December 2020

Reference of the PR19 final determinations: Costs and outcomes – Ofwat December response

Ofwat

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Contents

1. Introduction

1.1 We welcome the opportunity to provide this additional submission to the CMA. In this submission we address points raised by the CMA on cost allowances and outcomes at our hearings on 30 November and 2 December. We also set out our response to issues raised by disputing companies in their respective hearings. This document does not cover third party hearings or other issues.

1.2 This document is structured into eight main chapters, each of which deals with a key policy area related to Costs or Outcomes, as follows:

- Chapter 2 – The use of outturn 2019-20 data in the base cost econometric models
- Chapter 3 – Average pumping head
- Chapter 4 – Impact of Covid
- Chapter 5 – Covid impact on productivity
- Chapter 6 – Use of ASHE or AWE for the labour cost true up
- Chapter 7 – Growth unit cost adjustment
- Chapter 8 – Elsham Direct Procurement for Customers scheme
- Chapter 9 – Northumbrian Water sewer flooding

1.3 In Chapter 10, we include a table covering further key issues.

2. The use of outturn 2019-20 data in the base cost econometric models

2.1 During its hearing on 3 December, Northumbrian Water said it didn't consider the 2019-20 year to be atypical in terms of level of expenditure companies brought forward, because transition expenditure in 2019-20 has been much lower than in 2014-15.[1] The company also said that the high expenditure observed in wholesale water in 2019-20 could be explained by the cycle of capital maintenance or by delayed capital investments that have slipped to the end of the AMP.[2] Similarly, in its hearing Yorkshire Water argued that programmes of expenditure generally take longer to start due to the initial design phase, causing expenditure to peak at the end of the period.[3]

2.2 We note the point on transition expenditure is not relevant. Transition expenditure is expenditure we allow companies to bring forward, mainly to enable early statutory deadlines to be met. As such, the transition expenditure we allowed in 2019-20 was related almost exclusively to enhancement schemes (with base transition expenditure being lower than £1 million). The increase we observe in wholesale water modelled base costs in 2019-20 is unrelated to the transition programme.

2.3 The investment cycle within a five year asset management period (AMP) in the water sector typically shows high expenditure in the mid-years of an AMP, with dips at the first and last year. A 2012 report by HM Treasury notes: *"Cyclical investment in the water sector has been evident since privatisation. Its effects have led to a stop-start cycle within the water sector supply chain with schemes typically being delivered within the middle three years of a five year cycle"*.[4] The high expenditure in 2019-20 does not follow the pattern of a typical investment cycle. In our response to RFI 019 we discussed that 2019-20 expenditure is heavily affected by pre-spending for 2020-25 and provided evidence of this from companies' APR data commentaries and query responses.[5]

2.4 Northumbrian Water said it may not be true that the application of the 2019-20 data would increase wholesale water allowances £1.5 billion above companies' requested cost, because in response to the draft determinations companies were

[1] Competition and Markets Authority, 'Northumbrian Water Hearing', 3 December 2020, p. 14.
[2] Competition and Markets Authority, 'Northumbrian Water Hearing', 3 December 2020, p. 15.
[3] Competition and Markets Authority, 'Yorkshire Water Hearing', 1 December 2020, p. 14.
[4] HM Treasury, 'Smoothing investment cycles in the water sector', July 2020, p. 3.
[5] Ofwat, 'Ofwat response to RFI 019 – 13 November 2020 (updated)', November 2020, pp. 3-6.

encouraged to decrease requested costs to benefit from more favorable cost sharing rates.[6]

2.5 There is no evidence that companies reduced their requested costs, either in their business plans or in the August 2019 submission, beyond what is an efficient level of costs. Commentary companies provided in August 2019 indicates that companies acted on feedback received at the draft determinations to identify further scope for efficiencies, as the following sample of quotes suggest:

> "*We will make £6.7 million of efficiency savings across our wholesale operations resulting in total requested wholesale expenditure of £251.6 million*."[7] – SES Water

> "*We have made a determined effort to fully consider Ofwat's latest round of feedback, particularly where this provides new information. As a result of this further detailed review, we have incorporated a £92m reduction to our planned totex, which reduces the gap between our and Ofwat's view of efficient costs from £296m at Draft Determination to £204m."*[8] – Northumbrian Water

> *"We provide further evidence as part of our response, but also recognise where the balance of information meant we could challenge our own plans further. In particular, we have included an additional £15m of efficiency challenge compared to our revised plan, which we believe closes the gap to Ofwat's modelled view of an efficient company."*[9] – Bristol Water

> "*Notwithstanding our reservations regarding Ofwat's approach, we have considered the challenge Ofwat has set us around reducing costs and increasing efficiency, and further scrutinised our Plan in the light of this and new information now available to us. Following that scrutiny, our Board is now proposing […] reductions to our proposed Botex expenditure compared to our IAP position of around £100m. […] In responding to Ofwat's challenge in this area, we are pleased to have been able to make these significant reductions, and to have done so in ways that mean our customers will enjoy even lower bills without compromising the delivery of the resilience and wider outcomes they prioritised."*[10] – Anglian Water

[6] Competition and Markets Authority, 'Northumbrian Water Hearing', 3 December 2020, p. 17.
[7] SES Water, 'SES Water response to the draft determination', August 2019, p. 3.
[8] Northumbrian Water, 'Northumbrian Water Draft Determination – Company Representation", August 2019, p. 2.
[9] Bristol Water, 'BW01 – Bristol Overview', August 2019, p. 3.
[10] Anglian Water, 'PR19 Draft Determination Representation', August 2019, p. 5.

2.6 We also note that a comparison of allowed costs with the inclusion of 2019-20 data to the companies' April 2019 business plan requested cost still shows excess allowances of £1 billion for the sector in wholesale water.

3. Average pumping head

3.1 In its 2 December hearing, Anglian Water said that booster pumping station data appears to be poor as it varies quite a lot across companies and years.[11] It gave the example of Portsmouth Water, which "*went from reporting 40 to then reporting 26 stations*". Anglian Water concluded that on the face of these data issues with booster pumping stations, average pumping head seems to be a better proxy for understanding power costs.

3.2 Anglian Water's statement regarding the variance in booster pumping station data is not correct. Anglian Water refers to the 2019-20 booster data companies initially provided in their Annual Performance Reports in July 2020. We identified that some companies had reported the data according to an outdated definition, and issued a query to all companies to collect consistent data. The revised data companies provided was consistent with the historical values (including Portsmouth's, whose revised value was 40 in line with historical data). All the disputing companies were aware of the inconsistency issue in the original July 2020 data, as noted by Oxera and Bristol Water in their analysis of 2019-20 data.[12][13]

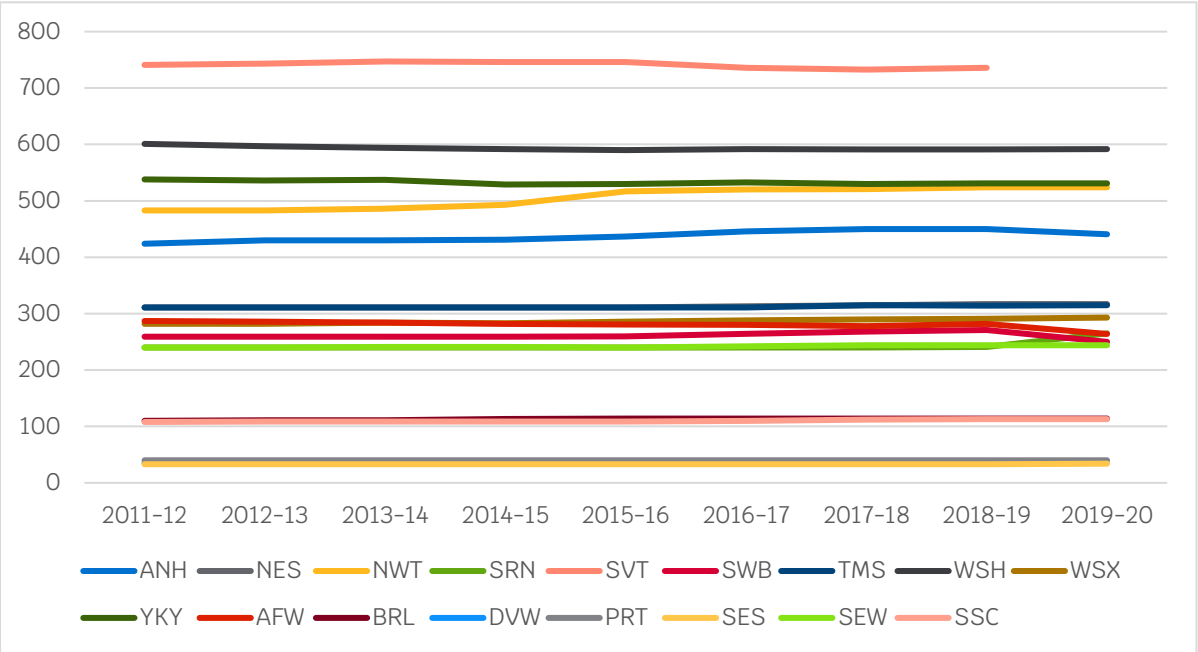
3.3 Booster pumping station data is robust over time, as shown in Figure 2.4. Conversely, average pumping head data presents significant variation across years, both at activity level and at aggregate level (Figure 2.5), with Northumbrian Water, Southern Water, South West Water, United Utilities and Yorkshire Water presenting significant year-on-year variations.[14]

3.4 Some of these year-on-year variances do not appear to reflect changes in the underlying drivers. For example, Southern Water's aggregate average pumping head saw a 29% decrease in 2018-19 but no decrease in energy consumption, and a 46% increase in 2019-20 despite seeing a 2% decrease in energy consumption. Similarly, Northumbrian Water's 2013-14 aggregate average pumping head saw a 17% increase despite an increase of only 4% in energy consumption. When considered at activity level, the disconnect between average pumping head and the underlying drivers is even more evident.

[11] Competition and Markets Authority, 'Anglian Water Hearing', 2 December 2020, p. 47.
[12] Oxera (on behalf of Anglian Water, Northumbrian Water and Yorkshire Water), 'On the use of 2019-20 APR data in econometric modelling', p. 5.
[13] Bristol Water, 'Response to CMA Provisional Findings (Non-Confidential)', October 2020, p. 69, paragraph 22.
[14] The data underlying these figures has been provided in a workbook alongside this document.

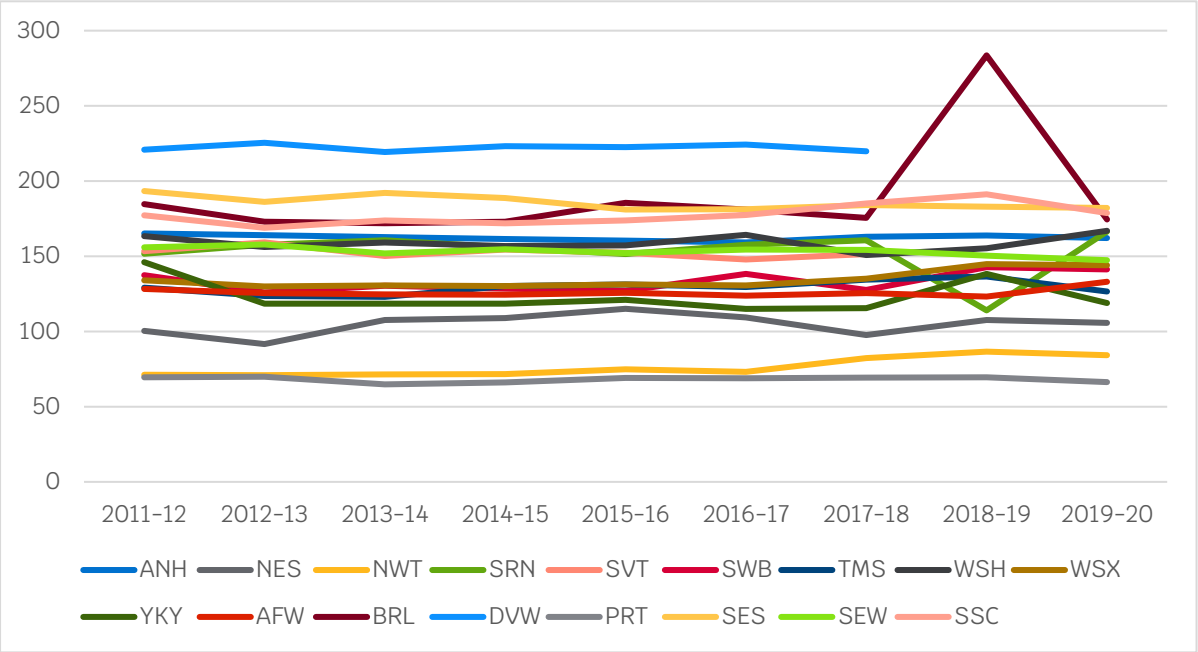
3.5 We note the differences in data quality between booster pumping stations and average pumping head reflect the confidence grades companies assigned to the two variables, which are consistently higher for booster pumping stations.[15]

Figure 3.1: Number of booster pumping stations by company, 2011-12 to 2019-20



[15] We discussed the confidence grades of average pumping head and booster pumping stations in Ofwat, 'Reference of the PR19 final determinations: Cost efficiency – response to common issues', May 2020, pp. 16-17, paragraph 3.16; and Ofwat, 'Reference of the PR19 final determinations: Costs and outcomes – responses to the provisional findings responses', November 2020, pp. 75-77, paragraphs A4.3-A4.8.

Figure 3.2: Wholesale water average pumping head by company, 2011-12 to 2019-20



4. Impact of Covid

4.1 In the Ofwat hearing of 2 December the CMA asked about the impacts of Covid-19 on the redetermination.

4.2 There is still considerable uncertainty over the impact of Covid-19 on water companies. We have recently published the joint work with Water UK. This work provides an indication of what the potential impacts of Covid-19 might be based on information provided by water companies in August 2020, covering the April-July 2020 time period. The work suggests that impacts will vary across companies. It highlights that at present the quality of information is variable and trends are still uncertain. More work needs to be done and further information over a longer time period to understand better the potential costs and benefits, the interactions and the implications for the sector in the longer term. In particular we note that:

- while inflation is forecast to be lower in 2020-21 than our assumption at PR19 final determinations, it was lower in 2015-16 than our assumption at PR14. Our determinations are designed to accommodate such changes. Moreover, the current forecasts suggest an increase in inflation, particularly if Britain leaves the EU without a deal;[16]
- while short term water production costs might have increased following the increase in water demand, the more recent Artesia and Manchester University study suggests that the household demand response has declined as time has gone on. The specific combination of first lockdown conditions and exceptionally hot weather means it is difficult to forecast with certainty what levels of demand and therefore water production costs will be into the future. At the same time, consumption by non-households decreased particularly in the first lockdown. We intend to explore the issue of consumption in more depth;
- while some impacts might continue, such as greater working from home and reduced travel costs, others are likely to be directly linked to prevalence of the virus and the update in the availability of vaccines, for example health and safety related expenditure and so may reduce or cease in 2021-22; and
- bad debt costs are likely to be strongly linked to household incomes and unemployment and impacts should become better known as furlough support unwinds.

[16] The latest OBR forecast suggest that CPI will be 0.6% in 2020-21, this compares to 0.1% in 2015-16. OBR supplementary economic data available here.

4.3 This work has not examined whether any impacts are materially different to variations companies normally experience within price control periods Our existing regulatory mechanisms are designed to protect companies and customers with a number of mechanism to protect companies against risks of unforeseen events.

4.4 As part of our normal processes, companies will submit full 2020-21 performance information (which will include any impact of Covid-19) in summer 2021. We are reflecting on the joint Ofwat/Water UK work to see if any supplementary information would be helpful. We also expect to discuss company specific issues as part of our conversations with individual companies. The Frontier report focused on sector-wide issues and noted that impact of Covid-19, as reported by companies for the period April-June 2020, varied from company to company. Our approach to considering the impact of Covid-19 remains that as set out in Rachel Fletcher's letter.

5. Covid impact on productivity

5.1 In the Ofwat hearing of 2 December the CMA asked about the impact of Covid-19 on water sector productivity. We consider that there are a number of reasons not to adjust the water sector productivity assumption downwards for Covid-19.

5.2 Firstly, as set out in the hearing and in our previous submissions, water sector productivity growth tends to be relatively unaffected by recessions as evidenced by Water UK's own work on historical water sector productivity growth which showed around 2% per year productivity growth during the 2008-09 recession.[17]

5.3 Second, productivity growth is based on performance of comparator sectors over a full economic cycle and so it would not be appropriate to adjust it to reflect the short impacts of Covid-19. This is compounded by the difficulty of separating out the impacts of Covid-19 directly on productivity from the wider impact of Covid-19 on macroeconomic conditions. If the CMA makes a downward adjustment for this year this implies that corresponding positive adjustments would need to be made to frontier shift in other years of the price control, to take account of other events that may happen over the economic cycle that may have a positive impact on productivity. This could lead to the CMA instead being faced with the need to estimate potential productivity growth on a year-by-year basis. This is different to the approach based on long term rates previously used by the CMA and regulators.[18] We note that if such an adjustment was made to productivity growth in 2020-21, then a corresponding adjustment would need to be made to 2021-22, to reflect the 'bounce back' in productivity following the removal of restrictions as otherwise productivity growth would be permanently lower in all subsequent years of the period, despite the absence of restrictions.[19]

5.4 Third, the national OBR productivity forecasts are now slightly higher since the provisional findings. In July OBR central productivity forecasts were 0.7% per year 2020-24.[20] The latest OBR productivity central forecasts are 0.8% per year 2020-25. However these are based on a vaccine being widely available by summer 2021, with the high case forecasts, which assume a vaccine being widely available in

[17] Europe Economics, Impact of Covid-19 crisis on real price effects and frontier shift, April 2020, p. 6.
[18] Europe Economics, Additional Evidence on Impact of COVID-19 on Frontier Shift and Labour real price effect, December 2020, pp 2-3.
[19] Europe Economics, Additional Evidence on Impact of COVID-19 on Frontier Shift and Labour real price effect, December 2020, p. 3.
[20] OBR, 'Fiscal Stability report', July 2020, as referenced on page 16 of Ofwat, 'Final submission to the CMA', August 2020.

spring 2021 (which currently appears most likely), are 1.3% per year 2020-25.[21,22] As previously noted we expect productivity growth of the water and comparator sectors to outstrip that of the economy as a whole over a full economic cycle.[23]

5.5 Fourth, the reasons the OBR gives for the reduction in productivity growth due to Covid-19 are factors that are not relevant to the water sector. In particular, the OBR states the productivity reduction is caused by: depressed capital investment and capital scrapping — which is not relevant for the water sector, as water companies are being funded to carry out substantial capital investment programmes; and the effect of higher business debt and business failures on innovation and total factor productivity — which is not relevant to the water sector, as the water sector has stable revenues under the revenue controls (and reconciliation adjustments) and hence there is no reason to expect the crisis to lead to higher debt or risk of business failure for water companies.[24]

5.6 Fifth, the joint work with Water UK notes that "There are a number of Covid-19 related changes such as increased working from home, greater use of technology, etc that could increase or decrease productivity. At this stage, there is still considerable uncertainty on the net impact in the longer-run." While the negative impacts of Covid-19 such as the restrictions on working practices to prevent the spread of COVID-19 (e.g. social distancing, masks) might be expected to be short term the positive productivity impacts, as water companies have experimented with new ways of working such as more remote working could lead to longer term productivity improvements.[25] For example in the hearing Anglian Water stated that "There must be some areas where we have learned ways of working, this meeting is a way of working that none of us would have envisaged before. There will be ways in which we can utilise that in the future, to drive down costs."[26] Any such additional productivity improvements from the changes instigated from Covid-19 would be additional to any bounce back in productivity.

[21] OBR, 'Economic and fiscal outlook', November 2020.
[22] We note that the OBR's productivity estimate of 0.9% productivity growth in 2020 is unchanged between March and November 2020 forecasts, this goes against Northumbrian Water's argument that the frontier shift assumption should be lower in 2020 due to the COVID-19 crisis.
[23] Comparator sectors productivity growth was 0.4% per year higher than the market economy over 1990-2007 using gross output measures, Europe Economics, 'Real Price Effects and Frontier Shift – Final Assessment and Response to Company Representations', December 2019, p.77, Table 3.14; p. 77.
[24] Europe Economics, Additional Evidence on Impact of COVID-19 on Frontier Shift and Labour real price effect, December 2020, p. 8.
[25] Europe Economics, Additional Evidence on Impact of COVID-19 on Frontier Shift and Labour real price effect, December 2020, p. 4.
[26] CMA, Anglian Water hearing of 2 December, p 51.

5.7 Sixth, while it is not conclusive we note that the latest ONS productivity flash report suggests that water sector labour productivity increased by around 4% between Q3 2019 to Q3 2020, demonstrating that so far Covid-19 does not appear to have adversely affected water sector productivity.[27]

5.8 Seventh, as set out above, six monthly results of listed water companies suggest that their totex is either in line or expected to outperform the final determinations, which also suggests that there has not be a significant adverse impact of Covid-19 on water sector productivity overall. While some of the disputing companies have suggested that they might have incurred additional costs related to covid-19, they have not, to our knowledge, provided evidence that these costs have been efficiently incurred. It is also not clear if the costs cited by companies are directly related to the impact of Covid-19 on productivity, wider impacts of Covid-19 (such as health and safety related costs) or other impacts such as changes in macroeconomic conditions or input prices. Ultimately, the implications of the Covid-19 restrictions for efficient water company costs can only be determined through industry-wide comparisons.[28]

5.9 Eighth, after a detailed review of the evidence on the impact of Covid-19, Ofgem have not adjusted their productivity assumptions in their final determinations due to Covid-19 with their consultants CEPA concluding that "We conclude that, on balance, the Covid-19 crisis does not change our assessment of the use and reliability of the EU KLEMS data used in our analysis to inform the [ongoing efficiency] challenge. In fact, we suggest that little, if any, weight should now be put on economy-wide productivity forecasts given the scale and unevenness of economic disruption caused by COVID-19."[29]

5.10 Ninth, as set out in our previous submission we consider that Covid-19 impacts on productivity are better addressed in terms of individual cost and outcome impacts and should be considered when we consider other impacts of Covid-19.[30] This would allow cross company comparisons to be made and for further information over a longer time period to be considered.

[27] ONS, Flash productivity by section, November 2020.
[28] Europe Economics, Additional Evidence on Impact of COVID-19 on Frontier Shift and Labour real price effect, December 2020, p. 3.
[29] CEPA, RIIO-GD2 and T2: Cost Assessment – Advice on Frontier Shift policy for Final Determinations, November 2020, p 59. Available here.
[30] Ofwat, 'Final submission to the CMA', August 2020, p. 16.

6. Use of ASHE or AWE for the labour cost true up

6.1 At the hearing of 2 December, the CMA cited concerns raised by companies over the use of the ASHE manufacturing index for the reconciliation for real price adjustment for wage growth. At its hearing, Northumbrian Water suggested that we had not addressed concerns that the ASHE manufacturing index has been badly impacted by Covid-19 and that takes data from a particular point in time when the impact of Covid-19 was greatest. We address both points below.

6.2 In the PR19 final determinations we set out that we would use the ASHE all employees, mean manufacturing hourly wages, including overtime[31] for the reconciliation for real price adjustment for wages as:

- The purpose of the index is to isolate the underlying wage pressure relevant to the water sector which is outside management control and so water sector outturn wages should not be used;
- Manufacturing wages and water sector wages are correlated;
- The ASHE index is a more reliable measure than the AWE measure as AWE is carried out at an aggregate level (total wages divided by total employees), rather than an employee level; and can be impacted by the number of people joining or leaving an organisation;
- Manufacturing wages are a better reflection of wage pressure in the water sector than other industries given the similar skills sets and labour markets; and
- Unlike AWE, ASHE allows identification of hourly wages which is the basis for the theoretical link between labour productivity (measured in terms of output per hour) and hourly wage rates).

6.3 We do not consider that the latest ASHE release changes this conclusion. While manufacturing wages have been broadly flat, wages in other comparator sectors such as construction have fallen. It is also important to emphasise that we are not seeking to track water sector wages through this index but to track water sector wage growth pressure. And if there are falls in wages in comparator sectors in the same labour market, then this will reduce pressure for wage increases in the water sector. In addition the true up is end of period which allows for any short term impacts of Covid-19 or Brexit to work through.

[31] Ofwat: '[PR19 final determinations: Securing cost efficiency technical appendix]', pp. 209-210.

Table 6.1: Mean all employees gross hourly wage growth of selected 2019 to 2020 (nominal)

	Mean growth
All employees (UK)	1.8%
All employees (England and Wales)	1.7%
Manufacturing	**-0.3%**
Construction	-2.0%
Water supply, sewerage, waste management and remediation	1.6%
Water supply	4.0%
Sewerage	-5.4%
Combined water and sewerage	2.9%

Source: ONS ASHE - Table 5.5a – hourly pay – gross 2020. Note Water supply and sewerage sectors are impacted by small sample size.

6.4 While the ASHE survey benefits from greater robustness in terms of sample size compared to AWE it is a survey done at a point of time (the period covering 22 April 2020). Due to the impact of Covid-19, this timing could have a material impact on the ASHE survey. However, the results seems far less affected than the AWE survey at the same time, particularly when examining figures at an hourly level. For example, in April 2020 average weekly earnings under the AWE survey fell by 1% in nominal terms, compared to a 0.1% increase for the ASHE survey on a similar basis, and a 1.8% increase at an hourly level. As set out by the ONS 'The pattern in 2020 was last seen in 2009 during the economic crisis, suggesting that employers are inclined to cut employee hours ahead of pay rates, in times of economic challenge.'[32]

Table 6.2: Mean all employees gross hourly wage growth of selected 2019 to 2020 (nominal)

	Year on year growth
AWE median weekly earnings (full time)	-1.0%
ASHE median weekly earnings (full time employees)	0.1%
ASHE mean weekly earnings (all employees)	0.2%
ASHE mean hourly earnings (all employees)	1.8%

Source: ONS AWE ASHE - Table 5.1 and 5.5a. Figures are for total pay

6.5 The impact of furlough under the ASHE survey is also far smaller than might be expected. At the time of the survey around 11% of all employees were on furlough with reduced pay. This compares to an estimate of 31% of employees on furlough from the BCIS survey at the same time. The proportion of workers on furlough in

[32] ONS, Employee earnings in the UK: 2020, November 2020.

the BCIS survey has dropped markedly since then. Given the differences in definition between the two surveys, this implies that while a number of workers might have been furloughed in April, most of these appear to have been furloughed on full pay, thereby reducing significantly the potential impact on the ASHE survey results.

Table 6.3: Proportion of workers on furlough

	ASHE % of workers on furlough not receiving full pay	BCIS survey % of workers on full or partial furlough wave 4 (April 2020)	BCIS survey % of workers on full or partial furlough wave 17 (October 2020)
All employees	11%	31%	9%
Manufacturing	17%	32%	4%
Water supply, sewerage, waste and remediation	10%	12%	2%

Source: ASHE 2020 Table 1 ONS, AWE Table 1 and Figure 9. For BCIS refers to all employees. Levels of furlough in the water sector are lower than the water, sewerage, waste and remediation as a whole

6.6 Both ASHE and AWE and other measures of wages and earnings growth are likely to been affected to some degree by Covid-19 and the furlough scheme in 2020. Furlough is scheduled to end on 31 March 2021. Given the current rollout of vaccines it is likely that by next financial year the impacts of furlough should have disappeared from the earnings measures. Consequently if there has been a significant impact on ASHE in 2020 then this should be clear when the impacts unwind in 2021. The PR19 wage reconciliation will take place at the end of the period at PR24. At this stage it should be possible for us to identify whether any adjustments to the wage reconciliations are required for 2020. Therefore we continue to consider that the ASHE manufacturing index represents the best approach to the reconciliation. We do not consider that Northumbrian Water's proposal for using the AWE measure of water, sewerage, waste and remediation is appropriate as it is affected by changes in hours worked, is subject to higher sampling variability and is not independent of water companies' own pay awards.[33]

6.7 **Wage growth assumptions in totex.** We note that as set out by Europe Economics the latest OBR forecasts including materially lower real wage growth

[33] Europe Economics, 'Response to new points on frontier shift and real price effects', November 2020, pp. 13-14.

assumptions. We consider that these should be included in totex allowances rather than those set out in May to minimise the scale of reconciliation adjustment requirements.[34]

[34] Europe Economics, Additional Evidence on Impact of COVID-19 on Frontier Shift and Labour real price effect, December 2020, p. 13.

7. Growth unit cost adjustment

7.1 During our hearing on the 2 December, the CMA asked a question in relation to the growth unit cost adjustment. Specifically, it noted that our growth unit cost adjustments (as applied to modelled base costs) provide an allowance for companies for 'growth at sewage treatment works' costs based on forecast growth, without the condition that additional capacity was delivered. This appears to be in contrast to our uncertainty mechanism proposal for 'growth at sewage treatment works' costs (provided in response to the CMA's RFI 022), where we proposed that should out-turn growth exceed the growth rates assumed at final determinations, additional allowance should be provided only if additional capacity was delivered.

7.2 On reading the transcript we consider we have not clarified sufficiently our position on this issue at the hearing, so we are using this opportunity to respond.

7.3 We recognised in our final determination that our base cost models may suffer from a missing growth variable, which means the models provide funding based on the average historical growth rate across the industry. For growth costs, which include 'growth at sewage treatment works', we considered that this was not appropriate and we introduced the growth unit cost adjustment to compensate for the missing variable. The growth unit cost adjustment is based on ONS forecasts (relative to historical average growth rates) to ensure internal consistency between the assessment of opex, capital maintenance and growth costs.

7.4 We do not consider it would have been necessary or proportionate to introduce an ex-post assessment to review whether additional sewage treatment works capacity had been delivered in line with the ONS growth forecast. Our base cost allowances are sufficient to fund growth expenditure over the long term. Our approach incentivises companies to manage the impact of growth on their network through long term planning.

7.5 Anglian Water considers that it has a specific issue in AMP7 related to growth expenditure. If the CMA chooses to address it through an uncertainty mechanism for growth at sewage treatment works costs, we consider it is appropriate to ensure the investment is delivered. This mechanism does not form a part of our long term efficient allowance.

7.6 An additional point is that the uncertainty mechanism would provide ex-post funding rather than ex-ante funding. Ex-post funding removes incentives and risk

from companies, and we do not consider it is appropriate to ask customers to fund investment that has not been delivered after the fact.

7.7 We also note that during its hearing on 2 December, Anglian said that the inclusion of a double lock in Ofwat's proposed mechanism would increase rather than reduce uncertainty.[35] Anglian also considers our mechanism would dilute the certainty to encourage investment that the mechanism is seeking to create.[36]

7.8 We struggle to understand how this can be the case. In our view, our proposed mechanism would:

- provide Anglian with greater certainty as they will only be subject to negative adjustments (e.g. if outturn growth is less than forecast) when baseline treatment capacity enhancements have not been delivered;
- provide customers with the certainty that additional treatment capacity would be delivered if outturn growth is higher than assumed at final determinations; and
- facilitate efficient increases in sewage treatment capacity when outturn growth is higher than forecast, which we understand is what the CMA was aiming to deliver with its proposal to expand the DSRA in the provisional findings.

[35] Competition and Markets Authority, 'Anglian Water Hearing', 2 December 2020, p. 54.
[36] Anglian Water, 'Main parties' replies to Provisional Findings responses', 20 November 2020, p. 21.

8. Elsham Direct Procurement for Customers scheme

Introduction

8.1 We have reviewed the transcript from the Anglian hearing on 2 December 2020, along with the WSP report and submit a combined response, addressing issues which have been raised.

8.2 We would like to highlight that our role as regulator is to consider and approve at each stage, a project which was designated as a DPC in the PR19 final determination. This process follows the HM Treasury Green Book approach and represents best practice for complex infrastructure projects. As part of the submission for the business plan, Anglian set out a preferred date for their first key milestone, the Strategic Outline Case of 31 December 2020.

- The development of the Strategic Outline Case for the Elsham DPC scheme is work in progress. The most recent draft received by Ofwat **is incomplete and does not adequately evidence the case** to enable a decision to be made at this stage on whether to de-scope the project. We are continuing to work with Anglian to develop the business case within the Strategic Outline Case to enable a decision to be made regarding whether the Elsham scheme continues to be progressed towards delivery through DPC in totality, in part, or not at all.
- By asking the CMA to make an early decision, Anglian seeks to shortcut the proven business case approach without providing the necessary evidence and argument required to ensure that any decision is made in the best interests of customers. **We do not agree that there is a need to accelerate the timing of the decision** beyond that set out below, and we expect Anglian to progress the project during this period so that whatever the decision, they are able to start market engagement, as appropriate, once a decision has been made. We understand that no in depth market engagement has happened to date, which appears contrary to the Anglian view that there is no appetite for a project such as Elsham. Ofwat has in place the processes to make a decision on the SOC and the regulatory mechanisms established to deal with a decision to proceed via DPC or not including partial de-scoping. We ask that the CMA allow this process to run its course.

Current timetable

- SOC final submission – End December
- Ofwat review – January
- Ofwat decision – early February

Discreteness

8.3 The transcript and the WSP report both describe timing and complexity challenges. We are not arguing that these challenges do not exist but we do not consider that they have yet been sufficiently evidenced to allow a decision to be made.

8.4 We met with Anglian in May 2019 and discussed the KPMG analysis that they presented to us on the discreteness tests. **The KPMG analysis did not conclude that DPC was not possible for the scheme**, but merely highlighted that it may be less suitable for DPC. We disagree with Anglian that we accepted this was the case and agreed that they would continue to work on the full scope of the Elsham scheme and that it was likely the project could overcome the complexities that they highlighted at that time through development of the commercial model. To our knowledge, Anglian has not developed any commercial models, or tested these with the market to support their view that the full scheme is not a viable DPC project.

8.5 As part of the Strategic Outline Case development, Anglian has provided the same discreteness test high level review from KPMG. **However, it does not provide sufficient detail for us to understand the discreteness test for each element of the scheme** and how they have arrived at the decision as to whether an element of the scheme or full scheme passes/fails the test. In our response to Anglian's draft Strategic Outline Case we have asked them to provide the full details of the discreteness test assessment for each of the three scheme elements and to provide details in the Strategic Outline Case as to how the risk assessment is used to make a pass/fail decision on this test.

8.6 In the review of the Elsham Scheme, WSP commented "while the overall summary finding was that the scope proposed would be "less suitable" for DPC this does not mean that it would not be possible to develop a satisfactory scheme, and Anglian Water acknowledges that it should indeed be possible. It is not clear from WSP's report whether they have reviewed the Anglian discreteness test.

8.7 We understand there may be complexities to delivering either the full scheme or part thereof, and we seek evidence as to how the risks associated with the

complexities could be managed. WSP include information which shows that the interface operating parameters have been defined for the pipeline element, suggesting that they could adequately define the operating parameters in a DPC contract.

8.8 In his presentation to the CMA, Peter Simpson described the "very very complicated system on the Humber Bank." Whilst we do not claim to have the detailed operational knowledge of the Anglian network that Mr Simpson has, there is no evidence that the pipeline element is more complex than the treatment works and further that it is not possible for a commercial construct whereby Anglian retain operational control of the pipeline.

Timing of delivery of the Elsham scheme

8.9 One area which both the WSP report and Anglian cite at the CMA hearing is the criticality of timing.

8.10 We have sought clarification from Anglian to evidence that their only route to meeting their resilience requirements in March 2025 is by delivering the full Elsham Scheme by this date.

- **Establishing the 2025 needs case** – the Anglian Water WRMP19 provides significant detail on the approach taken to define the 2045 supply demand challenges facing the Anglian region and how they have arrived at the proposed strategy to address the emerging gap. In contrast, the evidence and argument supporting the 2025 needs case is not adequately detailed and as such it is not possible with the current draft of the Strategic Outline Case to fully understand and approve the 2025 needs and outcomes case. For example, there appears to be contradictory evidence presented on the effect of demand management on future growth demand. We have asked that Anglian explains these apparent contradictions and have asked for the evidence to be included in the Strategic Outline Case.
- **Addressing the 2025 supply demand gap** – similar to the needs case, the Anglian WRMP provides confidence that an extensive range of options were considered and refined resulting in the proposed 2045 strategy. This approach is summarised in the Strategic Outline Case. The same approach is not apparent regarding the necessary timing of interventions for 2025. The criticality of the need to intervene by March 2025 and the corresponding impact on commercial delivery models, means that a range of options should be considered even if these options are not critical to the 2045 strategy or are necessarily operational and short term in nature. It is not clear in the Strategic Outline Case that the specific optioneering for the 2025 solutions

has considered all the opportunities to enable the timely delivery of the 2025 outcomes.

- **Evidencing the preferred commercial delivery approach** - the Strategic Outline Case is a formal gateway in the business case development where schemes may be deemed suitable or unsuitable for DPC delivery. The current Strategic Outline Case does not fully examine the benefits, constraints, opportunities, and risks of both a DPC and non-DPC delivery model for all, or parts of, the Elsham scheme. For example, Anglian has identified the Network Rail Basic Asset Protection Agreement (BAPA) process as a potentially critical path activity that would push a DPC delivery beyond the 2025 outcome date. It is not however clear whether Anglian has adequately considered the risk and potential mitigation options. This could include taking a more nuanced approach to the DPC approach (including the scope and timing of procurement) and potentially progressing the BAPA crossings as part of in-house delivery of enabling works. This would potentially bring significant programme benefits and place the risk with the most appropriate organisation to manage it and hence reduce the commercial risk on the DPC contract

The case for de-scoping and pursuing only the Elsham water treatment works as DPC

8.11 Ofwat recognises that the procurement costs associated with a DPC contract could potentially exceed those by a traditional route and therefore not all discrete projects would result in the best interests of customers. We therefore developed guidance that only schemes greater then £100m TOTEX would likely be suitable for DPC delivery. Our rationale was that on these larger schemes the potential benefits for customers would exceed the marginal increase in procurement costs. In our response to Anglian's Strategic Outline Case, we have therefore questioned the proposal to progress only the Elsham water treatment works project through DPC.

8.12 At c.£41m capex (the Strategic Outline Case is unclear on the project TOTEX) we are concerned that this project on its own will not meet the "size test" described in the Strategic Outline Case and be able to demonstrate net benefits to customers. As mentioned earlier, we are also seeking for detailed analysis on the discreteness test for the single project. We are therefore concerned that to progress the treatment works project only through a DPC route would not be in the best interests of customers.

8.13 We note the risk and reward drivers for Anglian and its shareholders in progressing a project via DPC. A DPC route means that shareholders do not get the benefits of growth to their RCV, and instead any costs associated with DPC are

a direct pass through to customers. Risks may be transferred from Anglian to the Competitively Appointed Provider (CAP) but this may not offset the reduction in RCV growth. From a shareholder perspective, Anglian may consequently prefer in-house delivery over delivering best value for customers. For this reason we consider it is important that a final decision on whether the total scheme should progress as a DPC scheme should only be made once a well evidenced case has been presented.

9. Northumbrian Water sewer flooding

9.1 In the hearing with Ofwat, the CMA has put to us the following: "Northumbrian have argued that Ofwat have rejected some £400 million of, what they would argue are, similar sewer flooding resilience schemes in PR19 and this indicates some kind of a gap in the regime and your approach. Do you recognise this? Do you agree with this?"

9.2 We do not consider that the rejection of the Northumbrian claim is due to a gap in our approach, nor do we consider that the rejection of c. £400 million of costs related to sewer flooding is indicative of a gap in our approach.

9.3 We have responded to this specific argument in a previous submission to the CMA,[37] where we explained that almost all of the cost claims highlighted by Northumbrian were rejected in relation to companies' advancing arguments for unique operating circumstances. For example, we rejected a claim by United Utilities that they need an adjustment to our modelling results due to higher rainfall, lower permeability and larger sewers. The rejection was not of a specific investment, but a rejection of evidence that the company is unique and requires a cost adjustment. Such is also the case with Yorkshire Water's cellars cost claim. Northumbrian Water also includes, within the £400 million figure, the Hull scheme, which we challenged on efficiency and therefore not indicative of a gap in our approach.

9.4 In short, most of the schemes in Northumbrian's argument are not relevant and are not indicative of a gap in our approach.

9.5 Flooding protection is an important part of our PR19 final determinations. In addition to allowing more than £1 billion in base allowance to help reduce the impact of flooding on communities, and setting ODIs on internal and external flooding performance, we also allowed almost all the funding sought by companies for improving flood resilience of water and wastewater networks and treatment works, as shown in the table below.

[37] Ofwat – Response to Northumbrian Water's statement of case, May 2020, p. 56.

Table 9.1 – PR19 water and wastewater flood resilience improvement schemes

Company	Requested	Allowed	Description of the investment
Anglian Water	£15m	£14m	Flood protection for key water and wastewater assets and services, including through working with partners.
Northumbrian Water	£41m £9m	£41m £5m	Protection against flooding (and power failure) for key assets and services. Drainage and wastewater management plans
Severn Trent	£14m	£11m	Groundwater production sites protected against pollution, power failure and flooding
South West Water	£9m	£8m	Flooding resilience of water and wastewater assets
Thames Water	£179m	£179m	North East London resilience is to protect Coppermills against various risks including flooding.
Welsh Water	£14m	£7m	Drainage and wastewater management plans
Wessex Water	£3m	£3m	Sea wall to protect Portbury Wharf STW from coastal flooding
Yorkshire Water	£29m	£16m	Hull and Haltemprice flooding resilience. We consider the remainder is allowed through our model for growth including sewer flooding.
Bristol Water	£7m	£7m	Wells to Glastonbury and Street main (due to risk of mains failure in flooded area)
South East Water	£1m	£1m	Flood protection at water treatment works
Total	**£321m**	**£292m**	

9.7 In the hearing we also pointed at the outcomes framework that provides strong incentives to invest in sewer flooding. Specifically, for Northumbrian, we set an enhanced ODI rate which is higher than what the company initially proposed. We noted that not only does the company have a totex allowance to make investments to reduce sewer flooding risk, but it can also benefit from our outcomes framework, which in this specific case can provide full funding for the investment over a reasonable timescale. We note the uncertainty and risk around this investment, but this risk is similar to that a competitive company would expect to bear and is a catalyst to making an appropriate and well thought through investment. The risk that this specific ODI will not be there in the long term is extremely low. Sewer flooding is one of the most important outcomes which we have used since privatisation. We have committed to an outcomes approach at PR24 and we intend to consider setting outcomes and ODIs for the long term.

9.8 Importantly, Northumbrian does not have to rely on the outcomes framework to fund the entire investment. As we noted in response to RFI 011A (and consistent

with the CMA's provisional funding) the company should be able to fund this investment from its totex allowance. Given that, as suggested by the company, this investment is to go beyond the performance commitment level, the outcomes framework would remunerate it more than sufficiently for any residual costs beyond our totex allowance.

9.9 In the hearing with Northumbrian Water the question was asked about risk reduction for the 7,400 properties. Even though the company was seemingly unable to provide a clear answer to this question,[38] we note that it has provided this information before, which does not appear to support some of the statements made in the hearing. We collated information in our response to RFI11A. We understand Northumbrian Water has assessed the 7,400 properties to have a risk of sewer flooding of at least once in twenty years, but less than once in ten years. So between 1 in 20 years (5% chance each year) to 1 in 11 years (9% chance each year). Northumbrian Water expects that this risk will increase. In the calculations that accompany our response to RFI11A we estimated that on average the investment would lead to a reduction of around 300 sewer flooding incidents per year than would otherwise be the case.[39] In practice flooding is affected by weather and the benefits of avoided flooding would be greater in some years than others. It is important to also bear in mind that there can be wider benefits from this investment. In particular, Northumbrian Water stated in its business plan that it would help reduce pollution incidents. This is particularly relevant to Northumbrian Water, which has an enhanced ODI rates for reducing pollution.

[38] Northumbrian Water Transcript, pp. 48-9.
[39] See NES ODI PC analysis.xls we submitted in our response to RFI11A. Our estimate of the average number of avoided incidents from the investment can be found on sheet "ODI Analysis" by adding cell P31 (188 incidents) with cell P86 (120 incidents).

10. Our response to further new cost and outcomes issues

Topic area	Reference	Statement	Ofwat response
P removal	Yorkshire Water transcript, p. 24 (L18) – p. 27 (L13)	On p. 26 of the transcript Mr. Muncaster states "it's the urban wastewater [treatment directive] that drives the cost".	We understand and accept that without the UWWTD obligation at a site, rather than the costs of meeting the tighter phosphorus consent required to meet the WFD objective being apportioned between the two legislative drivers, all costs would all be attributed to the WFD. In this situation the cost benefit analysis would be more likely to indicate that meeting the WFD objective was disproportionately costly. Were this to prove to be the case either a less onerous objective would be set by the EA or potentially none at all. In this way, the UWWTD can be viewed as enabling the WFD objective to be met and therefore driving the cost of doing so. However, this is not an argument for including a variable in the model to account for the extent to which sites are subject to UWWTD phosphorus removal requirements. The cost of a phosphorus removal scheme is driven by the variables already included in the CMA and Ofwat models, not least a variable to account for the tightness of the future consent. While the legislative driver theoretically has a bearing on the type of solutions that are permitted (and therefore on cost), in practice every company has entirely or almost entirely based its estimate of the investment required on traditional on-site end-of-pipe treatment. The few exceptions we have found relate to very small sites typically in rural settings and even then often involve a hybrid approach in which on-site treatment still forms part of the solution. This is the key point that we made in Table 2.5 of our response to the CMA's provisional findings responses (pp. 22-25). The additional point that Mr. Muncaster makes about other companies already having largely met the cost of UWWTD phosphorus removal requirements in previous AMP periods and thus only having to meet the incremental costs of meeting tightened consents in 2020-25 to meet WFD requirements is accepted. However, again, this has been satisfactorily addressed in the CMA model which includes a variable which accounts for the number of sites with an existing phosphorus consent.

Topic area	Reference	Statement	Ofwat response
Leakage	Northumbrian Water hearing transcript, p. 58, lines 4-7. 24-25	"I think the first point is this only applies in Essex and Suffolk, in our Essex and Suffolk region. I think the low point was in 2012/13. When we read Ofwat's service preliminary report just out this morning, it looks as though a number of other companies had that historic low point in leakage in 2012/13." "That historic minimum was in no way sustainable in the long term"	The historical leakage data (2011-2020) shows that three companies had a historical low point in leakage in 2012-13. Other than 2019-20 where nine companies had a historical minimum leakage level, different companies had minimums in different years. For example, two companies record a minimum leakage level in 2011-12, with a single company in both 2016-17 and 2017-18. There appears to be nothing particularly special about 2012-13 (for the purpose of this analysis we have combined Severn Trent Water, Hafren Dyfrdwy and Dee Valley Water figures). In this dataset Northumbrian water's minimum leakage level of 188.6 Ml/d in annual average terms occurs in 2011-12. We also note that although the company identified it as 'threw the kitchen sink at leakage to hit the target' and that the historical minimum was unsustainable it still outperformed its totex allowances in both the 2010-15 and 2015-20 periods.
Leakage	Northumbrian Water hearing transcript, p. 57, lines 10-12	"...another major factor at play between the 2019/20 leakage figures which was that in 2019/20 the industry as a whole saw a 20 per cent drop in the rate at which pipes were bursting. We can provide the graphs and the evidence to back that up."	The data provided in response to RFI011[40] indicates that 2019-20 was not the low point in terms of mains repairs rate in the 2015-20 period. The low point was recorded in 2015-16. Additionally, we reviewed the data[41] and there appears to be no correlation between reduction in mains repairs and reduction in leakage. For example, some companies, such as SES Water and Northumbrian Water, had a relatively high reduction in mains repair but a small reduction in leakage. Other companies, such as Severn Trent, Affinity Water and Wessex Water had a relatively smaller reduction in mains repair but a higher reduction in leakage. We therefore do not consider that the data indicates weather and changes in repair rates to be the principal drivers of the improved performance. However, to comment further we would need to be provided with the graphs and analysis that Northumbrian Water reference relating to this point.
Unplanned outage	Northumbrian Water hearing transcript, p. 63.	"I think we had a concern about unplanned outages because I think we still think that is a pretty rubbish	Despite the company's views on the unplanned outage metric we still consider it an important performance commitment. Outage, both, planned and unplanned, has been highlighted as an issue in the Environment Agency's review of 2019-20

[40] Ofwat, 'Update to Q2 RFI007 Performance Commitment data', Response to RFI011, July 2020.
[41] Mains repair data and leakage data based on the new reporting method were taken from reference 40.

Topic area	Reference	Statement	Ofwat response
		asset health and resilience metric. But I think we understand what you have done there and so I do not think we have a lot more to say."	WRMP annual reporting, "Southern Water's Sussex North and Northumbrian Water's Kielder water resource zones reported supply-demand deficits due to unplanned outage".[42]The company's unplanned outage levels reported were higher than the targeted combined levels for planned and unplanned outage in WRMP19, with 50% identified as resulting from systems failure. The reported deficit indicates that a reduced level of resilience to drought was provided to customers with an increased risk of water restrictions. Note that while there are variances in the unplanned outage calculations for our PR19 performance commitment and the WRMP reporting, we would expect correlation in the trends reported.

[42] Environment Agency, 'Water and sewerage companies in England: environmental performance report for 2019', October 2020, Section 10. Water resources planning.

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