performance around this measure is as follows:

Table 20: Pollution incidents performance

number of incidents	2015/16	2016/17	2017/18	2018/19	2019/20
Target	0	0	0	0	0
Actual/forecast	0	2	1	0	0

Lessons Learnt from AMP6

In 2016-17 we had two category one pollution incidents, which are the most serious classifications. These occurred at our Groombridge Water Treatment Works in Kent when two discharge compliance samples taken on the same day were reported as failures. This was the first time that such samples have failed.

We immediately took remedial action, the site has undergone extensive refurbishment to further improve the efficiency and control of the works. It was agreed that the frequency of sampling would be increased, and to clean out the lagoons to reduce the risk of discharge. We are pleased to report that subsequently there were no further sample failures.

In 2017-18 we had one category two pollution incident, which we consider was the result of the emergence of blue/green algae. We have appealed the Environment Agency’s original classification that this was category two incident, and are continuing those discussions.

How we have used the learning to create the 2025 plan

Due to the number and range of new environmental performance commitments included in our new outcomes package we have decided to report these measures as KPIs in our Performance, People and Planet report from 2020.

5.4 Number of breaches of national security obligations

Performance and forecast

For this outcome, our target is to have zero breaches. Our performance around this measure is as follows:

Table 21: Compliance with national security obligations

Number of breaches	2015/16	2016/17	2017/18	2018/19	2019/20
Target	0	0	0	0	0
Actual/forecast	0	0	0	0	0

In this period we have had zero breaches of the Security and Emergency Measures Directive, which specifies a level of security required at each type of site; and are on target to deliver all the work to remain compliant with the Directive.

We are required to produce a statement of compliance outlining all the work we have committed to and this is independently audited. We were pleased to be recognised for our high security standards in this area during the audit with the auditor, from Defra Water Security and Resilience, commenting *“the sustained level of your*

reporting is exemplary for the water sector. As the regulator, your clarity, precision and depth of deliverables inspires confidence that prior commitments are being met and that the future programme of works is credible.”

Our cyber controls helped us successfully evade the Wannacry and NotPetya attacks that occurred in 2017. However as cyber threats continue to increase in volume and complexity, we have invested in advanced cyber defence tools and employee training and awareness schemes to protect our systems and our customers’ data from attack.

Lessons Learnt from AMP6

We fell victim of two ransomware attacks in May and December 2015, these attacks resulted in no loss of data however it gave us an opportunity to exercise our detection and recovery procedures. It also provided us with some lessons learnt that triggered actions such as mandatory training for all staff on phishing and ransomware, and mandatory re-boots of all PCs every 24 hours. This is to ensure that security patches that have been rolled out to PCs are applied.

How we have used the learning to create the 2025 plan

Whilst we will have completed the physical security programme in this period we have included within maintenance expenditure, as outlined in appendix 11: Our investment plan, the ability to maintain this security infrastructure and further expenditure to allow us to continue to maintain cyber security.

For the business plan period 2020 to 2025 this measure will be removed from our Outcomes package, however we will continue to report it as a KPI in our Performance, People and Planet report.

5.5 We are compliant with our health and safety regulations

Performance and forecast

For this outcome, our target is to have zero breaches. Our performance around this measure is as follows:

Table 22: Compliance with health and safety obligations

Number of breaches	2015/16	2016/17	2017/18	2018/19	2019/20
Target	0	0	0	0	0
Actual/forecast	0	0	0	0	0

The health, safety and wellbeing of our workforce is fundamental to our company vision and business and so we are pleased that we have met our performance

commitment of zero breaches during this period. We remain focussed on health and safety which is why we launched our Thrive 365 strategy in this period; this focusses on two strands – safe people and safe working – but which is about more than just preventing accidents; it is also about enhancing the overall wellbeing of everyone.

Lessons Learnt from AMP6

We launched our Thrive 365 strategy to ensure we keep Health, Safety and Wellbeing of everyone’s mind. This strategy has particular emphasis on willingness to intervene and the importance of personal ownership.

Since 2015 we have seen a:

- reduction of 78 per cent in our reportable injury rate
- 50 per cent reduction in lost time as a result of work related injury
- 30 per cent reduction in service strikes during street works

In 2018 South East Water came top out of 122 workplaces competing in the Active Workplace Challenge.

How we have used the learning to create the 2025 plan

Health and Safety remains a critical activity and is monitored across the business and reported to the Board on a regular basis, we intend to drive the Thrive365 concept deeper into the business.

For the business plan period 2020-25 this measure will be removed from our Outcomes package, however we will continue to report it as a KPI in our Performance, People and Planet report.

5.6 We are compliant with our other statutory obligations and licence conditions
Performance and forecast

For this outcome, our target is to have zero breaches. Our performance around this measure is as follows:

Table 23: Compliance with statutory and licence obligations

Number of breaches	2015/16	2016/17	2017/18	2018/19	2019/20
Target	0	0	0	0	0
Actual/forecast	0	1	0	0	0

The one breach that occurred in May 2016 and related to an enforcement order from the DWI around how we reported our data under the Water Industry (Supplier's Information) Direction 2012.

Following implementation of corrective actions the DWI revoked the enforcement order in May 2017, as it was satisfied the issues had been resolved and that our improvements demonstrated compliance. The DWI also commented that the secondary internal checks we'd implemented should be shared with the industry as an excellent example of good practice.

Lessons Learnt from AMP6

The learning from the enforcement order has allowed us to develop processes that are of a very high standard, however the real learning relates to the risk developing in the first place. The inclusion of our approach to business risk assessment is now embedded and will pick up a developing issue such as this a lot earlier and prevent its escalation.

How we have used the learning to create the 2025 plan

This measure will be removed from our Outcomes package, however we will continue to report it as a KPI in our Performance, People and Planet report.

5.7 Compliance outcomes: performance summary and outperformance payments and underperformance penalties

The performance outlined in the tables above has resulted no outperformance or under performance payments. This financial data is summarised in table 37 in section 8.2.1 of this document.

Table 24: Compliance outcomes: performance summary

ODI (£m)	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Mean Zonal Compliance	0.000	0.000	0.000	0.000	0.000	0.000
Number of breaches of abstraction licences, discharge consents and environmental permits	n/a	n/a	n/a	n/a	n/a	n/a
Number of pollution incidents (category 1 and 2)	n/a	n/a	n/a	n/a	n/a	n/a
Number of compliance breaches of health and safety legislation	n/a	n/a	n/a	n/a	n/a	n/a
Number of breaches of National Security obligations	n/a	n/a	n/a	n/a	n/a	n/a
Number of compliance breaches of other statutory obligations	n/a	n/a	n/a	n/a	n/a	n/a
Total	0.000	0.000	0.000	0.000	0.000	0.000

6. Our sustainability outcomes performance

6.1 Introduction

We introduced a suite of sustainability outcomes to reduce our impact on the environment; and support our decision making for the longer term so that the service of future is not compromised by decisions taken at the five-yearly price review process.

6.2 Our asset are capable of delivering outcomes in the future

6.2.1 Discolouration contacts

Performance and forecast

We also measure the number of discolouration contacts per 1,000 population to assess our compliance with water quality regulations. We set ourselves ever-more challenging performance targets for each year of the 2015 to 2020 period.

Our performance around this measure is calculated on a calendar year basis ie January to December and is as follows:

Table 25: Customer discolouration contacts

Per 1,000 population	2015	2016	2017	2018	2019
Target	0.97	0.78	0.58	0.58	0.58
Actual/forecast	0.98	0.96	0.82	0.70	0.58

Lessons Learnt from AMP6

There has been a continuous reduction in our discolouration contact rate from a performance rate in 2014 of 1.19 per 1,000 population to a record low level of 0.82 contacts per 1000 population in 2017.

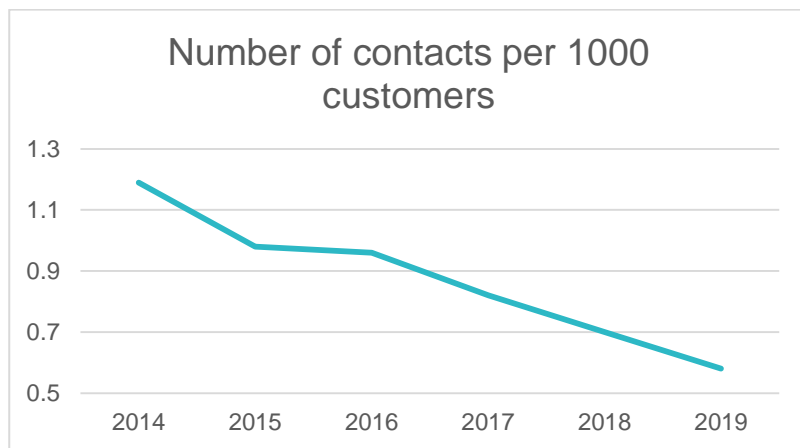
This improvement has been as a result of the positive action we've taken which has included the optimisation of treatment works performance, the installation of SeaQuest dosing at key water treatment work sites and a substantial programme of sequential mains flushing, which now covers around 10 per cent of the company network per year. In addition we have instigated 'calm network operation' training across the business as well as hot spot mains replacement programmes.

The projected overall discolouration rate for 2018, based on the seven months of data so far, is currently tracking at 0.59 contacts per 1,000 population below our

original forecast of 0.70 we have chosen to continue to show a forecast of 0.70 as this was included in our PR14 Reconciliation submission. This demonstrates a continuation of the improving trend in discolouration and means our current performance is only just above the stretching company target of 0.58 contacts per 1,000 population - showing that the benefits of the programme of works are beginning to be realised. We have also seen an ongoing reduction in the number of water supply zones with elevated contact rates from 12 which had above two contacts per 1,000 population (with four of these zones having above four contacts per 1,000) to just six water supply zones with above two contact per 1,000 population (and none with above four contacts per 1,000 population).

Table 26: reduction in discolouration contacts

Per 1,000 Population	2014	2015	2016	2017	2018	2019
Number of contacts per 1000 customers	1.19	0.98	0.96	0.82	0.70	0.58
reduction from previous year		0.21	0.02	0.14	0.12	0.12
% reduction from previous year		18%	2%	15%	15%	17%
reduction from 2014		0.21	0.23	0.37	0.49	0.61
% reduction from 2014		18%	19%	31%	41%	51%



How we have used the learning to create the 2025 plan

This measure will be transformed into Appearance of water – number of contacts per 1,000 customers supplied to be in line with how the measure is reported to the DWI. Appearance captures white water, cause by air and chalk in addition to brown water. We will continue our operational changes introduced over the past 2 years.

6.2.2 Above ground asset performance assessment

Performance and forecast

For this outcome, our target is to maintain our assets at a stable level.

The assessment of that asset stability is made up of four indicators of 'asset health'. These are:

- Water treatment works coliforms non-compliance - the number of treatment works where the samples taken contained coliforms (a form of bacteria)
- service reservoir coliforms non-compliance - the number of service reservoirs where more than five per cent of the samples taken exceeded the maximum concentration required for coliform bacteria as a percentage of the number of service reservoirs tested for microbiological parameters
- turbidity - is the cloudiness or haziness caused by large numbers of particles that are generally invisible to the naked eye
- enforcement incidents - incidents which have triggered a formal enforcement action against the company on above ground assets.

All of the four measures of asset health are within agreed limits and so our performance around this measure is as follows:

Table 27: Above ground asset performance

	2015/16	2016/17	2017/18	2018/19	2019/20
Target	Stable	Stable	Stable	Stable	Stable
Actual/forecast	Stable	Stable	Stable	Stable	Stable

Sub-Measures performance and forecast

Sub-measure	Reference level set out in FD	2015/16	2016/17	2017/18	2018/19	2019/20
WTW coliforms non-compliance	0.05	0.03	0.08	0.05	0.05	0.05
Service reservoir coliforms non-compliance	0.21	0	0	0	0	0
Turbidity non-compliance	4	0	0	0	0	0
Enforcement incidents	0	0	0	0	0	0

Lessons Learnt from AMP6

The fundamental improvement in this area is due to a closer alignment of asset operation and water quality and the continued focus from these teams to ensure the quality of drinking water is delivered to the highest standard.

We have also improved the resource and skillset within the teams monitoring the water production process. Specifically we have trained people and assessed competencies in key areas of water quality and introduced a site ownership model. Following this we have applied appropriate performance metrics to teams.

We have upgraded a significant number of analysers and replaced all legacy sampling facilities with a modern design.

Risk is managed via regular sessions, a risk database linked to our DWSP and formalised asset audits and governed by a Water Quality Strategic group chaired by the Managing Director.

How we have used the learning to create the 2025 plan

Due to the new asset health measures being introduced from 2020 this measure will be removed from our Outcomes package.

6.2.3 Number of sites at risk of flooding

Performance and forecast

For this outcome, our target is to reduce the number of sites at risk of flooding (from a 1 in 100 year event for fluvial flooding). Our performance around this measure is as follows:

Table 28: Sites at risk of flooding

Number of Sites	2015/16	2016/17	2017/18	2018/19	2019/20
Target	n/a	n/a	n/a	n/a	0
Actual/forecast	55	33	7	3	0

At the start of this period we had 55 sites at risk of flooding and identified the short term improvements we needed to make to ensure our assets are 'flood resilient' and have actioned these. On that basis we are confident we will achieve our target of having zero sites at risk of flooding by 2019/20.

Lessons Learnt from AMP6

In delivering the current flooding schemes, the following lessons were learnt and fed into our 2020 to 2025 approach:

- More robust risk assessments and flood models were needed as some original at risk sites were not identified
- Some of our earlier solutions used assets that were able to be removed, and were then difficult to track and maintain. This approach has been modified during the period to ensure more robust, permanent solutions that can be included in our asset management systems and have defined on-going planned maintenance activities scheduled. Where we do have demountable flood barriers, an improved tagging and tracking process is needed to ensure quick deployment in preparation for flood risk events.
- We have also identified that flooding resilience levels need to be captured on our operational systems, and linked to our emergency response plans so this information is more readily accessible.

How we have used the learning to create the 2025 plan

This measure will be included in our outcomes package, with a three phase risk assessment has been carried out on our sites for flooding in 1 in 1,000 year event. Phase 1 was a high level review to identify assets at risk of a 1 in 1000 fluvial, tidal or surface water flood event. Phase 2 considered the risk of flooding to our assets from sources of flood risk not covered in place 1, such as groundwater, sewer flooding, reservoir failure and canal breach, and other operational resilience issues including accessibility, risk to pipe bridges, simultaneous flooding and pollution events. Phase 3, updated the assessment to account for redundancy and recovery systems for each asset, undertake site visits for top 20 critical sites to scope remedial works and develop cost estimates, and extrapolate these to similar assets on less critical sites. For more information see Appendix 9 Resilience in the round.

6.2.4 Water mains bursts

For this outcome, our target is to reduce the number of burst mains to 2,429 by 2020. Our performance around this measure is as follows:

Table 29: Water mains bursts performance

Number of bursts	2015/16	2016/17	2017/18	2018/19	2019/20
Target	2,429	2,429	2,429	2,429	2,429
Actual/forecast	3,032	2,307	2,747	2,429	2,429

Burst mains are an indicator of asset stability and while there has been variations due to differences in weather and related ground conditions, our performance has remained within tolerance for the period.

Lessons Learnt from AMP6

This level of performance has demonstrated that we are able with targeted replacement and renovation strategies we are able to keep burst rates broadly constant. We have also improved network operations as mentioned above that have positive impacts on both burst rates and interruption minutes.

How we have used the learning to create the 2025 plan

We have challenged ourselves to keep the burst rate flat for the 2020 to 2025 period despite driving at a 15 per cent reduction in leakage which will mean we will find the unfindable leak and therefore this represents a new challenge. The two main tools of targeted maintenance and network operation will need to be deployed further.

6.3 We will reduce our impact on the environment

6.3.1 Carbon emissions

Performance and forecast

For this outcome, our target is to reduce our carbon emissions to 37.7KgCO_{2e} by. Our performance around this measure is as follows:

Table 30: Carbon emissions

KgCO _{2e}	2015/16	2016/17	2017/18	2018/19	2019/20
Target	n/a	n/a	n/a	n/a	37.7
Actual/forecast	36.8	37.2	37.2	36.2	36.4

Approximately 90 per cent of our carbon emissions are derived from the energy we need to use to abstract, treat and distribute water. This contrasts to 2 per cent of our carbon emission that come from our direct transport requirements. As such, given the energy intensive nature of our business, we are continually reviewing how we can minimise our carbon emissions. This includes optimising existing energy efficient assets, assessing alternative renewable sources and replacing older pumps with newer, more efficient ones that collectively reduce our energy usage and carbon emissions. Specifically we have:

- Looked to reduce our dependency on carbon based fuel by purchasing Defra quality energy, this will ensure a large majority of our sites that are fed by the national grid only will be using renewable sources.

- Investigated further into direct renewables. This leads to our new review of solar panels in the 2020 to 2025 period. We have learnt that there is a new potential avenue for acquiring energy through the use of a community energy scheme. The premise being that we will enter into an agreement to help the build of a solar farm that will allow local members of the community to receive cheaper rates as well as receive alternative benefits, such as money towards the improvement of a local school. This allows us to buy energy at a less expensive rate and support customers in other areas at the same time.
- Investigated battery storage, following an increase in TRIAD costs we have to perform more and more grid avoidance at site each year. Therefore by using batteries we avoid the high charges while also making sure not to use diesel generators and reduce our carbon.
- Acknowledged the increased research in hybrid and electric vehicles and the increasing trend to move to these greener vehicles. We are looking at 10 electric vehicles to be used in our fleet as an initial test. We discovered that we have a large collection of pumps that were potentially inefficient, therefore we are investigating the efficiency of the pumps at 10 sites to see if we can replace inefficient ones to reduce our energy usage for the same amount of water pumped; this will in turn reduce our amount of carbon usage.

How we have used the learning to create the 2025 plan

This measure will be modified to be greenhouse gas emissions - kgCO₂ emissions per megalitre of treated water to be in line with how the measure is reported on the Discover water website.

6.3.2 Monitoring of abstractions during low flows at environmentally sensitive sites Performance and forecast

Our target is to reduce our abstractions at two identified groundwater sources under the Abstraction Incentive Mechanism (AIM). The purpose of the Abstraction Incentive Mechanism (AIM) is to incentivise water companies, where and when they can, to reduce abstraction from the most environmentally sensitive abstraction sources at times of greatest water stress.

We have two sources where AIM applies; these are Windmill Hill in East Hampshire and Kingston in Kent and our performance around this measure for these sites is as follows:

Table 31: AIM performance

AIM performance	2015/16	2016/17	2017/18	2018/19	2019/20
Target	n/a	n/a	n/a	n/a	n/a
Actual/forecast	n/a	-0.18	-0.24	0	0

At the end of 2017-18 we completed a full-year review and concluded that the requirements of AIM has been triggered at both Kingston and Windmill Hill during the year, but abstraction output has been managed below the AIM baseline daily abstraction rate and so we have met our performance commitment for the year.

In 2017-18 we have used 156.2 MI/d less during AIM periods at the agreed sites which gives us a cumulative normalised value of -0.24 MI/d; this represents an outperformance against the AIM baseline.

Lessons Learnt from AMP6

We have learnt that by operating this kind of environmentally based abstraction protocol, it is possible and we can achieve and potentially outperform the targets, delivering further benefits to the environment. It is important to systemise the approach with joined up remote site control and alarm notification and response triggers to ensure the AIM targets are achieved we intend to use this approach on the new sites below.

How we have used the learning to create the 2025 plan

We have reviewed our Water Industry National Environmental Programme version 3 (WINEP3) and the Ofwat filtering process and are proposing the following 3 sites for inclusion in our AIM, these are;

1. Kingston
2. Charing
3. Itchel

We have included these additional sites following detailed discussion with the Environment Agency. The rationale for the site selection is that we have chosen sites with actual or high potential for producing environmental impacts at certain flows where an alternative source exists full details of this measure can be found in Appendix 10 Environment.

6.4 Sustainability outcomes: performance summary and outperformance payments and underperformance penalties

The performance outlined in the tables above has resulted in a financial penalty of £-0.537m. This financial data is summarised in table 37 in section 8.2.1 of this document.

Table 32: Sustainability outcomes: performance summary

ODI (£m)	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Discolouration Contacts	0.000	0.000	-0.358	-0.179	0.000	-0.537
Above group asset performance	0.000	0.000	0.000	0.000	0.000	0.000
Number of sites at risk of flooding	n/a	n/a	n/a	n/a	n/a	n/a
Water mains bursts	0.000	0.000	0.000	0.000	0.000	0.000
KG of carbon emissions per customer per year	n/a	n/a	n/a	n/a	n/a	n/a
We will monitor our abstractions at low flows at environmentally sensitive sites	n/a	n/a	n/a	n/a	n/a	n/a
Total	0.000	0.000	-0.358	-0.179	0.000	-0.537

7. Our financial performance

7.1 Introduction

The following section outlines our performance in the 2015 to 2020 period, in delivering our financial performance in relation to our total expenditure and revenue.

We challenged ourselves to deliver our day-to-day activities at a lower cost over the period and we set out below the efficiencies we have achieved so far.

7.2 Our total expenditure performance

Table 33 below sets out the first three years' performance and the projections to the end of the 2015 to 2020 period:

Table 33: Totex performance actual and forecast

2012/13 price base	2015/16	2016/17	2017/18	Period to date	2018/19	2019/20	Full Period
Actual (Table 4B APR)	143.3	143.0	148.4	434.7	156.0	143.4	734.1
Final Determination – PR14	147.9	155.9	165.5	469.3	159.0	148.4	776.7
Outperformance	4.6	12.9	17.1	34.6	3.0	5.0	42.6

The outperformance in the first three years of this period is principally driven by the following:

7.2.1 Power procurement

With a continuing backdrop of energy price increases we work hard to use energy as efficiently as possible while exploring ways we can make additional savings. Among the approaches we have undertaken during 2015 to 2020 are:

- Miser – network and pump scheduling optimisation Miser is our highly configurable and flexible suite of decision-making support tools that optimise water management, asset and resource planning and their associated costs. It means we can optimise our portfolio of energy assets so that we deliver water at least cost. We have tariff management approaches in place to use our assets when energy tariffs are lower, and conversely restrict the use of those same assets use during peak tariff periods - for example, Miser ensures our service reservoirs are filled during off-peak charging periods.

- Triad avoidance - the triad system is the way National Grid charges businesses for the cost of the transmission network during extreme demand periods. The cost of energy in a triad period is very high and is a clear price signal to large energy users to reduce their consumption and ensure energy is available for all customers. We have worked hard to avoid triad period impacts and so reduced our exposure to very high energy tariffs. We also continue to make further use of our resilience generators as a substitute for National Grid energy.
- Export pilots - the use of our resilience generators has allowed us to undertake pilot schemes that export electricity back into the national grid, for which we receive payments that we offset against our usual energy costs. Exporting back to the national grid also supports the UK's broader energy aspirations to balancing energy demand in the network to maintain a constant level of generation.
- Pump efficiency - over a period of time pumps become less energy efficient. While we can, and do, replace them, we have begun studies on refurbishing them. These studies have a two-fold advantage in that they improve our asset cost information (which can be fed back into Miser optimisation tool) but also identify pumps where refurbishment can lead to improved energy efficiency and reduce energy running costs.
- Metering programme/demand management - our metering programme is due to be completed by the March 2019 so that approximately 90% of household properties will be metered. While the key driver of the programme is to manage demand for water, a bi-product of lower water usage by customers is less pumping of water and reduced energy consumption.

Procurement Initiatives

We have improved our reservoir cleaning and maintenance services by developing a new contracting approach and ensuring key interfaces are in place with our water quality, operations and asset planning teams. For the cleaning element of the services we have introduced an emergency call-out provision, and streamlined the process for small works orders, to reduce the amount of time these key assets are out of service so our water supply service remains resilient.

7.2.2 Engineering efficiency

The Engineering Team secured new contracts for 2015 to 2020 from framework suppliers and improved efficient delivery by:

- working more closely with contractors, consisting of co-location of engineering and some key contractors

- the development of a minor works team which is focussed on delivering the less complex programmes of work with minimum overheads (soft-costs)
- further integration with our framework contractor – Jacobs, to look for alternative approaches and innovation.

These changes contributed to the delivery of cost outperformance by unlocking efficiency opportunities, reducing central overhead costs and being able to procure more effectively.

7.2.3 Asset efficiency

The asset function improved delivery of key engineering and non-engineering programmes by developing a new integrated approach to programme development - the Programme Definition and Optimisation Team (PDOT); and increased capacity in key areas where we have previously relied on external support e.g. National Environment Programme (NEP) and the Water Resources Management Plan (WRMP).

7.2.4 Phasing of metering programme

As part of the programme to meter our household customers, completion is due to occur one year ahead of the original programme which releases a year of overhead charges.

7.3 Our wholesale revenue performance

Our wholesale revenue performance is weather dependent as the number of metered customers approaches 90 per cent; as such our revenue predictions become more sensitive to variations in customer consumption.

Water revenue accounts for 94 per cent of our total allowed revenue. A much smaller element of our revenue (approximately 6 per cent) is provided by developers. Income from developers each year can also fluctuate according to activity levels in the housing market.

We have under-recovered £7.6 million (2012/13 price base) of revenue in the first three years of this period. Our forecast indicates that this under recovery will increase to 18.4 million by the end of the 2015 to 2020 period.

Table 34 below sets out the first three years' performance and the projections to the end of this period for wholesale revenue:

Table 34: Wholesale revenue actual and forecast

	2015/16	2016/17	2017/18	AMP to date	2018/19	2019/20	Full AMP
Actual/forecast Revenue	181.6	183.3	182.9	547.7	184.1	187.5	919.3
Allowed revenue Final Determination -	183.2	184.5	187.6	555.3	188.6	193.7	937.7
Under recovery of revenue	1.6	1.2	4.7	7.6	4.5	6.3	18.4

The under recovery of revenue in the first three years of this period, and the projections to the end of the period, are predominantly due to the following factors:

7.3.1 Consumption levels

Our forecast water consumption is based on a “normal year” in terms of water resources demand profile which has been developed using historic consumption data from previous years. Water consumption in the first three years of this period has fallen short of the underlying assumptions in the Final Determination and this has led to a cumulative shortfall of revenue. We anticipate this trend to continue until 2020.

7.3.2 Property mix

Within the assumptions underpinning the Final Determination there are estimates of the mix of metered and unmetered properties in our supply area. The actual mix of properties has differed, resulting in a lower level of revenue from those customers who have transferred from an unmetered supply to a metered supply, earlier than planned, which is largely due to the acceleration of the metering program. Customers who transfer to metered supply tend to pay less than would be the case if their water charges are based on Rateable value.

7.3.3 Price cap

For the last two years (2016/17 and 2017/18) we have chosen to defer £3.9m of the revenue allowance to ensure any bill increases remain below 5 per cent.

7.3.4 Wholesale Revenue Forecasting Incentive Mechanism (WRFIM)

The forecast of revenue that will not have been recovered during 2015 to 2020 will form part of the PR14 reconciliation submission and will therefore be included in the revenue allowance for 2020 to 2025.

7.4 Our retail revenue performance

Retail revenue for the period is expected to result in a required total adjustment of £0.174 million (outturn prices). This is based on actual customer numbers for 2015/16 to 2017/18 and the latest forecast for 2018/19 and 2019/20.

Further detail can be found in our PR14 reconciliation submission.

7.5 Our financial resilience

7.5.1 Long term viability

In the past two years there has been increased industry focus on financial resilience and long term viability of water companies.

Our Board has engaged on this key area of focus and ensured there has been appropriate consideration and review of Ofwat's Information Notices as they have been issued. We have ensured that the additional validation of financial metrics under stress scenarios, and our conclusions, have been subject to a high degree of internal rigour and external assurance.

We have also considered the extra requirements of the Information Notice in March 2018 and are able to demonstrate financial resilience in the short to medium term.

We have considered the impact on key financial metrics and ratios of financial shocks over a five year period. The risk factors that have been considered are as follows:

- Outturn inflation less than is forecast in our business plan
- interest rate being greater than forecast in our business plan
- increased revenue loss/financial penalties
- totex overspend
- increased ODI penalties
- compensation payments
- retail cost overspend.

In line with Ofwat guidance, we have categorised our scenarios as either a severe major incident, sustained adverse conditions or pervasive under performance.

Under the scenarios stress tested, over a five year period, the Board has satisfied itself that have the financial resources available to protect the interests of customers and to finance our primary function.

Our detailed Long Term Viability statement sets out further information and this can be found in our Annual Report and Financial Statements.

7.5.2 Our financial position

Our current business plan for 2015 to 2020 which was submitted to Ofwat as part of the PR14 price review process ensured that we are financeable, that we could attract and raise finance on the money markets, operate our business and fund our investment plans.

Our target ratings of BBB with Standard and Poor's and Baa2 with Moody's (see below) have been maintained, which has meant that we have been able to operate and fund our activities and comply with our licence of appointment.

7.5.3 Ratings agencies and capital structure

Under our instrument of appointment, we are required to maintain an investment grade rating, and we are currently rated BBB with Standard and Poor's and Baa2 with Moody's.

Our financial performance for the three years to 31 March 2018 has supported these ratings; and, for the remainder of this period, our forecast indicators show we will continue to maintain compliance with those ratings.

Equally important are the requirements of the securitisation underlying the capital structure of our business. We have maintained compliance with the financial covenants set out under our loan documentation and this has ensured continued support from our investors.

We manage our capital structure in a way that enables us to maintain our investment grade credit rating and comply with our loan covenants. We monitor interest cover ratios and the ratio of net debt to regulated capital value (RCV), ensuring covenant compliance both in the current and future reporting periods.

7.5.4 Dividends

The company's dividend policy is to ensure that a suitable return is paid to our shareholders, while ensuring that the company is able to finance the business and meet the requirements of our instrument of appointment, both as at the date of the proposed dividend and prospectively.

Each year we assess the appropriate level of dividend by considering:

- the company's actual and forecast level of gearing
- the need to maintain the company's credit rating
- the allowed cost of capital
- the performance of the business.

It is on this basis that we have paid dividends of £45 million in the three years to 31 March 2018, which has been in line with our plans.

7.5.5 Tax

In the first three years of this period, the tax payable was £2.0m (2012/13 price base) less than has been funded in the Final Determination.

Table 35 summarises the reasons for the variance to the Final Determination

Table 35: Tax

	2015/16	2016/17	2017/18	AMP to date
	£m	£m	£m	£m
Tax funded in the FD	(2.6)	(1.8)	(1.4)	(5.8)
Capital allowances greater than in the FD	3.7	3.0	0.9	7.6
Operating profit (better)/worse than the FD	(2.7)	(2.4)	0.7	(4.4)
Developer income (better) than the FD	(0.3)	(0.5)	(0.5)	(1.3)
Other	(0.2)	0.1	0.2	0.1
Tax payable	(2.1)	(1.6)	(0.1)	(3.8)

6.4.6. Return on regulatory equity

The Return on Regulatory Equity (RORE) for the first three years of the period is set out below:

Table 36: Return of Regulatory Equity

2012/13 price base	2015/16	2016/17	2017/18
Base case			
Regulated Equity (£m)	406.0	414.7	425.3
Base return (%)	5.6	5.6	5.6
Base case return (£m)	22.7	23.2	23.8
Outturn			
Regulated Equity (£m)	406.0	414.7	425.3
Adjusted return (%)	4.8	6.7	7.8
Outturn Annual RORE (£m)	19.5	27.8	33.2

RORE has increased from 4.8 per cent in 2015/16 to 7.8 per cent for the most recent year. These compare to a base case RORE of 5.60 per cent. RORE to date is 6.44 per cent, which is 0.84 per cent greater than that funded in the Final Determination

The outperformance on RORE has primarily been driven by outperformance on both wholesale totex and retail costs.

8. The financial adjustments we need to make for 2020 to 2025

8.1 Introduction

The previous sections have outlined our performance in the 2015 to 2020 period, both in terms of delivering outcomes for customers and our financial performance in relation to our total expenditure and revenue.

This section describes how this performance translates into the financial adjustments we need to make for the period 2020 to 2025. These financial adjustments come in the form of adjustments to our Regulatory Capital Value (RCV) or to the revenue we are allowed for the same period. It is consistent with our commentary for the PR14 reconciliation submission of July 2018.

The basis for calculating these adjustments was set out by Ofwat at the last price review in a reconciliation rulebook and we have carefully implemented those rules for these adjustments.

The main points to note in making these financial adjustments are:

- A small downward revenue adjustment for our ODI performance of -£0.033 million and for retail it is a penalty of -£0.024 million (2017/18 FYA¹ CPIH deflated)
- A larger downward adjustment to our Regulatory Capital Value (RCV) to reflect our cost outperformance in this period of -£44.952 million² (2017/18 FYA CPIH deflated)
- A large upward adjustment to our 2020 to 2025 revenue to reflect the under-recovery of revenue in the current 2015 to 2020 period of £19.773 million for water network plus and £0.139 million for residential retail (2017/18 FYA CPIH deflated)

The other material adjustment is a downward adjustment of £25.003 million (2017/18 CPIH deflated) to RCV reflecting the CIS indexation issue from the 2010 to 2015 period.

¹ Financial Year Average.

² This includes the NPV effect of interest in land disposals, total RCV adjustment, CIS RCV adjustment, ODI adjustment and totex adjustments.

8.2 The reconciliation rulebook

Ofwat published its reconciliation rulebook in October 2016. The rulebook outlined the methodology and approach that should be taken, and included an illustrative spreadsheet to show the calculations in eight specific areas: These eight areas are:

- ODI reconciliation
- totex menu reconciliation
- wholesale revenue correction (WRFIM)
- retail revenue adjustment
- PR14 uncertainty mechanisms
- adjustments from the PR09 period (the 'blind year'³ adjustments');
- the CIS legacy adjustment; and
- adjustments for water trading.

We have worked with our advisers in this area, Frontier Economics, to ensure that we have followed Ofwat's methodology correctly. This will mean that our 2015 to 2020 performance, together with other reconciliation issues such as the PR09 blind year, should result in the appropriate financial adjustments being made for the period 2020 to 2025.

We now explore each of the relevant areas in more detail.

8.2.1 ODI adjustments

The financial adjustments for ODIs reflect the performance already summarised in Sections 2 to 5 in this appendix.

To calculate the financial adjustments we use the incentive rates from our PR14 final determination. Data from APR table 3A has been used for 2015/16 to 2017/18 and business planning forecasts for the remaining years in order to calculate the payments. We note that these are not net of tax, but are consistent with APR tables.

The financial adjustment for each ODI is shown in Table 37.

³ The blind year refers to the fact that Ofwat's final determination is made before data for the last year of the current period is available. Therefore performance in 2014/15 was not fully accounted for the PR14 determination and can lead to an adjustment at PR19.

Table 37: ODI adjustments

ODI (£m)	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Customer Satisfaction Score	0.000	-0.050	-0.024	0.048	0.048	0.022
Leakage	0.846	0.409	0.189	0.189	0.000	1.633
SIM score					0.000	0.000
Number of properties at risk of low pressure	0.002	0.003	0.004	0.004	0.004	0.017
Average time lost per property	-0.932	0.000	-1.331	0.266	0.266	-1.731
Meeting the Water Resource Deficit	0.000	0.000	0.000	0.000	0.000	0.000
Mean Zonal Compliance	0.000	0.000	0.000	0.000	0.000	0.000
Discolouration Contacts	0.000	0.000	-0.358	-0.179	0.000	-0.537
Above ground asset performance	0.000	0.000	0.000	0.000	0.000	0.000
Water mains burst	0.000	0.000	0.000	0.000	0.000	0.000

Our adjustments are all revenue adjustments (see section 7.3) except for discolouration contacts which is an RCV adjustment.

Our strong performance on leakage is not fully offset by the issues we have faced on time lost per property and discolouration contacts. The overall revenue adjustment is -£0.058 million.

8.2.2 Totex adjustments

Ofwat has set out a mechanism for how companies and customers can share cost performance.

In summary, this means customers receive 50 per cent of any total expenditure that we deliver. This customer share is in the form of an adjustment to the Regulatory Capital Value (RCV) of our business and an adjustment to revenue - reflecting the fact that Totex covers both capital expenditure (which is an RCV item) and operating expenditure (which is a revenue item).

In applying Ofwat's methodology for the Totex adjustment we have used the following data sources and evidence:

- APR table 2B for 2015/16 to 2017/18 and WS1 forecasts for 2018/19 and 2019/20 for all in Block D, except for disallowables which comes from APR table 4B.

- There is no IDoK triggered in line 23. The business specific rate in line 17 is 75 per cent from the PR14 Final determination letter. This is also the source for the water business rate constants in line 20.
- Totex menu adjustments are results from the Totex menu model in 2017/18 financial year average (FYA) price bases in lines 24 and 25. The 2017/18 FYA CPIH deflated value for Totex menu revenue adjustment in line 26 comes from the revenue adjustment feeder model. The similarly deflated Totex menu RCV adjustment in line 27 comes from the RCV adjustment feeder model. The feeder models take the Totex menu model outputs and apply the appropriate indexation to achieve the deflated values.

The calculated revenue and RCV adjustments arising from the Totex reconciliation are shown in sections 8.3 and 8.4 respectively.

8.2.3 Wholesale Revenue Forecast Incentive Mechanism

For wholesale revenue, companies make adjustments to reflect previous years under or over-recovery against the final determination. This is subject to an incentive penalty if the gap between actual and allowed revenue is too high.

As highlighted in Section 6 we have not been able to recover our full revenue allowance in this period, while keeping below the threshold of a 5 per cent annual bill increase. In applying Ofwat's methodology for the Totex adjustment we have used the following data sources and evidence:

- APR table 2I for 2015/16 to 2017/18 and the latest forecast for 2018/19 and 2019/20.
- The RCM adjustment is consistent with 2010 to 2015 final reconciliation data. The RCM adjustment of £4.465 million feeds into the WRFIM adjustment in the WRFIM model, and is applied at PR19⁴.
- Discount rate is equal to the WACC at 3.6 per cent
- Inflation is consistent with APP23.

⁴ We do not plan to make this adjustment in 2019-20 as this will increase bills significantly beyond 5%. Our initial customer research, as part of our PR19 research programme, shows that customers favour bill stability. If final research results do not support bill stability, then we will further assess the impact on PR19 financial modelling of changing this.

Table 38: Wholesale revenue adjustments

Input	Value	FY	Price base	Comment
Discount rate	3.6%			WACC
AMP5 RCM including financing rate adjustment	£6.599m	2019/20	2012/13	
WRFIM adjustment at the end of AMP6	£14.405m	2019/20	Outturn	
WRFIM Total adjustment at the end of AMP6 ~ water	£21.004m	2019/20	Outturn	WS13 line 30
WRFIM Total adjustment at the end of AMP6 ~ water network plus	£20.984m	2019/20	2017-18 FYA CPIH deflated	WS13 line 31

We have used inflation forecasts by Oxford Economics consistently across all business plan tables, models and feeder models.

The calculated revenue adjustment arising from the WRFIM reconciliation is shown in WRFIMs 7.3.

8.2.4 SIM adjustments

There are no adjustments arising from SIM.

8.2.5 Blind year adjustments

This includes CIS, RCM and serviceability adjustments. The blind year values from the Final Determination are laid out in the Table 39 below. There were no differences to the forecasts.

Table 39: Blind year adjustments

Blind year adjustment	Value - £m	Price base
CIS: RCV adjustment	0.60	2012/13 FYA
CIS: revenue adjustment	0.16	2012/13 FYA
RCM: revenue correction required	4.47	2012/13 FYA
RCM: billing incentive adjustment	0	2012/13 FYA
Serviceability: RCV shortfall	(4.87)	2012/13 FYA

8.3 Revenue impact on 2020 to 2025

This section summarises the total revenue adjustment arising from the specific areas we have considered.

Inputs to the revenue adjustment feeder model come from business plan tables, the PR14 final determination and other sources including business planning. All non-zero inputs are outlined in Table 40 below:

Table 40: Non-zero inputs

Input name – water network plus	Value	Price base	Source	Comments
Further 2010-15 reconciliation total adjustment carry forward to PR19 ~ Water network plus	£0.16m	2012/13 FYA	Company specific appendix – table A13	
Net performance payment / (penalty) applied to revenue for end of period ODI adjustments ~ Water network plus	(£0.00)m	2012/13 FYA	Business planning	This is consistent with App 5 ODI figures. Only end of period ODIs are applied for us.
Water: revenue adjustment from totex menu model	(£1.19)m	2012/13 FYA	WS15	
WRFIM total reward / (penalty) at end of AMP6 ~ Water	£21.00m	November 2018/19	WS13	This includes the balance of the RCM as applied to PR19 (line 13 of WS13 converted to November 2018/19 price base), as is consistent with the WS13 WRFIM table.

We have no new water trades to reconcile.

Table 41: Residential retail revenue adjustment

Input name – residential retail	Value	Price base	Source	Comments
Net performance payment / (penalty) applied to revenue for end of period ODI adjustments ~ Residential retail	(£0.02)m	2012/13 FYA	Business planning	This is consistent with App 5 ODI figures. Only end of period ODIs are applied for us.
Residential retail revenue adjustment at end of AMP6	£0.17m	2012/13 FYE	R 9	

8.4 Regulatory Capital Value (RCV) adjustments

8.4.1 Overall Opening RCV adjustments

This section summarises the total revenue adjustment arising from the specific areas we have considered.

8.4.2 RCV Land sales adjustments

APP9 converts the forecast from the previous review in line 1 or £0.97 million has been converted to a negative as this was not sold, and only £0.007 million was sold. The WACC in line 4 is 3.6 per cent which is the RPI real value for 2015 to 2020. The NPV effect of 50 per cent of proceeds from disposals of interest in land in line 11 at 2017-18 FYA CPIH deflated price base is an output from the RCV adjustment feeder model.

8.4.3 CIS inflation adjustment

This issue arose from the reconciliation of capital expenditure in the 2010 to 2015 period. Before the PR14 final determination Ofwat concluded that its approach to indexation of expenditure created a benefit to companies. It decided to apply a downward adjustment to the opening RCV at 2020 to allow for this. Ofwat has provided the calculation for the adjustment and this figure has been applied below in the RCV adjustment table. Notwithstanding our opposition to this approach, in order to meet Ofwat's requirements we have assumed the downward adjustment to RCV is applied.

8.4.4 Regulatory Capital Value (RCV) impact on 2020 to 2025

This section summarises the total RCV adjustment arising from the different areas considered above.

Inputs from the RCV feeder model come from business plan tables, the PR14 final determination and other sources including business planning. Non-zero inputs are laid out in Table 42 below:

Table 42: RCV non-zero inputs

Input name	Value	Price base	Source	Comments
Wholesale water closing RCV at 31 March 2020 (from PR14 FD)	£1,181.76m	2012/13 FYA	PR14 FD	
Water ~ Total Adjustment RCV carry forward to PR19	£0.60m	2012/13 FYA	Company specific appendix – table A13	
Water ~ CIS RCV inflation correction as at 31 March 2015	(£21.30)m	2012/13 FYA	Ofwat CIS calculation	Company specific appendix – table A13 minus RCV run off
Net performance payment / (penalty) applied to RCV for end of period ODI adjustments ~ Water network plus	(£0.54)m	2012/13 FYA	Business planning	This is consistent with App 5 ODI figures. Only end of period ODIs are applied for us.
Water: RCV adjustment from totex menu model	(£17.74)m	2012/13 FYA	WS15	
Water ~ NPV effect of 50% of proceeds from disposals of interest in land	£0.40m	2017-18 FYA	App 9	
% of RCV to index by RPI - water services	50%	n/a	Ofwat	
Water resources % of total wholesale water RCV ~ 31 March 2020	5%	n/a	Business planning	
Water network plus % of total wholesale water RCV ~ 31 March 2020	95%	n/a	Business planning	

The outputs from the feeder model are in Table 43 below, along with the business plan table that they are included in.

Table 43: Outputs from the feeder model

RCV adjustment feeder model output	Value - £m	Price base	Business plan table
Wholesale water closing RCV at 31 March 2020 before midnight adjustments	1,387.34	2017-18 FYE CPIH deflated	APP8
Water ~ Total adjustment RCV carry forward to PR19	0.70	2017-18 FYA CPIH deflated	APP25
Water ~ CIS RCV inflation correction as at 31 March 2015	(24.79)	2017-18 FYA CPIH deflated	APP25
Water ~ NPV effect of 50% of proceeds from disposals of interest in land	0.42	2017-18 FYA CPIH deflated	APP9
ODI end of period RCV adjustment allocated to Water network plus	(0.62)	2017-18 FYA CPIH deflated	APP27
Water ~ Totex menu RCV adjustment	(20.66)	2017-18 FYA CPIH deflated	WS15

9. Assurance of our 2015 to 2020 performance and consistency with meeting Ofwat's expectations

9.1 How we report our assurance and risk management

9.1.1 The Company Monitoring Framework

The Company Monitoring Framework (CMF) is a framework for assuring and providing information to customers and stakeholders.

Ofwat uses it to challenge water companies to provide information that can be trusted and categorises companies into self-assured, targeted or prescribed category based on the quality of their data assurance. A company that demonstrates an appropriate assurance of its information has a significantly reduced level of prescription in the process it must follow. In 2017, for the second consecutive year, we were again placed into the highest category of self-assured

Our CMF (published on our website⁵) sets out what we do to ensure that the data and information we publish is reliable, transparent, timely and appropriate to the audience. It also sets out the process we follow to define those risks and how we assure them.

9.2 Our approach to assurance

Our assurance process is structured around three important pillars to ensure that the information we provide about our performance is robust, reliable and complete.

Key to this framework is the assurance we undertake at each stage of the process and how we engage with stakeholders to ensure the information we provide is useful and relevant for their needs.

9.2.1 Pillar 1: Robust data

The first pillar represents the data that we hold in our systems. Data can be entered into our systems in a number of ways – through manual input by our teams in the office or field, through to data that is automatically uploaded via real time monitoring at our operational sites.

⁵ <https://corporate.southeastwater.co.uk/media/2340/180329-sew-company-monitoring-framework-2017-18-final.pdf>

During our review of risks we have considered the source of the data and whether there are any potential risks associated with the accuracy of the data we collect. We have a wide range of controls in place to ensure the integrity of the data we use including system rules to ensure correct formatting of data through to manager approvals and independent reviews.

9.2.2 Pillar 2: Clear and reliable information and reporting

Once data has been collated it can form part of the information we use to manage our performance for reports or information in our core publications. It is vital to ensure that all data is correctly processed and formatted to ensure it can be relied upon by us and our customers and stakeholders. Our information and reports go through many levels of checks before they are included in our core publications which include peer reviews, senior manager approval and review by our executive team or Board as required.

9.2.3 Pillar 3: Monitoring and proactive management of performance

We have a thorough range of methods to monitor and manage our performance which includes:

- Monthly reporting through to our executive team and board
- specific reports and steering groups for all key areas
- a range of working and technical groups to drive forward specific initiatives and improvements
- regular dialogue and challenge from a range of stakeholders, including our new customer panel
- regular review of risks to ensure these are properly managed and mitigated where possible
- to ensure the data and information we publish is reliable, robust and complete we have reviewed each stage/pillar above for each of our main publications to identify if there are any risks or issues with the information we publish.

9.3 How we manage risk

We have comprehensive systems of internal control and risk management and we monitor their effectiveness regularly in compliance with the principles of our corporate governance code.

This risk management framework is also closely linked to the way we monitor and measure our performance; and compliance with our statutory obligations and commitments which is subject to external assurance by third parties.

This ensures that the board and the audit and risk committee review all material controls including financial, operational and compliance controls.

We maintain a formal risk register and risk management system for the identification, evaluation and mitigation of risks. The Board defines our risk management framework and reviews the risks on the register and the effectiveness of the relevant mitigation measures at least once a year. The Board also reviews monthly, quarterly and annual reports on performance.

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