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Creating tomorrow, together: Consulting  
on our methodology for PR24

# **PR24 submission table guidance – section 3: Costs (wholesale) water**

## About this document

### Version control

Version	Date published	Description
V1	7/7/2022	Draft methodology
V2		
V3		

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# 1. Summary purpose of the data tables

## What data are we collecting?

- 1.1 In this section we are collecting companies' forecast costs and associated drivers from 2022-23 onwards. Some tables cover the period 2022-30 while others ask for longer-term forecasts. This reflects our approach to long-term delivery strategies.

## Why are we collecting the data?

- 1.2 This data forms the basis for us to set cost allowances at PR24. It covers base, enhancement, developer services and best value data which we will use in our cost assessment models.

## How is the data aligned with the annual performance report (APR)?

- 1.3 Where possible tables in this section are the same as the equivalent APR tables and, as such, we expect 2022-23 data to reflect companies' 2022-23 APRs. In some case we have included additional lines. This is primarily to reflect changing requirements, such as WINEP obligations, and associated drivers. These tables will then form the basis of APR tables from 2025 onwards.
- 1.4 Some tables are not included within the APR as we only need this information at price reviews, such as table CW12 – transition expenditure.

## 2. General guidance

### Jointly used or owned assets – Reporting guidance change for 2025–26 onwards

- 2.1 Following concerns we have received over different reporting of expenditure on joint use assets (assets that are owned jointly or operated on a joint agreement) and requests for clarity in this area we propose to introduce guidance into RAG2 and RAG4 which will apply from 2025–26 onwards. **It should therefore also be followed when preparing your PR24 business plan.**
- 2.2 For both capex and opex, we require that in the cost tables (ie APR sections 4–8 and 10) companies report only their share of the totex.
- 2.3 This means that where a company takes the lead on any expenditure and is due a corresponding payment from the asset partner, that such income effectively 'nets off' the gross cost of the expenditure. Accordingly, we also require that such income is adjusted in table 1A from the statutory treatment of income and is instead recognised as a negative adjustment to costs in the regulatory accounts. This ensures that any such income will not become a component of actual regulatory income and so will not impact on reconciliation mechanisms.
- 2.4 The other company, who is simply making a payment to the lead company for its share of the costs, will show this as a regular totex cost as if the payment was to any ordinary supplier.

### Direct procurement for customers

- 2.5 We expect companies to include in their business plans forecasts of expenditure they will incur in the planning and administration of their expected DPC schemes. These are the development, procurement and contract management costs. These costs should be included in tables CW1, CW2, CW3 and CW12 as appropriate. Companies should not include in the wholesale expenditure tables any costs forecast to be incurred by the competitively appointed provider.

### **Price base and Indexation**

The base year for the business plan is 2022-23.

The price base for financial cost information is base year prices indexed using the financial year average Consumer Price Index (including housing costs) ie 2022-23 prices FYA (CPIH deflated).

### 3. CW1 – Totex analysis – water resources and water network+

Table CW1 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW1.1</b>	Base operating expenditure	Operating expenditure excluding third party opex to deliver base levels of service. This line should equal line CW2.14	4D.1
<b>CW1.2</b>	Enhancement operating expenditure	Enhancement operating expenditure excluding third party opex. This line should equal line CW3.103.	4D.2
<b>CW1.3</b>	Developer services operating expenditure	Total developer services operating expenditure including third party opex. This line should equal line DS4.10 (opex) plus DS6.6 (water resources and water network+).	4D.3
<b>CW1.4</b>	Total operating expenditure excluding third party services	Total operating costs excluding base and enhancement third party services but including developer services third party services. The sum of lines CW1.1 to CW1.3.	4D.4
<b>CW1.5</b>	Third party services	Operating expenditure for providing third party services, excluding developer services third party services. See RAG4 appendix 1.	4D.5
<b>CW1.6</b>	Total operating expenditure	Total operating expenditure for the wholesale business only within each business category. The sum of lines CW1.4 and CW1.5. This should reconcile to wholesale operating expenditure in APR table 2A line 3 and 2B line 11 for 2022-23.	4D.6
<b>CW1.7</b>	Grants and contributions – operating expenditure	Grants and contributions – operating expenditure. The operating expenditure element of the water resources and water n+ grants and contributions reported in lines DS1.6 and DS1.22. Input as a positive number.	4D.7
<b>CW1.8</b>	Base capital expenditure	Capital expenditure excluding third party capex to maintain the long-term capability of assets and to deliver base levels of service. Where projects have drivers both of enhancement and capital maintenance, companies should apply a method of proportional allocation to allocate costs between enhancement and capital maintenance. This line should equal line CW2.17	4D.8
<b>CW1.9</b>	Enhancement capital expenditure	Total enhancement capital expenditure excluding third party capex. This line should equal line CW3.102.	4D.9
<b>CW1.10</b>	Developer services capital expenditure	Total developer services operating expenditure including third party capex. This line should equal line DS4.10 (capex) plus DS6.4 (water resources and water network+).	4D.10
<b>CW1.11</b>	Total gross capital expenditure excluding third party services	Total gross capital expenditure excluding base and enhancement third party services but including developer services third party services – the sum of lines CW1.8 to CW1.10	4D.11
<b>CW1.12</b>	Third party services	Capital expenditure for providing third party services, excluding developer services third party services. See appendix 1	4D.12



Line	Title	Definition	RAG 4.10 line reference
<b>CW1.13</b>	Total gross capital expenditure	The sum of lines CW1.11 and CW1.12.	4D.13
<b>CW1.14</b>	Grants & contributions – capital expenditure	Grants and contributions – capital expenditure. The capital expenditure element of the water resources and water n+ grants and contributions reported in lines DS1.6 and DS1.22. Input as a positive number.	4D.14
<b>CW1.15</b>	Net totex	The sum of lines CW1.6 and CW1.13 less the sum of CW1.7 and CW1.14.	4D.15
<b>CW1.16</b>	Pension deficit recovery payments	2022-23 to 2024-25 – Actual pension deficit recovery payments including costs capitalised and any group recharges for pension deficit costs. Companies that report under FRS102 should include the element of the statutory charge attributable to deficit payments in this line rather than block A above. 2025-26 to 2029-30 – Pension deficit recovery payments to be funded through price limits, in accordance with <a href="#">JN 13/17</a> .	
<b>CW1.17</b>	Other cash items	Other cash items not included in totex.	4D.17
<b>CW1.18</b>	Totex including cash items	The sum of lines CW1.15 to CW1.17.	4D.18
<b>CW1.19</b>	Atypical expenditure items	Please specify atypical items in the lines CW1.19 to CW1.23. Atypical items are defined as unusual items outside ordinary activities. This would include items such as office moves and one-off reorganisations. For avoidance of doubt these items should be included in lines 1 to 18 above but in the item description state the line that it is included in. Costs should be entered as a positive number and any income/rebates entered as a negative number.	4D.19
<b>CW1.20</b>	Atypical expenditure items	Please specify atypical items in the lines CW1.19 to CW1.23. Atypical items are defined as unusual items outside ordinary activities. This would include items such as office moves and one-off reorganisations. For avoidance of doubt these items should be included in lines 1 to 18 above but in the item description state the line that it is included in. Costs should be entered as a positive number and any income/rebates entered as a negative number.	4D.20
<b>CW1.21</b>	Atypical expenditure items	Please specify atypical items in the lines CW1.19 to CW1.23. Atypical items are defined as unusual items outside ordinary activities. This would include items such as office moves and one-off reorganisations. For avoidance of doubt these items should be included in lines 1 to 18 above but in the item description state the line that it is included in. Costs should be entered as a positive number and any income/rebates entered as a negative number.	4D.21
<b>CW1.22</b>	Atypical expenditure items	Please specify atypical items in the lines CW1.19 to CW1.23. Atypical items are defined as unusual items outside ordinary activities. This would include items such as office moves and one-off reorganisations. For avoidance of doubt these items should be included in lines 1 to 18 above but in the item description state the line that it is included in.	4D.22

Line	Title	Definition	RAG 4.10 line reference
		Costs should be entered as a positive number and any income/rebates entered as a negative number.	
<b>CW1.23</b>	Atypical expenditure items	Please specify atypical items in the lines CW1.19 to CW1.23. Atypical items are defined as unusual items outside ordinary activities. This would include items such as office moves and one-off reorganisations. For avoidance of doubt these items should be included in lines 1 to 18 above but in the item description state the line that it is included in. Costs should be entered as a positive number and any income/rebates entered as a negative number.	4D.23
<b>CW1.24</b>	Total atypical expenditure	Total atypical expenditure. Calculated as the sum of lines CW1.19 to CW1.23.	4D.24

## CW1 Additional guidance

- 3.1 Operating expenditure should be reported **net of the principal use recharges** between the price control units so that the costs at a price control level can be properly recorded.
- 3.2 If companies choose to forecast atypical items they must provide details in their commentary. Companies must also clearly explain whether the nature of the atypical item is an operating or capital expense. For forecast years (2023–24 onwards) companies must clearly explain why the item disclosed in Block D is atypical and why it is appropriate not to include it in the previous lines.
- 3.3 Where applicable please ensure values are consistent elsewhere within the cost assessment wholesale water tables.

## CW1 Commentary requirement

- 3.4 Companies should include the following commentary to this table;
  - An explanation of any costs categorised as atypical, and which cost line(s) they are included in (eg atypical cost item 1 is included in CW1.1).
  - An explanation of the nature and extent of 'principal use' recharges between business units.
  - An explanation for any significant changes in costs over the period.

## **4. CW1a – Totex analysis – water resources and water network+ (post frontier shift and real price effects)**

- 4.1 This table will mirror CW1 but will include the impact of the frontier shift and real price effects assumptions included in table SUP11.

## 5. CW2 – Base expenditure analysis – water resources and water network plus

Table CW2 line definitions

Line	Title	Definition	RAG 4.10 line reference
CW2.1	Power	All energy costs, including the climate change levy and the carbon reduction commitment. Any cost savings from power generated internally should be netted off these costs.	4J.1
CW2.2	Income treated as negative expenditure	Income received from sales which are external to the appointed business and which directly relate to the water and wastewater processes. It should be input as a negative number. This will include; <ul style="list-style-type: none"> <li>Electricity sales from sources such as Hydro, PV, wind and CHP to external parties.</li> <li>Electricity sales from back-up generators under arrangements such as the National Grid 'STOR', "frequency response" and "dynamic demand".</li> <li>Bio-methane gas sales to the National Grid.</li> </ul> Sludge and sludge products such as cake, granules etc. to external parties.	4J.2
CW2.3	Bulk Supply/Bulk discharge	Total payments for bulk imports/exports. Where a company jointly owns a supply, the costs associated with it should not be reported here but in the appropriate cost line.	4J.3
CW2.4	Renewals expensed in year (Infrastructure)	Infrastructure renewals which are expensed rather than capitalised in the statutory accounts. 'Renewals' are generally planned activities to replace significant lengths of pipework or parts of an asset. These are targeted at improving network performance or solving ongoing problems and restores an asset to full capability.	4J.4
CW2.5	Renewals expensed in year (Non- Infrastructure)	Non-infrastructure renewals which are expensed rather than capitalised in the statutory accounts. 'Renewals' are generally planned activities targeted at improving network performance or solving ongoing problems and restores an asset to full capability.	4J.5
CW2.6	Other operating expenditure	Other operating costs not covered by CW2.4 and CW2.5. This should exclude finance charges associated with operating leases.	4J.6
CW2.7	Local authority and Cumulo rates	The cost of local authority rates. This should include both the local authority rates, cumulo rates and sewerage site rates (where appropriate).	4J.7
CW2.8	Canal & River Trust abstraction charges/ discharge consents	Costs associated with the Canal & River Trust service charges and discharge consents.	4J.8
CW2.9	EA / NRW abstraction charges/ discharge consents	Costs associated with Environment Agency / Natural Resources Wales service charges/ discharge consents.	4J.9

Line	Title	Definition	RAG 4.10 line reference
<b>CW2.10</b>	Other abstraction charges/ discharge consents	Costs associated with other service charges/ discharge consents.	4J.10
<b>CW2.11</b>	Costs associated with Traffic Management Act	Costs directly related to permit schemes made pursuant to the Traffic Management Act (TMA) excluding penalties or fines incurred by the company. TMA costs incurred in the delivery of developer services should be included in developer services expenditure (CW1.3 and DS4) and not in this line.	4J.11
<b>CW2.12</b>	Costs associated with lane rental schemes	Costs directly associated with lane rental schemes excluding penalties or fines incurred by the company. Lane rental scheme costs incurred in the delivery of developer services should be included in developer services expenditure (CW1.3 and DS4) and not in this line.	4J.12
<b>CW2.13</b>	Statutory water softening	Costs associated with statutory requirements for the softening of water as directed by the relevant legislation.	4J.13
<b>CW2.14</b>	Total base operating expenditure	The sum of lines CW2.1 to CW2.13.	4J.14
<b>CW2.15</b>	Maintaining the long term capability of the assets – infra	Capital expenditure on infrastructure assets excluding third party capex to maintain the long term capability of assets and to deliver base levels of service. Where projects have drivers both of enhancement and capital maintenance, companies should apply a method of proportional allocation to allocate costs between enhancement and capital maintenance.	4J.15
<b>CW2.16</b>	Maintaining the long term capability of the assets – non-infra	Capital expenditure on non-infrastructure assets excluding third party capex to maintain the long term capability of assets and to deliver base levels of service. Where projects have drivers both of enhancement and capital maintenance, companies should apply a method of proportional allocation to allocate costs between enhancement and capital maintenance.	4J.16
<b>CW2.17</b>	Total base capital expenditure	The sum of lines CW2.15 and CW2.16.	4J.17
<b>CW2.18</b>	Projects incurring costs associated with Traffic Management Act	The number of jobs that required a permit for which the costs that have been reported in CW2.11 have been incurred.	4J.18

## CW2 Additional guidance

- 5.1 Operating expenditure should be reported **net of the principal use recharges** between the price control units so that the costs at a price control level can be properly recorded.
- 5.2 This table contains inputs needed for populating the PR19 Cost reconciliation model and calculating the end of period revenue and RCV adjustments to be applied at PR24.

## **CW2 Commentary requirement**

5.3 Companies should include the following commentary to this table;

- An explanation for any significant changes between actual and forecast costs.
- An explanation of any material year-on-year variations in costs.
- An explanation of any changes in reporting methods / assumptions that have led to a material change in reported figures from previous reporting years.

## 6. CW3 – Enhancement expenditure analysis – water resources and water network plus

Table CW3 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW3.1- CW3.3</b>	Biodiversity and conservation	Expenditure to deliver biodiversity improvement (NERC driver code) to restore or prevent deterioration of Sites of Special Scientific Interest (SSSI driver code) and/ or ensure European sites (HD driver code) are in a favourable condition. This is for expenditure over and above any required to be reported in other lines.	
<b>CW3.4- CW3.6</b>	Eels/fish entrainment screens	Expenditure on schemes to prevent the entrainment of eels (EE or WFD driver codes) and migratory fish in existing abstraction intakes and outfalls (SAFFA or WFD driver codes).	
<b>CW3.7- CW3.9</b>	Eels/fish passes	Expenditure on schemes to address physical barriers to the passage of eels (EE or WFD driver codes) and migratory fish (SAFFA or WFD driver codes).	
<b>CW3.10- CW3.12</b>	Invasive non-native species	Expenditure on surveillance, action to prevent deterioration and improvement schemes (INNS driver code) to reduce risk of spread and impacts of invasive non-native species.	4L.7- 4L.9
<b>CW3.13- CW3.15</b>	Drinking Water Protected Areas	Expenditure on the implementation of catchment schemes to prevent deterioration (DrWPA driver code) or to make improvements following a deterioration in water quality to avoid an increase in the level of water treatment.	4L.10- 4L.12
<b>CW3.16- CW3.18</b>	Water Framework Directive	Expenditure on action to improve/achieve/protect/prevent deterioration of water body objective or ecological status within a catchment (WFD and WFDGW driver codes) due to water company assets and operations. Ensure any related WFD driver code expenditure for wetland creation, eels/fish entrainment screens or passes are reported under other appropriate lines. This should not include any expenditure to improve the supply-demand balance as justified through a WRMP.	
<b>CW3.19- CW.21</b>	Wetland creation	Expenditure on wetland creation to improve/achieve/protect/prevent deterioration of water body objective or ecological status within a catchment (HD, NERC, SSSI, WFDGW driver code) due to water company assets and operations.	
<b>CW.22- CW.24</b>	Trade effluent discharge flow monitoring	Expenditure on MCERTS flow monitoring to protect the environment from the effects of water treatment works trade effluent discharges (EPR driver code).	
<b>CW.25- CW.27</b>	25 Year Environment Plan	Expenditure on locally significant environmental measures (25YEP driver code) not eligible under any other driver, but with clear evidence of customer support.	

Line	Title	Definition	RAG 4.10 line reference
<b>CW.28- CW.30</b>	Investigations	Expenditure on investigations and/or options appraisals (INV and NDINV driver codes) listed in the PR24 WINEP driver guidance documents to confirm/identify actions/determine impacts or the costs and technical feasibility of meeting targets.	4L.16- 4L.18
<b>CW3.31</b>	Total environmental programme expenditure	The sum of lines CW3.3, CW3.6, CW3.9, CW3.12, CW3.15, CW3.18, CW3.21, CW3.24, CW3.27 and CW3.30.	4L.19
<b>CW3.32- CW3.34</b>	Supply-side improvements delivering benefits in 2025-2030	Expenditure that enhances the supply-demand balance in 2025-30. Includes expenditure associated with schemes delivering supply-side (resource and production options) enhancements in 2025-30. The benefits (Ml/d) associated with this expenditure are reported in table CW8.	4L.20- 4L.22
<b>CW3.35- CW3.37</b>	Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering)	Expenditure that enhances the supply-demand balance in 2025-30. Includes expenditure associated with schemes delivering demand-side (water efficiency options) enhancements in 2025-30. This excludes benefits from leakage and metering activities. The benefits (Ml/d) associated with this expenditure are reported in table CW8.	4L.23- 4L.25
<b>CW3.38- CW3.40</b>	Leakage improvements delivering benefits in 2025-2030	Expenditure that enhances the supply-demand balance in 2025-30. Includes expenditure associated with schemes delivering leakage enhancements in 2025-30.	4L.26- 4L.28
<b>CW3.41- CW3.43</b>	Internal interconnectors delivering benefits in 2025-2030	Expenditure that enhances the supply-demand balance in 2025-30. Includes expenditure associated with inter-zonal and intra-zonal connections delivering interconnectivity in 2025-2030. The benefits (Ml/d) associated with this expenditure are reported in table CW8.	4L.29- 4L.31
<b>CW3.44- CW3.46</b>	Supply demand balance improvements delivering benefits starting from 2031	Expenditure that enhances the supply-demand balance in the longer term (providing benefits from 2031 onwards). Includes expenditure associated with inter-zonal and intra-zonal connections delivering interconnectivity benefits from 2031. The benefits (Ml/d) associated with this expenditure are reported in table CW8.	4L.32- 4L.34
<b>CW3.47</b>	Total supply demand expenditure	The sum of lines CW3.34, CW3.37, CW3.40, CW3.43 and CW3.46	4L.38
<b>CW3.48- CW3.50</b>	New meters requested by existing customers (optants)	Expenditure related to metering (excluding cost of providing metering to new service connections) for provision of meters requested by existing customers (optants). This does not include costs related to smart meter infrastructure assets such as telemetry. Costs associated with meter readings for retail activities are reported in line RET1.4.	4L.39- 4L.41
<b>CW3.51- CW3.53</b>	New meters introduced by companies for existing customers	Expenditure related to the provision of meters introduced by companies (excluding cost of providing metering to new service connections), irrespective of whether these meters are used for charging. This does not include costs related to smart meter infrastructure assets such as telemetry. Costs associated with meter readings for retail activities are reported in line RET1.4.	4L.42- 4L.44



Line	Title	Definition	RAG 4.10 line reference
<b>CW3.54- CW3.56</b>	New meters for existing customers - business	Expenditure related to the provision of meters to businesses and other non-household customers (excluding cost of providing metering to new service connections). This does not include costs related to smart meter infrastructure assets such as telemetry. Costs associated with meter readings for retail activities are reported in line RET1.4.	4L.45- 4L.47
<b>CW3.57- CW3.59</b>	Replacement of existing basic meters with smart meters	The enhancement element of the expenditure relating to the activity of replacing basic meters for existing residential and business customers. This does not include costs related to smart meter infrastructure assets such as telemetry.	4L.48-4L.50
<b>CW3.60- CW3.62</b>	Smart metering infrastructure	Expenditure related to the provision of infrastructure such as telemetry to support the residential and business smart meter network. In this context the use of the term infrastructure is not intended to signify a split between non-infrastructure and infrastructure in regulatory reporting terms. It is rather capturing expenditure relating to smart meter programme assets outside of the meter and meter installation costs captured in the lines above.	4L.51-4L.53
<b>CW3.63</b>	Total metering expenditure	The sum of lines CW3.50, CW3.53, CW3.56, CW3.59 and CW3.62	4L.54
<b>CW3.64- CW3.66</b>	Improvements to taste, odour, colour (grey solutions)	Expenditure to deliver improvements to consumer acceptability of the drinking water (relating to taste, odour and colour) through grey solutions (conventional).	4L.55- 4L.57
<b>CW3.67- CW.69</b>	Improvements to taste, odour and colour (green solutions)	Expenditure to deliver improvements to consumer acceptability of the drinking water (relating to taste, odour and colour) through green solutions (eg nature-based solutions/non-conventional).	
<b>CW3.70- CW3.72</b>	Conditioning water to reduce plumbosolvency	Expenditure to deal with conditioning of water before entering distribution to reduce plumbosolvency.	
<b>CW3.73- CW3.75</b>	Communication pipes replaced or relined	Expenditure on replacing or relining lead communication pipes that are owned by the company	
<b>CW3.76- CW3.78</b>	External lead supply pipes replaced or relined	Expenditure on external lead pipes replaced or relined from the underground boundary box or property boundary to the internal stop tap or above ground boundary box (if fitted).	
<b>CW3.79- CW3.81</b>	Internal lead supply pipes replaced or relined	Expenditure on internal lead supply pipes replaced or relined from the internal stop tap or above ground boundary box to the compliance point (kitchen tap).	
<b>CW3.82- CW3.84</b>	Other lead reduction related activity	This includes any investigation costs and other lead reduction costs not directly associated with water conditioning or the replacement or relining of communication pipes, and external and internal supply pipes.	
<b>CW3.85- CW3.87</b>	Addressing raw water quality deterioration (grey solutions)	Expenditure on grey (conventional) water treatment assets to address deteriorating raw water quality (eg THM, nitrates, crypto, pesticides, others).	
<b>CW3.88- CW3.90</b>	Addressing raw water quality deterioration (green solutions)	Expenditure on green treatment solutions (eg nature-based solutions/non-conventional which may include catchment management) to address deteriorating raw water quality (eg THM, nitrates, crypto, pesticides, others) prior to water company abstraction.	

Line	Title	Definition	RAG 4.10 line reference
<b>CW3.91- CW3.93</b>	Resilience	Expenditure to enhance resilience. This relates to expenditure to manage increasing risks of failing to give consumers an appropriate level of service and protection from events caused by hazards that are beyond company control, excluding those covered by other areas of enhancement and base expenditure (CW2).	
<b>CW3.94- CW3.96</b>	Security – SEMD	Expenditure to comply with the requirements of Security and Emergency Measures Direction (SEMD) 2022. To include schemes to protect CNI and NI assets and assessments of further improvements to comply with SEMD Direction 2022, and emergency response and resilience requirements. Defra’s Protective Security Guidance.	4L.70- 4L.72
<b>CW3.97- CW3.99</b>	Security – Cyber	Expenditure on schemes to enhance the security of network and information systems to comply with NIS Regulation 2018.	
<b>CW3.100- CW3.102</b>	Greenhouse gas reduction (net zero)	Expenditure on schemes where the primary driver is to reduce greenhouse gas emissions.	
<b>CW3.103- CW3.112</b>	Additional lines 1-5	Other expenditure by purpose. Where possible companies should maintain consistency with corresponding lines in previous data submissions when using these lines.	4L.76- 4L.85
<b>CW3.113</b>	Total other enhancement expenditure	The sum of lines CW3.66, CW3.69, CW3.72, CW3.75, CW3.78, CW3.81, CW3.84, CW3.87, CW3.90, CW3.93, CW3.96, CW3.99, CW3.102 and CW3.103 to 112.	4L.86
<b>CW3.114</b>	Total enhancement expenditure – capex	The sum of lines 1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 32, 35, 38, 41, 44, 48, 51, 54, 57, 60, 64, 67, 70, 73, 76, 79, 82, 85, 88, 91, 94, 97, 100, 103, 105, 107, 109 and 111. Total enhancement capital expenditure should equal line CW1.9	4L.87
<b>CW3.115</b>	Total enhancement expenditure – opex	The sum of lines 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 33, 36, 39, 42, 45, 49, 52, 55, 58, 61, 65, 68, 71, 74, 77, 79, 80, 83, 86, 89, 92, 95, 98, 101, 104, 106, 108, 110 and 112. Total enhancement operating expenditure should equal line CW1.2	4L.88
<b>CW3.116</b>	Total enhancement expenditure	The sum of lines CW3.114 and CW3.115.	4L.89

## CW3 Additional guidance

- 6.1 Where a quality enhancement scheme (or the proportionally allocated component of a quality enhancement scheme) has more than one cost driver, companies should allocate the expenditure attributable to the primary driver to the relevant line. Any net additional cost for delivering any further drivers should be included in the relevant line.
- 6.2 The table (and other similar expenditure tables for the water and wastewater controls) allows companies to identify i) other purpose categories of expenditure not covered by

those listed in the table or ii) expenditure which is covered by the standard lines in the table but which the company considers beneficial to distinguish separately.

- 6.3 Assuming no atypical costs we expect the total operating capital expenditure to agree to the sum to table CW1.
- 6.4 Transition expenditure in table CW12 should be included in 2025–30 forecasts in this table and not in 2024–25 expenditure.

## Resilience enhancement

- 6.5 We have refined the resilience enhancement line definition for PR24 to mitigate some of the issues faced at PR19. For example, the PR19 resilience definition overlapped with other enhancement areas and was not explicit on what hazards this covers.
- 6.6 Companies can request investment under the resilience enhancement line to manage increasing risks from hazards that are beyond their control and not covered by other enhancement areas.
- 6.7 Examples of hazards include source water pollution, fluvial flooding of company assets and mitigating failures of other infrastructure systems such as power networks. It is essential that the company fully sets out the hazard the investment is addressing.
- 6.8 This investment category does not cover the failure of assets that are managed through maintenance. These are funded through base costs and are not within scope.
- 6.9 We provide additional guidance below for companies to follow when developing their PR24 business plans:
- (1) The two specific categories of hazards we are open to consider for funding in this area are **natural hazards** (eg fluvial flooding) and **cascading failures of supporting systems** (eg power, source water pollution, or third party impacts).
    - Therefore, asset failures, that are managed through maintenance, are funded through base (capital maintenance) expenditure and are not within scope.
    - Adaptions for climate change are included, where relevant to the specified hazards. However, this is not a ‘catch-all’ for climate change expenditure. Funding to address the impact of climate change for other hazards should be factored into the relevant investment area and associated enhancement line.
  - (2) **Proportionally allocating cost for investments that mitigate multiple risks** both within and beyond company control.

- Solutions such as removing single points of failure can **mitigate multiple hazards**. These will include hazards relevant to this line, such as those arising from climate change, and inappropriate ones such as inadequate maintenance or delivering performance commitment improvements. These can be expected to directly impact common performance commitments and thus a proportion should be considered as **implicit within base costs**.

## CW3 Commentary requirement

6.10 Companies should include the following commentary to this table;

- An explanation of whether any costs have been proportionally allocated between expenditure categories in tables CW3 and CWW3 or between enhancement and base expenditure. Companies should include details of how much has been subject to proportional allocation and which cost drivers they have used.
- An explanation of the reasons for using the additional lines.
- If total operating and capital expenditure does not agree to table CW1 companies should provide a reconciliation so that the difference is explained.
- Clear descriptions of where further commentary, related business cases or evidence for costs in this table are included elsewhere in the business plan.

## 7. CW4 – Raw water transport, raw water storage and water treatment

Table CW4 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW4.1</b>	Total number of balancing reservoirs	All reservoirs used for holding transported raw water. See RAG4 – Appendix 2 (Water resources further guidance)	6A.1
<b>CW4.2</b>	Total volumetric capacity of balancing reservoirs	Total design/construction capacity of all balancing reservoirs used for holding transported raw water.	6A.2
<b>CW4.3</b>	Total number of raw water transport stations	Total number of raw water transport stations. For the avoidance of doubt this is the number of sites as opposed to the number of individual pumps.	6A.3
<b>CW4.4</b>	Total installed power capacity of raw water transport pumping stations	Total installed power of all raw water transport pumpsets (duty, assist and standby – irrespective of the number that may be working at any one time)	6A.4
<b>CW4.5</b>	Total length of raw water transport mains and other conveyors	The length of all mains or other conveyors associated with raw water transport between water resources defined assets (eg a river intake pumping station and a surface water reservoir) and raw water storage and/or water treatment defined assets. Include all amber coloured pipework in the examples given in Appendix 2 of RAG 4.	6A.5
<b>CW4.6</b>	Average pumping head ~ raw water transport	Average pumping head for the raw water transport business unit as defined in RAG4 and RAG2. This is to be calculated using actual pumping head rather than the rating of the pumps.	6A.6
<b>CW4.7</b>	Energy consumption – raw water transport (MWh)	Measure of energy usage (electricity, gas, liquid fuels) by the raw water transport business unit (irrespective of the power source). Energy usage should be measured as that which is either imported or self-generated and used in relevant business unit. No account should be taken of self-generated energy that is exported from the business unit where it is generated. Fleet transport and standby generation should be included as should an allowance for administrative buildings and head office function.	6A.7
<b>CW4.8</b>	Total number of raw water transport imports	Total number of raw water transport import points. Points not used in the year should still be included.	6A.8
<b>CW4.9</b>	Water imported from 3rd parties to raw water transport systems	The average daily water imported from 3rd parties to raw water transport systems.	6A.9
<b>CW4.10</b>	Total number of raw water transport exports	Total number of raw water transport export points. Points not used in the year should still be included.	6A.10
<b>CW4.11</b>	Water exported to 3rd parties from raw water transport systems	The average daily water exported to 3rd parties from raw water transport systems.	6A.11
<b>CW4.12</b>	Total length of raw and pre-treated (non-potable) water	The length of all dedicated raw and pre-treated (non-potable) water mains for supplying customers. Include;	6A.12

Line	Title	Definition	RAG 4.10 line reference
	transport mains for supplying customers	<ul style="list-style-type: none"> <li>raw water and pre-treated (non-potable) mains which deliver non-potable water to the end customer or a 3rd party water company, and</li> <li>partially treated water mains which deliver non-potable water to the end customer (eg industrial process water and fire-fighting mains) or a 3rd party water company.</li> </ul> <p>Exclude raw water abstraction and transport mains and other conveyors reported in RES1.22 and CW4.5, and raw and partially treated water mains that are situated within the boundaries of the water treatment works.</p>	

Line	Title	Water treated Ml/d	Number of works	RAG 4.10 line reference
<b>CW4.13</b>	All simple disinfection works	The average daily distribution input derived from water treatment works providing simple disinfection and pre-aeration only. Bulk supplies received should be included and bulk exports should be omitted.	Total number of water treatment works providing simple disinfection and pre-aeration only	6A.13
<b>CW4.14</b>	W1 works	The average daily distribution input derived from water treatment works providing simple physical treatment only. Bulk supplies received should be included and bulk exports should be omitted.	Total number of water treatment works providing simple physical treatment and/or blending only	6A.14
<b>CW4.15</b>	W2 works	The average daily distribution input derived from water treatment works providing single stage complex physical or chemical treatment but excluding processes in W4, W5 & W6. Bulk supplies received should be included and bulk exports should be omitted.	Total number of water treatment works providing single stage complex physical or chemical treatment but excluding processes in W4, W5 & W6	6A.15
<b>CW4.16</b>	W3 works	The average daily distribution input derived from water treatment works providing more than one stage of complex treatment but excluding processes in W4, W5 & W6. Bulk supplies received should be included and bulk exports should be omitted.	Total number of water treatment works providing more than one stage of complex treatment but excluding processes in W4, W5 & W6	6A.16
<b>CW4.17</b>	W4 works	The average daily distribution input derived from water treatment works providing one of the processes with very high operating costs. Bulk supplies received should be included and bulk exports should be omitted.	Total number of water treatment works providing one of the processes with very high operating costs	6A.17

Line	Title	Water treated Ml/d	Number of works	RAG 4.10 line reference
<b>CW4.18</b>	W5 works	The average daily distribution input derived from water treatment works providing two or more of the processes with very high operating costs. Bulk supplies received should be included and bulk exports should be omitted.	Total number of water treatment works providing two or more of the processes with very high operating costs	6A.18
<b>CW4.19</b>	W6 works	The average daily distribution input derived from water treatment works providing processes with extremely high operating costs. Bulk supplies received should be included and bulk exports should be omitted.	Total number of water treatment works providing processes with extremely high operating costs	6A.19

Line	Title	% of total distribution input (DI)	Number of works	RAG 4.10 line reference
<b>CW4.20</b>	WTWs in size band 1	Please disclose the proportion (%) of total DI for band 1. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.20
<b>CW4.21</b>	WTWs in size band 2	Please disclose the proportion (%) of total DI for band 2. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.21
<b>CW4.22</b>	WTWs in size band 3	Please disclose the proportion (%) of total DI for band 3. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.22
<b>CW4.23</b>	WTWs in size band 4	Please disclose the proportion (%) of total DI for band 4. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.23
<b>CW4.24</b>	WTWs in size band 5	Please disclose the proportion (%) of total DI for band 5. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.24
<b>CW4.25</b>	WTWs in size band 6	Please disclose the proportion (%) of total DI for band 6. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.25
<b>CW4.26</b>	WTWs in size band 7	Please disclose the proportion (%) of total DI for band 7. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.26
<b>CW4.27</b>	WTWs in size band 8	Please disclose the proportion (%) of total DI for band 8. See additional guidance below.	Please disclose the number of WTW for each banding. See Additional Guidance	6A.27

Line	Title	Definition	RAG 4.10 line reference
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<b>CW4.28</b>	Total water treated at more than one type of works	Where water is treated at more than one type of works shown in lines CW4.13 to CW4.19 above, the average daily input which is recorded more than once in rows CW4.13 to CW4.19 above, entered as a negative.	6A.28
<b>CW4.29</b>	Number of treatment works requiring remedial action because of raw water deterioration	The number of water treatment works that require remedial action because of raw water deterioration. All works should be supported by the drinking water inspectorate (DWI) or in the case of planned activity be proposed to the DWI. The works should be included in the year the substantive activity is planned to take place.	6A.29
<b>CW4.30</b>	Distribution input from water treatment works being supplied by improved water quality from spend on water treatment to address raw water quality deterioration	Distribution input from water treatment works being supplied by improved water quality from spend on grey (conventional) and green (nature-based/non-conventional) solutions to address raw water quality deterioration	
<b>CW4.31</b>	Zonal population receiving water treated with orthophosphate	Zonal population receiving water treated with orthophosphate, in thousands	6A.30
<b>CW4.32</b>	Average pumping head – water treatment	Average pumping head for the water treatment business unit as defined in RAG 4 and RAG 2. This is to be calculated using actual pumping head rather than the rating of the pumps.	6A.31
<b>CW4.33</b>	Energy consumption - water treatment (MWh)	Measure of energy usage (electricity, gas, liquid fuels) by the water treatment wholesale business unit (irrespective of the power source). Energy usage should be measured as that which is either imported or self-generated and used in relevant business unit. No account should be taken of self-generated energy that is exported from the business unit where it is generated. Fleet transport and standby generation should be included as should an allowance for administrative buildings and head office function.	6A.32
<b>CW4.34</b>	Total number of water treatment imports	Total number of water treatment import points. Points not used in the year should still be included.	6A.33
<b>CW4.35</b>	Water imported from 3rd parties to water treatment works	The average daily water imported from 3rd parties to water treatment systems.	6A.34
<b>CW4.36</b>	Total number of water treatment exports	Total number of water treatment export points. Points not used in the year should still be included.	6A.35
<b>CW4.37</b>	Water exported to 3rd parties from water treatment works	The average daily water exported to 3rd parties from water treatment systems.	6A.36
<b>CW4.38</b>	Total number of water treatment works effluent discharges requiring new MCERTS flow monitoring	Total number of water treatment works effluent discharges requiring new MCERTS flow monitoring (EPR driver code).	



## CW4 Additional guidance

- 7.1 For both groundwater and surface water, a works is here defined as an individual location which receives raw or partially treated water for treatment (excluding secondary disinfection) and direct delivery to customers.
- 7.2 If the output of a site needs to be blended so as to become potable, then that site in itself is not defined as a works. However, where the total treatment process is split between a number of sites, the DI entering treated distribution should be split pro rata between bands based on the volumes treated at the individual sites. The pre-aeration of deep borehole water is included in category SD.
- 7.3 Companies should include water treatment works that have not been used in the year but have not been decommissioned and state in their commentary any instances where this is the case.

Categories of treatment types	Examples
<b>SD: Works providing simple disinfection only</b>	Marginal chlorination Pre-aeration
<b>W1: Simple disinfection plus simple physical treatment and/or blending only</b>	Rapid gravity filtration Slow sand filtration Pressure filtration Aeration (solvent removal)
<b>W2: Single stage complex physical or chemical treatment</b> <b>W3: More than one stage of complex treatment but excluding processes in W4, W5 or W6</b>	Super chlorination Coagulation Flocculation Biofiltration pH correction Softening
<b>W4: Single stage complex physical or chemical treatment with significantly higher operating costs than in W2/ W3</b> <b>W5: More than one stage of complex, high cost treatment</b>	Membrane filtration (excluding desalination) Ozone treatment Activated carbon/ pesticide removal UV treatment Adsorption treatment
<b>W6: Works with one or more very high cost processes</b>	Desalination Re-use

- 7.4 Line CW4.32 relates to the energy costs associated with operating costs only. For consistency within the APR (Line 2B.1) this line should include all energy costs (including electricity, gas and fuel for vehicles, plant and machinery). These lines are intended to capture energy consumed; energy exported should not be included.

### Band Guidance CW4.20 to CW4.27

Size band	Maximum Production Capacity Ml/d
Band 1	< 2
Band 2	≥ 2 and < 4
Band 3	≥4 and < 8
Band 4	≥8 and < 16
Band 5	≥16 and < 32
Band 6	≥32 and < 64
Band 7	≥64 and < 128
Band 8	≥ 128

## CW4 Commentary requirement

7.5 Companies should include the following commentary to this table;

- An explanation of instances where water treatment works have not been used in the year but have not been decommissioned.
- An explanation of any material year-on-year variations.
- An explanation of any changes in reporting methods / assumptions that have led to a material change in reported figures.
- An indication of the quality of data provided.

## 8. CW5 – Treated water distribution – assets and operations

Table CW5 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW5.1</b>	Total installed power capacity of potable water pumping stations	Total installed power of all potable treated water pumpsets (duty, assist and standby - irrespective of the number that may be working at any one time) associated with treated water distribution (into and within). Refer to RAG 2 A2 for proportional allocation.	6B.1
<b>CW5.2</b>	Total volumetric capacity of service reservoirs	The installed design/constructed capacity of treated water service reservoirs within the water supply system including treated water reservoirs at water treatment works and any secondary disinfection plant on reservoir sites. Include break pressure tanks. Exclude decommissioned assets.	6B.2
<b>CW5.3</b>	Total volumetric capacity of water towers	The installed design/constructed capacity of treated water storage towers within the water supply system. Exclude decommissioned assets.	6B.3
<b>CW5.4</b>	Water delivered (non- potable)	All non-potable water supplied as part of the appointed business. Include all non-potable water charged at standard and non-standard rates.	6B.5
<b>CW5.5</b>	Water delivered (potable)	All potable water supplied as part of the appointed business. This includes: <ul style="list-style-type: none"> <li>the average volume of water delivered for billed measured residential and businesses;</li> <li>the estimated volume of water delivered for billed unmeasured residential and business properties;</li> <li>supply pipe leakage;</li> <li>meter under registration for water delivered which is measured</li> <li>unbilled water taken legally for legitimate purposes (public supplies for which no charge is made eg some sewer flushing, uncharged church supplies, fire training and fire-fighting supplies where these are not charged irrespective of whether or not they are metered). Do not include volumes associated with leakage allowance rebates to metered customers;</li> <li>water taken illegally providing it is based on actual occurrences using sound and auditable identification and recording procedures (if not this should be treated as distribution losses and excluded from this line).</li> </ul>	6B.6

Line	Title	Definition	RAG 4.10 line reference
<b>CW5.6</b>	Water delivered (billed measured residential properties)	Average volume of water delivered to residential properties which is measured (Ml/d). This is to include supply pipe leakage and meter under-registration. Additional meters fitted to measured residential properties for ancillary supplies (eg external hosepipes) which are non-commercial are to be included, as should any fitted to unmeasured residential properties if this is how revenue is allocated. Exclude miscellaneous use (Distribution system operational use, water taken legally unbilled and water taken illegally unbilled).	6B.7
<b>CW5.7</b>	Water delivered (billed measured businesses)	Average volume of water delivered to businesses which is measured (Ml/d). This is to include supply pipe leakage and meter under-registration. Additional meters fitted to measured businesses for ancillary supplies (eg external hosepipes) which are non-commercial are to be included, as should any fitted to unmeasured businesses if this is how revenue is allocated. Exclude miscellaneous use (Distribution system operational use, Water taken legally unbilled and Water taken illegally unbilled).	6B.8
<b>CW5.8</b>	Distribution losses	Distribution losses represent the losses on the company's potable water distribution system, ie excluding supply pipe leakage, which is the customer's responsibility.	6B.10
<b>CW5.9</b>	Proportion of distribution input derived from impounding reservoirs	Proportion of distribution input derived from impounding (gravity fed) reservoirs, including bulk supply. Operational sources from which no water has been obtained in the report year should not be included in the number of sources.	6B.12
<b>CW5.10</b>	Proportion of distribution input derived from pumped storage reservoirs	Proportion of distribution input derived from pumped storage reservoirs including bulk supply. Operational sources from which no water has been obtained in the report year should not be included in the number of sources. Please refer to additional guidance relating to number of sources. Pumped storage reservoirs will receive an element of gravity flow. If this flow makes a material contribution (>20%) to the volume of the reservoir the distribution input from this source should be allocated proportionally between the two reservoir types. When reporting source numbers the source should be allocated according to the type of flow that delivers the larger part of the reservoir's input. For example, if 60% of the reservoir's volume is pumped river water the source should be counted as a pumped storage source.	6B.13
<b>CW5.11</b>	Proportion of distribution input derived from river abstractions	Proportion of distribution input derived from river abstractions including bulk supply. Operational sources from which no water has been obtained in the report year should not be included in the number of sources. Please refer to additional guidance relating to number of sources.	6B.14
<b>CW5.12</b>	Proportion of distribution input derived from groundwater works, excluding managed aquifer recharge (MAR) water supply schemes	Proportion of distribution input derived from groundwater works including bulk supply, but excluding managed aquifer recharge (MAR) water supply schemes. Operational sources from which no water has been obtained in the report year should not be included in the number of sources. Please refer to additional guidance relating to number of sources.	6B.15

Line	Title	Definition	RAG 4.10 line reference
<b>CW5.13</b>	Proportion of distribution input derived from artificial recharge (AR) water supply schemes	Proportion of distribution input derived from AR supply schemes including bulk supply. AR schemes are a subset of managed aquifer recharge (MAR) schemes, which functions by recharging an aquifer before or after abstraction. The water abstracted is not necessarily the water that has been recharged, so the water can be of natural quality and require more complex treatment. This excludes aquifer storage and recovery (ASR) water supply schemes (see line below).	6B.16
<b>CW5.14</b>	Proportion of distribution input derived from aquifer storage and recovery (ASR) water supply schemes	Proportion of distribution input derived from ASR supply schemes including bulk supply. ASR schemes are a subset of managed aquifer recharge (MAR) schemes, which functions by recharging an aquifer, storing that water and maintaining its quality. The aim is to enable simple and less costly treatment of the re-abstracted water, and that the water recharged is predominantly the water that is re- abstracted. This excludes artificial recharge (AR) water supply schemes (see line above).	6B.17
<b>CW5.15</b>	Proportion of distribution input derived from saline abstractions	Proportion of distribution input derived from saline abstractions including bulk supply. Operational sources from which no water has been obtained in the report year should not be included in the number of sources.	6B.18
<b>CW5.16</b>	Proportion of distribution input derived from water reuse schemes	Proportion of distribution input derived from reuse schemes. Direct effluent reuse, not returned to the environment.	6B.19
<b>CW5.17</b>	Total number of potable water pumping stations that pump into and within the treated water distribution system	The sum of owned and operated groundwater, surface water, re-pumping and import pumping stations that pump into and within the treated water distribution system (potable water).	6B.20
<b>CW5.18</b>	Number of potable water pumping stations delivering treated groundwater into the treated water distribution system	The number of potable water pumping stations delivering treated groundwater into the treated water distribution system. Groundwater stations are to be counted as 1, regardless if it has single lift or split lift / tandem pumping arrangements. Groundwater stations are to be counted as 1 for each separate site, where the pumped output is blended 'within' the treated water distribution system. See Example 3 in additional guidance below. Do not include stations where water enters the treated distribution system by gravity alone.	6B.21
<b>CW5.19</b>	Number of potable water pumping stations delivering surface water into the treated water distribution system	The number of potable water pumping stations delivering surface water into the treated water distribution system. Do not include stations where water enters the treated distribution system by gravity alone.	6B.22

Line	Title	Definition	RAG 4.10 line reference
<b>CW5.20</b>	Number of potable water pumping stations that re-pump water already within the treated water distribution system	The number of potable water pumping stations that re-pump water already within the treated water distribution system. Do not include single property boosters which are bespoke single customer (residential or business) solutions to overcome localised pressure and flow complaints.	6B.23
<b>CW5.21</b>	Number of potable water pumping stations that pump water imported from a 3rd party supply into the treated water distribution system	The number of potable water pumping stations that pump water imported from a 3rd party supply into the treated water distribution system. Do not include stations where water enters the treated distribution system by gravity alone.	6B.24
<b>CW5.22</b>	Total number of service reservoirs	The number of treated water service reservoirs within the water supply system including treated water reservoirs at water treatment works and any secondary disinfection plant on reservoir sites. Include break pressure tanks. Exclude decommissioned assets. A single structure divided into separate cells counts as one reservoir.	6B.25
<b>CW5.23</b>	Number of water towers	The number of treated water service towers within the water supply system. Exclude decommissioned assets.	6B.26
<b>CW5.24</b>	Energy consumption – treated water distribution (MWh)	Measure of energy usage (electricity, gas, liquid fuels) by the treated water distribution wholesale business unit (irrespective of the power source). Energy usage should be measured as that which is either imported or self-generated and used in relevant business unit. No account should be taken of self-generated energy that is exported from the business unit where it is generated. Fleet transport and standby generation should be included as should an allowance for administrative buildings and head office function.	6B.27
<b>CW5.25</b>	Average pumping head – treated water distribution	Average pumping head for the treated water distribution business unit as defined in RAG 4 and RAG 2. This is to be calculated using actual pumping head rather than the rating of the pumps.	6B.28
<b>CW5.26</b>	Total number of treated water distribution imports	Total number of treated water distribution import points. Points not used in the year should be included.	6B.29
<b>CW5.27</b>	Water imported from 3rd parties to treated water distribution systems	The average daily water imported from 3rd parties to treated water distribution systems.	6B.30
<b>CW5.28</b>	Total number of treated water distribution exports	Total number of treated water distribution export points. Points not used in the year should still be included.	6B.31
<b>CW5.29</b>	Water exported to 3rd parties from treated water distribution systems	The average daily water exported to 3rd parties from treated water distribution systems.	6B.32

Line	Title	Definition	RAG 4.10 line reference
<b>CW5.30</b>	Peak 7 day rolling average distribution input	The peak 7 day rolling average distribution input (DI) is the average daily DI of the 7 consecutive days within the charging year 1 April – 31 March with the highest DI. Please include appropriate commentary identifying the 7 day period when the peak 7 day rolling average occurred. For the avoidance of doubt this figure is reported prior to any MLE adjustments.	
<b>CW5.31</b>	Peak 7 day rolling average distribution input /annual average distribution input	This is calculated as a percentage as follows:  [Peak 7 day rolling average distribution input (CW.5.30) / Distribution input (CW.5.39)] * 100	
<b>CW5.32</b>	Measured household consumption (excluding supply pipe leakage)	Measured household consumption (excluding supply pipe leakage) for the reporting year. Reported post MLE. This is a component of water balance reporting. Lines CW5.32 – 5.38 should sum to the total reported in line CW5.39.	
<b>CW5.33</b>	Unmeasured household consumption (excluding supply pipe leakage)	Unmeasured household consumption (excluding supply pipe leakage) for the reporting year. Reported post MLE. This is a component of water balance reporting. Lines CW5.32 – 5.38 should sum to the total reported in line CW5.39.	
<b>CW5.34</b>	Measured non-household consumption (excluding supply pipe leakage)	Measured non-household consumption (excluding supply pipe leakage). Reported post MLE. This is a component of water balance reporting. Lines CW5.32 – 5.38 should sum to the total reported in line CW5.39.	
<b>CW5.35</b>	Unmeasured non-household consumption (excluding supply pipe leakage)	Unmeasured non-household consumption (excluding supply pipe leakage). Reported post MLE. This is a component of water balance reporting. Lines CW5.32 – 5.38 should sum to the total reported in line CW5.39.	
<b>CW5.36</b>	Total annual leakage	Total annual leakage measures the sum of distribution losses and supply pipe losses in megalitres per day (Ml/d). It includes any uncontrolled losses between the treatment works and the customer's stop tap. It does not include internal plumbing losses. Reported post MLE. This is a component of water balance reporting. Lines CW5.32 – 5.38 should sum to the total reported in line CW5.39.	6B.9
<b>CW5.37</b>	Distribution system operational use	Distribution system operational use includes water used by a company to meet its statutory obligations particularly those relating to water quality. Examples include mains flushing and air scouring. Reported post MLE. Lines CW5.32 – 5.38 should sum to the total reported in line CW5.39.	
<b>CW5.38</b>	Water taken unbilled	Total water taken unbilled (whether legally or illegally). Water used by the company for mains tests, flushing, washouts, running to waste, or incurred through burst mains or other leakage should be excluded. Reported post MLE. Lines CW5.32 – 5.38 should sum to the total reported in line CW5.39.	6B.11
<b>CW5.39</b>	Distribution input	Distribution input is the average amount of potable water entering the distribution system. Please refer to the additional guidance for a diagrammatic representation of what this should include. Reported post MLE. Lines CW5.32 – 5.38 should sum to the total reported in this line.	6B.4

Line	Title	Definition	RAG 4.10 line reference
<b>CW5.40</b>	Distribution input (pre-MLE)	Distribution input (pre-MLE) is a measure of the volume of potable water input to the distribution network at ground water and surface water treatment works, and bulk potable supply imports, with any bulk potable supply exports deducted. Distribution input is reported as an annual average MI/d and should be reported as a pre-MLE figure following the criteria defined in the PR19 performance commitment reporting guidance – Ofwat, ' <a href="#">Reporting guidance – leakage</a> ', 2018, p. 14.	
<b>CW5.41</b>	Leakage upstream of DMAs	Leakage upstream of DMAs Represents the losses between distribution input (DI) meters and the zonal or DMA meters used for operational leakage management (i.e., network upstream of DMA meters used for leakage targeting, including any trunk mains and service reservoirs). Post MLE estimates should be used for this reporting line. For companies that use zonal reporting that includes trunk mains and service reservoirs as part of reporting total leakage, this line should be the difference between total leakage and DMA/sub zonal leakage. For companies that report total leakage using DMAs plus other estimates for trunk mains and service reservoir leakage, these post MLE estimates should be used to derive this line. This is a subcomponent of CW5.36, total annual leakage and lines CW5.41 to CW5.46 should sum to the total in CW5.36.	
<b>CW5.42</b>	Distribution main losses	Distribution main losses represents the losses from the company's potable water distribution mains downstream of DMA meters, excluding any customer supply pipe losses. This is a subcomponent of CW5.36, total annual leakage and lines CW5.41 to CW5.46 should sum to the total in CW5.36. Reported as a post MLE figure	
<b>CW5.43</b>	Customer supply pipe losses – measured households	Losses on the customer supply pipe of measured household customers. It does not include internal plumbing losses. This is a subcomponent of CW5.36, total annual leakage and lines CW5.41 to CW5.46 should sum to the total in CW5.36. Reported as a post MLE figure	
<b>CW5.44</b>	Customer supply pipe losses – unmeasured households	Losses on the supply pipe of unmeasured household customers. It does not include internal plumbing losses. This is a subcomponent of CW5.36, total annual leakage and lines CW5.41 to CW5.46 should sum to the total in CW5.36. Reported as a post MLE figure	
<b>CW5.45</b>	Customer supply pipe losses – measured non-households	Losses on the supply pipe of measured non-household customers. It does not include internal plumbing losses. This is a subcomponent of CW5.36, total annual leakage and lines CW5.41 to CW5.46 should sum to the total in CW5.36. Reported as a post MLE figure	
<b>CW5.46</b>	Customer supply pipe losses – unmeasured non-households	Losses on the supply pipe of unmeasured non-household customers. It does not include internal plumbing losses. This is a subcomponent of CW5.36, total annual leakage and lines CW5.41 to CW5.46 should sum to the total in CW5.36. Reported as a post MLE figure	



## CW5 Additional guidance

8.1 Measured volumes supplied to NAVs should be reported as bulk exports under CW5.29, Water exported to 3rd parties' treated water distribution systems.

### Component analysis as a proportion of distribution input – not to scale

Distribution Input						
Distribution system ←-----	Customers' installations -----▶					
	Water Delivered – billed measured residential	Water Delivered – billed measured business	Water Delivered – billed unmeasured residential	Water Delivered – billed unmeasured business	Water taken legally unbilled	Water taken illegally unbilled
	Water Delivered – billed measured		Water Delivered – billed unmeasured		Water taken unbilled	
	Water Delivered – billed					
Water not delivered		Water Delivered to customers				
Distribution system operational use	Distribution Losses	Underground supply pipe losses	Total plumbing losses		Customer use	
			Above ground supply pipe losses	Internal plumbing losses		
Total leakage		Consumption				

8.2 The proportions entered in lines CW5.9 to CW5.16 should sum to unity. The proportion of water in each source category is a measure of how difficult a company's water is to treat. When classifying the water into one of the categories, the following guidelines should be followed.

- Water abstracted from boreholes or springs and pumped directly to a treatment works should be classified as groundwater water.
- Water abstracted from a river and transported directly to a treatment works (either by pumping or by gravity) should be classified as river water.

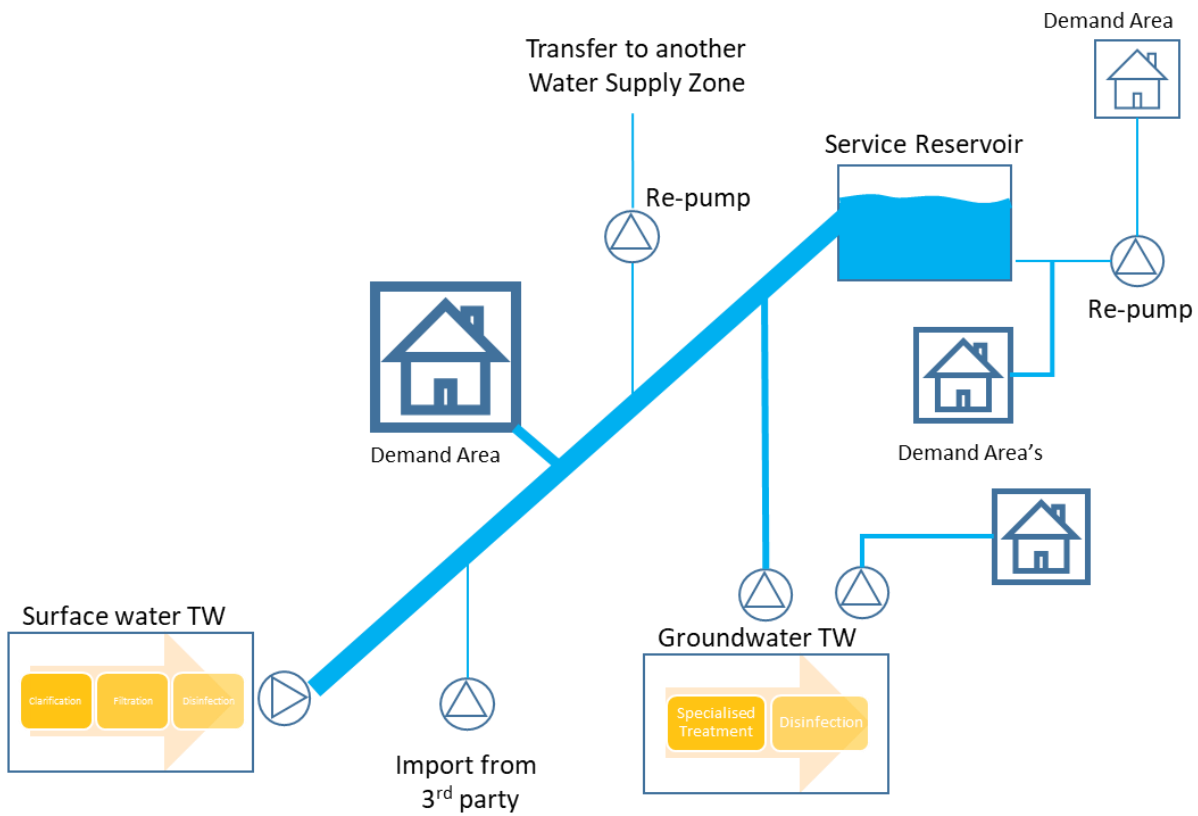
- Water that is transported directly to a treatment works from a reservoir which has been filled by a river should be classified as water from reservoirs (this is because, in general, while the water is stored in the reservoir, sediments will settle making the water easier to treat).
- Water that is transported from a reservoir, via a river, to a treatment works should be classified as water from a river.

8.3 If multiple sources feed a works (for example a river and a number of boreholes) and the flow from these sources is combined prior to treatment, then all of the flow entering the works can be categorised as the more difficult to treat water. (In this example, all of the water would be categorised as river water.)

### **Guidance for calculating the total number of pumping stations that pump into and within the treated water distribution service (potable water)**

- 8.4 When calculating the number of pumping stations note that this is not the number of individual pumps.
- 8.5 Include all pumping stations that have been operationally available, regardless of whether they have been used in the reporting year, as this applies to all types of pumping stations, not just those lines related to 'proportion of distribution input'.
- 8.6 Do not count more than once where a common source water is pumped to separate pressures at the same site (ie high lift and low lift), see example 2
- 8.7 Pumping stations solely for exporting water to a 3rd party are to be excluded, as per RAG2 A1.

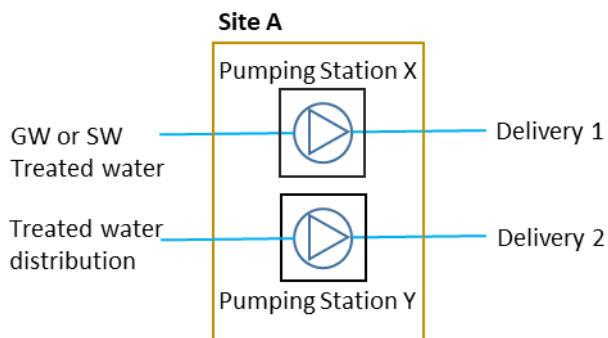
### **Definition of average pumping head**



**Note:** Pumping stations solely for exporting to a 3<sup>rd</sup> party are to be excluded

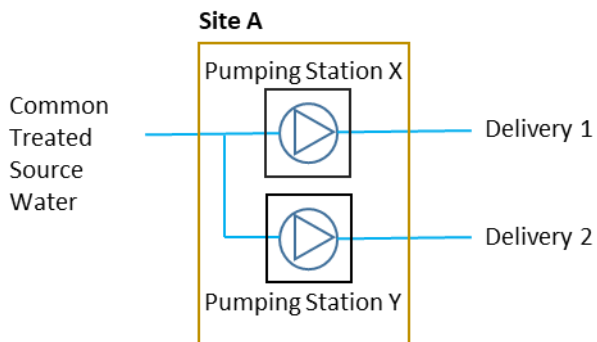
### Example 1

This is where a pumping station (Y) that re-pumps water already within the Treated Water Distribution System is located at the same site (A) as a groundwater or surface water pumping station (X). This counts as two pumping stations (one in CW5.20 and one in CW5.18 or CW.19).



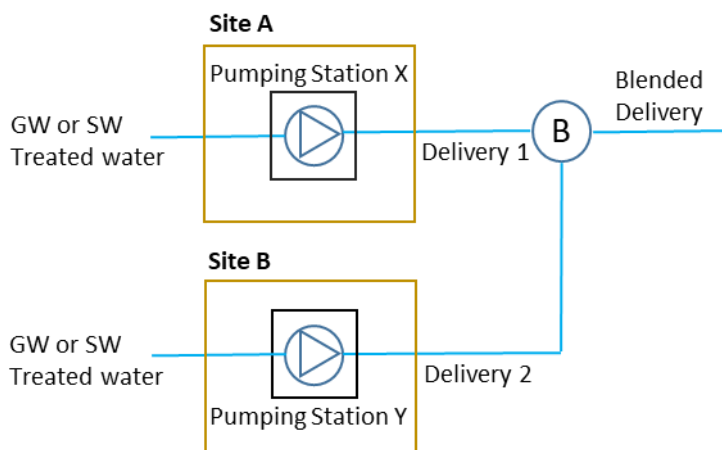
## Example 2

This is where multiple pumping stations may be located at the same site where a common source water (groundwater or surface water) is pumped to separate pressures at the same site (ie high lift and low lift). This counts as **one pumping station**.



## Example 3

This is where two separate Groundwater or Surface water pumping stations at different sites are blended in treated water distribution. This counts as **two pumping stations**.



- 8.8 Pumping stations solely for the exporting water to a 3rd party are to be **excluded**, as per RAG2 A1.
- 8.9 MLE refers to the maximum likelihood estimation adjustments used to reconcile the water balance gap between distribution input and the sum of water delivered to customers, a company's own water use, water delivered unbilled, distribution system use and leakage.<sup>1</sup> When we reference pre-MLE figures in the context of distribution input we are referring to the volume of water that has been directly measured as entering the company's distribution system through flow monitoring.

## **CW5 Commentary requirement**

- 8.10 Companies should include the following commentary to this table;
- An explanation of any material year-on-year variations.
  - An explanation of any changes in reporting methods / assumptions that have led to a material change in reported figures.
  - An indication of the quality of data provided.
- 8.11 Companies should include appropriate commentary for Peak 7 day rolling average distribution input in line CW5.30 identifying the 7 day period when the peak 7 day rolling average occurred.

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<sup>1</sup> See Ofwat, ['Reporting guidance – leakage'](#), 2018, p. 14.

## 9. CW6 – Water network+ – Mains, communication pipes and other data

Table CW6 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW6.1</b>	Total length of potable mains as at 31 March	The total length of potable water mains on 31 March of report year	6C.1
<b>CW6.2</b>	Total length of potable mains relined	Total length of potable mains relined in report year. Include all spray applied lining.	6C.2
<b>CW6.3</b>	Total length of potable mains renewed	Total length of potable mains renewed in report year. Include mains whose prime purpose is renewal of an existing main, even where existing main remains in service (ie is not abandoned immediately on commissioning of new main). Include mains sleeving/pipe cracking/slip lining where used for this category of work.	6C.3
<b>CW6.4</b>	Total length of new potable mains	Total length of new potable mains laid in report year. Include new mains and mains renewals involving upsizing, whose prime justification is the requirement for additional capacity.	6C.4
<b>CW6.5</b>	Total length of potable water mains ( $\leq 320\text{mm}$ )	The length of all potable water mains less than or equal to 320mm. Include all elements of trunk and distribution assets and system ancillaries. Include facilities intended for standby and emergency supplies.	6C.5
<b>CW6.6</b>	Total length of potable water mains ( $>320\text{mm}$ and $\leq 450\text{mm}$ )	The total length of all potable water mains greater than 320mm up to and including 450mm. Include all elements of trunk and distribution assets and system ancillaries. Include facilities intended for standby and emergency supplies.	6C.6
<b>CW6.7</b>	Total length of potable water mains ( $>450\text{mm}$ and $\leq 610\text{mm}$ )	The total length of all potable water mains greater than 450mm up to and including 610mm. Include all elements of trunk and distribution assets and system ancillaries. Include facilities intended for standby and emergency supplies.	6C.7
<b>CW6.8</b>	Total length of potable water mains ( $> 610\text{mm}$ )	The length of all potable water mains greater than 610mm. Include all elements of trunk and distribution assets and system ancillaries. Include facilities intended for standby and emergency supplies.	6C.8
<b>CW6.9</b>	Number of lead communication pipes	The total number of lead communication pipes within the undertaker's supply area.	6C.9
<b>CW6.10</b>	Number of galvanised iron communication pipes	The total number of galvanised iron communication pipes within the undertaker's supply area.	6C.10
<b>CW6.11</b>	Number of other communication pipes	The total number of other (excluding lead & galvanised iron) communication pipes within the undertaker's supply area.	6C.11
<b>CW6.12</b>	Number of lead communication pipes replaced or relined for water quality	The number of lead communication pipes replaced or relined that are owned by the company.	6C.21

Line	Title	Definition	RAG 4.10 line reference
<b>CW6.13</b>	Total length of lead communication pipes replaced or relined	The length of lead pipe replaced or relined from the water main to the underground boundary box or the property boundary.	
<b>CW6.14</b>	Number of external lead supply pipes replaced or relined	Number of external lead supply pipes replaced or relined from the underground boundary box or property boundary to the internal stop tap or above ground boundary box (if fitted).	
<b>CW6.15</b>	Total length of external lead supply pipes replaced or relined	Total length of external lead supply pipes replaced or relined from the underground boundary box or property boundary to the internal stop tap or above ground boundary box (if fitted).	
<b>CW6.16</b>	Number of internal lead supply pipes replaced or relined	Number of internal lead supply pipes replaced or relined from the internal stop tap or above ground boundary box to the compliance point (kitchen tap).	
<b>CW6.17</b>	Total length of internal lead supply pipes replaced or relined	Total length of internal lead supply pipes replaced or relined from the internal stop tap or above ground boundary box to the compliance point (kitchen tap).	
<b>CW6.18</b>	Total length of potable mains laid or structurally refurbished pre-1880	Total length of potable mains laid or structurally refurbished pre- 1880	6C.12
<b>CW6.19</b>	Total length of potable mains laid or structurally refurbished between 1881 and 1900	Total length of potable mains laid or structurally refurbished between 1881 and 1900	6C.13
<b>CW6.20</b>	Total length of potable mains laid or structurally refurbished between 1901 and 1920	Total length of potable mains laid or structurally refurbished between 1901 and 1920	6C.14
<b>CW6.21</b>	Total length of potable mains laid or structurally refurbished between 1921 and 1940	Total length of potable mains laid or structurally refurbished between 1921 and 1940	6C.15
<b>CW6.22</b>	Total length of potable mains laid or structurally refurbished between 1941 and 1960	Total length of potable mains laid or structurally refurbished between 1941 and 1960	6C.16
<b>CW6.23</b>	Total length of potable mains laid or structurally refurbished between 1961 and 1980	Total length of potable mains laid or structurally refurbished between 1961 and 1980	6C.17
<b>CW6.24</b>	Total length of potable mains laid or structurally refurbished between 1981 and 2000	Total length of potable mains laid or structurally refurbished between 1981 and 2000	6C.18
<b>CW6.25</b>	Total length of potable mains laid or structurally refurbished between 2001 and 2020	Total length of potable mains laid or structurally refurbished between 2001 and 2020	6C.19
<b>CW6.26</b>	Total length of potable mains laid or structurally refurbished post 2021	Total length of potable mains laid or structurally refurbished post 2021	

Line	Title	Definition	RAG 4.10 line reference
<b>CW6.27</b>	Company area	Area of company in km <sup>2</sup> . No adjustment should be made to take account of areas supplied by NAVs.	6C.20
<b>CW6.28</b>	Compliance Risk Index	<p>DWI measure of Compliance Risk.</p> <p>The Compliance Risk Index (CRI) is a measure designed to illustrate the risk arising from treated water compliance failures during the previous calendar year. It is calculated by assessment of the:</p> <p>the significance of the parameter failing the standards in the Regulations (the Parameter score); the cause of the failure; the manner of the investigation of the failure by the company; and any mitigation put in place by the company (the Assessment score); and</p> <p>the location of the failure within the supply system taking into account the proportion of the company's consumers affected.</p> <p>See <a href="#">DWI-Compliance-Risk-Index-CRI-definition.pdf (ofwat.gov.uk)</a> for more information</p>	6C.22
<b>CW6.29</b>	Event Risk Index	<p>DWI measure of Event Risk.</p> <p>The Event Risk Index (ERI) is a measure designed to illustrate the risk arising from water quality events during the previous calendar year. It is calculated by assessment of the:</p> <p>seriousness of the event;</p> <p>company performance in managing the event;</p> <p>impact of the event; and</p> <p>total population served by the company.</p> <p>See <a href="#">DWI-Event-Risk-Index-ERI.pdf</a> for more information.</p>	6C.23

## CW6 Additional guidance

9.1 Not applicable.

## CW6 Commentary requirement

9.2 Companies should include the following commentary to this table;

- An explanation of any material year-on-year variations.
- An explanation of any changes in reporting methods / assumptions that have led to a material change in reported figures.
- An indication of the quality of data provided.



## 10. CW7 – Demand management – Metering and leakage activities

Table CW7 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW7.1</b>	New optant meter installation for existing customers	Total capital and operating expenditure (excluding cost of providing metering to new service connections) for provision of meters requested by optants during the reporting year. This excludes meters installed at properties with an existing meter installation. These costs do not include costs related to smart meter infrastructure assets such as telemetry. These costs are associated with the meter numbers identified in line CW7.6. We expect companies to explain any variation between the costs reported in this line and line CW3.41 in their supportive narrative.	6D.1
<b>CW7.2</b>	New selective meter installation for existing customers	Total capital and operating expenditure (excluding cost of providing metering to new service connections) for provision of meters introduced by companies during the reporting year (irrespective of whether these meters are used for charging). This excludes meters installed at properties with an existing meter installation. These costs do not include costs related to smart meter infrastructure assets such as telemetry. These costs are associated with the meter numbers identified in line CW7.7. We expect companies to explain any variation between the costs reported in this line and line CW3.44 in their supportive narrative.	6D.2
<b>CW7.3</b>	New business meter installation for existing customers	Total capital and operating expenditure (excluding cost of providing metering to new service connections) for provision of new meters for businesses and other non-household customers during the reporting year. This excludes meters installed at properties with an existing meter installation. These costs do not include costs related to smart meter infrastructure assets such as telemetry. These costs are associated with the meter numbers identified in line CW7.8. We expect companies to explain any variation between the costs reported in this line and line CW3.47 in their supportive narrative.	6D.3
<b>CW7.4</b>	Residential meters renewed	Total capital and operational expenditure for the renewal of existing residential meter installations (basic or smart) with meters during the reporting year. These costs do not include costs related to smart meter infrastructure assets such as telemetry. These costs are associated with the meter numbers identified in line CW7.9.	6D.4
<b>CW7.5</b>	Business meters renewed	Total capital and operational expenditure for renewal of existing business meter installations (basic or smart) with meters during the reporting year. These costs do not include costs related to smart meter infrastructure assets such as telemetry. These costs are associated with the meter numbers identified in line CW7.10	6D.5

Line	Title	Definition	RAG 4.10 line reference
<b>CW7.6</b>	New optant meters installed for existing customers	The total number of meters installed at the request of the optants at existing residential properties during the reporting year (including where a company has installed a meter for social tariff purposes). Include meters installed at residential properties fitted in any location (eg internal, external in garden, external at boundary etc). Exclude all meters installed at the company's behest. For clarity and to avoid possible double counting, this should exclude basic meters installed at properties where the resident subsequently becomes an optant by virtue of switching to measured charges. These meters should have already been reported in line CW7.7. This excludes meters installed at properties with an existing meter installation, which is defined as a renewal, and should be recorded in line CW7.9.	6D.6
<b>CW7.7</b>	New selective meters installed for existing customers	The number of meters installed during the reporting year at existing billed residential properties at the behest of the company (irrespective of whether these meters are used for charging). Include meters installed at residential properties fitted in any location (eg internal, external in garden, external at boundary etc). Exclude all meters installed for meter optants or following property conversions. This excludes meters installed at properties with an existing meter installation, which is defined as a renewal, and should be recorded in line CW7.9.	6D.7
<b>CW7.8</b>	New business meters installed for existing customers	The number of meters installed during the reporting year at existing business properties. This excludes meters installed at properties with an existing meter installation, which is defined as a renewal, and should be recorded in line CW7.10.	6D.8
<b>CW7.9</b>	Residential meters renewed	The number of existing residential property meter installations renewed during the reporting year.	6D.9
<b>CW7.10</b>	Business meters renewed	The number of existing business property meter installations renewed during the reporting year.	6D.10
<b>CW7.11</b>	New residential meters installed for existing customers – supply-demand balance benefit	The supply-demand balance benefit (demand saving) associated with the installation of the meters defined in lines CW7.6 and CW7.7. The benefit is assumed to be a reduction in consumption and is recorded as a positive figure. Benefits relating to leakage reduction are excluded from this line.	6D.11
<b>CW7.12</b>	New business meters installed for existing customers – supply-demand balance benefit	The supply-demand balance benefit (demand saving) associated with the installation of the meters defined in line CW7.8 The benefit is assumed to be a reduction in consumption and is recorded as a positive figure. Benefits relating to leakage reduction are excluded from this line.	6D.12
<b>CW7.13</b>	Residential meters renewed - supply-demand balance benefit	The supply-demand balance benefit (demand saving) associated with the meters renewals in line CW7.4. The benefit is assumed to be a reduction in consumption and is recorded as a positive figure. Benefits relating to leakage reduction are excluded from this line. This is only recorded for renewals with AMR or AMI meters. No benefit is expected from a renewal of a basic meter with another basic meter.	6D.13

Line	Title	Definition	RAG 4.10 line reference
<b>CW7.14</b>	Business meters renewed - supply-demand balance benefit	The supply-demand balance benefit (demand saving) associated with the meters renewals in line CW7.5. The benefit is assumed to be a reduction in consumption and is recorded as a positive figure. Benefits relating to leakage reduction are excluded from this line. This is only recorded for renewals with AMR or AMI meters. No benefit is expected from a renewal of a basic meter with another basic meter.	6D.14
<b>CW7.15</b>	Residential properties - meter penetration	The total company meter penetration this line should correspond to that used in water resource management plans and reporting. Calculated excluding void properties.	6D.15
<b>CW7.16</b>	Per capita consumption (measured)	Estimated per capita consumption of households that are supplied with measured water. This figure applies to billed measured households and excludes underground supply pipe leakage. Underground supply pipe leakage is any loss of water from the underground supply pipe.  We expect companies to ensure the classification of properties as either household or non-household is consistent with the retail market definition of eligibility.	6D.18
<b>CW7.17</b>	Per capita consumption (unmeasured)	Estimated per capita consumption of households that are supplied with unmeasured water. This figure applies to billed unmeasured households and excludes underground supply pipe leakage. Underground supply pipe leakage is any loss of water from the underground supply pipe.  We expect companies to ensure the classification of properties as either household or non-household is consistent with the retail market definition of eligibility.	6D.19

## CW7 Additional guidance

- 10.1 For a definition of basic, automated meter read (AMR) and advanced metering infrastructure (AMI) meters please see table SUP1 guidance.
- 10.2 For avoidance of doubt the expenditure lines in table CW7 should include any allocation of general and support costs to these activities. Any assumptions necessary to derive figures at the level of granularity requested in this table and an associated assessment of confidence in the data should be included in your supporting narrative.
- 10.3 Unless specified otherwise in the line description reporting of lines CW.1 to CW.15 should be split by meter type, basic meter, AMR meter or AMI meter.

## CW7 Commentary requirement

- 10.4 Companies should include the following commentary to this table;

- An explanation of any material year-on-year variations.
- An explanation of any changes in reporting methods / assumptions that have led to a material change in reported figures.
- An indication of the quality of data provided.

## 11. CW8 – WRMP schemes (excluding leakage and metering activities)

Table CW8 line definitions

Line	Title	Classification and delivery year	Expenditure	Benefits	RAG 4.10 line reference
<b>CW8.1- CW8.50</b>	WRMP scheme	<p>'Classification' of water resources management plan (WRMP) schemes included in the business plan should be one of the following four categories;</p> <ul style="list-style-type: none"> <li>• Supply-side improvements delivering benefits in 2025-30</li> <li>• Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering)</li> <li>• Internal interconnectors delivering benefits in 2025-2030</li> <li>• Supply-demand balance improvements delivering benefits starting from 2031</li> </ul> <p>The delivery year is the year in which the scheme initially provides water resource benefits.</p>	<p>The capital and operating expenditure incurred each year for each scheme to delivered as part of the company's water resources management plan (WRMP). Expenditure in millions to three decimal places. Total expenditure for each 'classification' should reconcile with the expenditure reported in table CW3.</p>	<p>Supply-demand balance benefits for each scheme in megalitres (Ml/d) to one decimal place.</p> <p>For schemes delivering benefits in the 2025-30 period include the forecast cumulative benefits delivered in each year eg for a supply scheme delivering 7 Ml/d benefits in 2027-28; 7 in 2027-28, 2028-29, 2029-30 and after '2029-30'. For a 5-year demand scheme delivering 2 Ml/d reduction per annum from 2025-26 input 2,4,6,8,10 from 2025-26 to 2029-30.</p> <p>For internal interconnectors list total maximum transfer capacity delivered eg for a 10 Ml/d interconnector delivered in 2028-29 input 10 Ml/d in 2028-29 and 10 Ml/d in 2029-30.</p> <p>Length in kilometres to one decimal place, pipe diameter in millimetres to zero decimal places, pipe material (freeform text), pumping capacity installed in kilowatts to zero decimal places and storage capacity in cubic meters to zero decimal places are additionally required to be reported for internal interconnector schemes.</p> <p>For Supply demand balance improvements delivering benefits starting from 2031 the benefits should be recorded in the after 2029-30 column.</p>	6F.1- 6F.50
<b>CW8.51</b>	Total	Not applicable	The sum of lines CW8.1 to CW8.50.	The sum of lines CW8.1 to CW8.50. Note the internal interconnector specific elements are not summated.	6F.51

## CW8 Additional guidance

- 11.1 The scheme name and reference should be consistent with that used in the company's WRMP24.
- 11.2 We require forecast costs and cost drivers to be reported for every scheme in every year. Annual forecast costs are required and not cumulative costs. Where appropriate the method used to apportion or estimate costs should be set out in table commentary.
- 11.3 Forecast costs to be incurred beyond the reporting year 2029-30 should be given in total in the column 'After 2029-30'. For operating costs, the average annual forecast cost should be given. This should be based upon the average scheme utilisation forecast. For the avoidance of doubt the capital costs should be the costs incurred prior to the scheme entering use. Future refurbishment and replacement costs should not be included in the 'After 2029-30' column.
- 11.4 For schemes with a long lead in time we have included a 'pre-2025-26' expenditure column to capture capital expenditure to date.
- 11.5 Forecast benefits incurred beyond the reporting year 2029-30 should be given in total in the column 'After 2029-30'.
- 11.6 For the avoidance of doubt the 'Demand-side improvements' captured in this table exclude the costs and benefits of metering and leakage management that are captured in tables CW7, OUT4 and CW19. Therefore, table CW8 should not duplicate these costs and benefits but should record the cost and benefits of other water efficiency activities.
- 11.7 For the avoidance of doubt the requirement to report storage capacity for interconnector schemes relates to storage assets such as service reservoirs. We are not requesting that the pipeline capacity is reported in terms of cubic meters.

## Examples

- 11.8 The following 3 examples show how the table should be populated.
- Scheme 1 is a supply-side scheme, forecast to be constructed between 2025 and 2028 with a total capital cost of £6.0 million. The site is forecast to be fully commissioned and enter service part way through 2027-28 and has an annual opex cost of £246,000. Note in 2027-28 it is expected to incur £50,000 of opex costs operating over a less than 12-month period. The site provides 7 MI/d of additional supply benefits.
  - Scheme 2 is an internal interconnector forecast to enter service in 2028-29 with a maximum capacity of 10 MI/d. The scheme is a polyethylene (PE) pipeline of 25km, of

500mm diameter with an installed pumping capacity of 75kW and no additional storage. Operating costs are forecast to be £40,000 per annum, within minimal use in the first year. Construction to take place between 2026-27 and 2028-29 total capital cost is forecast to be £13.5 million.

- For scheme 3 is a strategic reservoir development providing 50 MI/d. Development was started in 2024-25 but not expected to complete until 2034-35. The total forecast scheme capital cost is £475 million. A future forecast operational cost of £200,000 per annum is identified.

PR24 submission table guidance – section 3: Costs (wholesale) water

Scheme name	Scheme reference	Units	DPs	Classification	Delivery year (in use)	Capital expenditure (£m)							Opex costs (£m)					
						pre-2025-26	2025-26	2026-27	2027-28	2028-29	2029-30	After 2029-30	2025-26	2026-27	2027-28	2028-29	2029-30	After 2029-30
New WTW	WTWA1	see column heading	3	Supply-side improvements delivering benefits in 2025-30	2027-28	0.000	1.300	3.900	1.300	0.000	0.000	0.000	0.000	0.000	0.050	0.246	0.246	0.246
Interconnector	INTB3	see column heading	3	Internal interconnectors delivering benefits in 2025-2030	2028-29	0.000	0.000	1.500	8.000	4.000	0.000	0.000	0.000	0.000	0.000	0.005	0.040	0.040
Strategic reservoir development	RES2A	see column heading	3	Supply-demand balance improvements delivering benefits starting from 2031	2036-37	5.000	11.000	24.753	28.782	71.356	82.588	251.521	0.000	0.000	0.000	0.000	0.000	0.200

Scheme name	Scheme reference	Units	DPs	Classification	Delivery year (in use)	Benefits (M/d)						Complete for internal interconnectors only				
						2025-26	2026-27	2027-28	2028-29	2029-30	After 2029-30	Length (km)	Diameter (mm)	Pipe material (text-freeform)	Pumping capacity installed (kW)	Storage capacity installed (m <sup>3</sup> )
New WTW	WTWA1	see column heading	3	Supply-side improvements delivering benefits in 2025-30	2027-28	0.0	0.0	7.0	7.0	7.0	7.0	0.0	0	0.000	0	0
Interconnector	INTB3	see column heading	3	Internal interconnectors delivering benefits in 2025-2030	2028-29	0.0	0.0	0.0	0.0	10.0	10.0	25.0	500	polyethylene (PE)	75	0
Strategic reservoir development	RES2A	see column heading	3	Supply-demand balance improvements delivering benefits starting from 2031	2036-37	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0	0.000	0	0

Note we have split the table in two to improve readability on the page



## CW8 Commentary requirement

11.9 Companies should include the following commentary to this table;

- Explanation and justification for any variation in schemes from those presented in the company's WRMP24. This should cover any variation in proposed schemes, their costs, benefits and delivery year.
- Identification of schemes delivered as part of the green recovery programme.
- For schemes entering use prior to 2029–30 there may be years where the forecast operating costs are representative of a period less than 12 months. In such cases the commentary should clearly identify this and the annual average operating cost for a 12-month period.
- We recognise there may be situations where operating costs recorded in 'After 2029–30' column could include costs incurred prior to the scheme entering use and the annual average operating cost. In such cases the annual average operating cost should be clearly indicated in the commentary. We expect the annual average operating cost to be calculated based upon the expected long-term average totex expenditure per annum for the option to the end of the WRMP planning period (or to decommissioning/end of life of option). This is calculated based on the average option utilisation for the period.

## 12. CW9 – Enhancement expenditure analysis (cumulative) – water resources and water network plus

### Table CW9 line definitions

This table will collect the cumulative expenditure on schemes completed in the year. It will mirror the categories of expenditure in table CW3.

### CW9 Additional guidance

- 12.1 Where a quality enhancement scheme (or the proportionally allocated component of a quality enhancement scheme) has more than one cost driver, companies should allocate the expenditure attributable to the primary driver to the relevant line. Any net additional cost for delivering any further drivers should be included in the relevant line.
- 12.2 This table contains inputs needed for populating the PR19 Strategic regional water resources reconciliation model and calculating the end of period revenue and RCV adjustments to be applied at PR24.
- 12.3 Expenditure included within third party services in table CW1 should not be included in this table.

### Cumulative expenditure on schemes completed in the report year

- 12.4 Companies should report schemes as completed when they come into beneficial use which may not always be the same as the financial close of a scheme. If companies incur additional expenditure on schemes already reported as completed (for example, additional snagging costs or landscaping), the expenditure should be reported in the relevant line in the report year but not restated in the cumulative expenditure on schemes completed in the report year columns. RAG4 appendix 4 contains guidance on reporting cumulative costs on schemes completed in the year.

## 13. CW10 – Wholesale water local authority rates

Table CW10 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW10.1</b>	Rateable value	Rateable value.	
<b>CW10.2</b>	Wholesale Water business rates charge for current year before transitional relief	Local authority rates charged to the water wholesale business in respect of the (then) current year, before the application of any transitional relief.	
<b>CW10.3</b>	Wholesale Water business rates transitional relief	The impact of any transitional relief on the local authority rates charged to the wholesale water business in respect of the (then) current year, entered as a negative.	
<b>CW10.4</b>	Wholesale Water business rates charge for current year after transitional relief	Local authority rates charged to the wholesale water business in respect of the (then) current year, after the application of any transitional relief. Calculated as the sum of CW10 lines 2 and 3.	
<b>CW10.5</b>	Adjustments to wholesale water business rates charge for prior years	Any adjustments to the local authority rates charged to the wholesale water business in respect of previous years	
<b>CW10.6</b>	[Other wholesale water business rates adjustments 1]	Any further adjustments made to reconcile to the local authority rates charge for the wholesale water business reported in the APR 4J.7 (please specify)	
<b>CW10.7</b>	[Other wholesale water business rates adjustments 2]	Any further adjustments made to reconcile to the local authority rates charge for the wholesale water business reported in the APR, 4J.7 (please specify)	
<b>CW10.8</b>	[Other wholesale water business rates adjustments 3]	Any further adjustments made to reconcile to the local authority rates charge for the wholesale water business reported in the APR, Schedule 4D line 6 (please specify)	
<b>CW10.9</b>	Wholesale Water business rates forecast for Business Plan	Local authority rates charged to the wholesale water business, as reported in the APR 4J.7. Equals the sum of CW10 lines 4 to 8.	
<b>CW10.10</b>	Change in wholesale water business rates costs from prior year	The year-on-year change in local authority rates charged to the wholesale water business in respect of the (then) current year before the application of any transitional relief. Calculated as the change in CW10 line 1 as compared to the previous year.	
<b>CW10.11</b>	Change in wholesale water business rates costs due to the impact of any revaluation	The change in local authority rates charged to the wholesale water business arising from any expected revaluation, before the impact of any transitional relief.	
<b>CW10.12</b>	Change in wholesale water business rates costs due to change in asset stock	The change in local authority rates charged to the wholesale water business arising from changes in the asset stock of the wholesale wastewater business before the impact of any transitional relief.	
<b>CW10.13</b>	[Change in wholesale water business rates costs due to other 1]	Any further changes to the local authority rates charge for the wholesale water business, before the impact of transitional relief (please specify)	

Line	Title	Definition	RAG 4.10 line reference
<b>CW10.14</b>	[Change in wholesale water business rates costs due to other 2]	Any further changes to the local authority rates charge for the wholesale water business, before the impact of transitional relief (please specify)	
<b>CW10.15</b>	[Change in wholesale water business rates costs due to other 3]	Any further changes to the local authority rates charge for the wholesale water business, before the impact of transitional relief (please specify)	
<b>CW10.16</b>	Change in wholesale water business rates charge before transitional relief	The sum of changes in local authority rates charged to the wholesale water business before transitional relief - calculated as the sum of CW10 lines 11 to 15.	
<b>CW10.17</b>	Check difference	Check difference - CW10 line 16 should equal line 10, with a check difference of zero	

## CW10 Additional guidance

13.1 This table seeks to understand the causes and pace of changes over time in reported local authority rates charges for the wholesale water business unit, as currently reported in APR table 4J line 7.

13.2 This table asks for actual and forecast business rates for the water service for the period 2022-23 to 2029-30. Companies can use an additional 3 lines to cover other types of adjustment to their wholesale water business rates.

## CW10 Commentary requirement

13.3 Companies should include the following commentary to this table.

- An explanation of the rateable values included in line one, including whether they are actual, draft or company forecast.
- An explanation of the basis of the calculation of any transitional relief included in line 3.
- An explanation for the of the calculation used to derive the change in business rates due to revaluation in line 11.

## 14. CW11 – Third party costs by business unit for the wholesale water service

Table CW11 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW11.1</b>	Non potable water (which are not bulk supplies)	Opex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.2</b>	Rechargeable opex - Fluoridation	Opex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.3</b>	Rechargeable opex - Fire hydrant install & repair	Opex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.4</b>	Rechargeable opex - third party damage	Opex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.5</b>	Rechargeable opex - build over	Opex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.6</b>	Other rechargeable opex	Other third party water service opex costs (price control) included in RAG 4.10 Appendix 1 not covered in lines 1 to 5.	
<b>CW11.7</b>	Total third party water service costs ~ price control (operating expenditure)	Sum of lines 1 to 6.	
<b>CW11.8</b>	Bulk supplies	Opex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.9</b>	Reservoir operating agreements	Opex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.10</b>	Other excluded charge opex	Other third party water service opex costs (non-price control) included in RAG 4.10 Appendix 1 not covered in lines 8, 9 and 12.	
<b>CW11.11</b>	Third party water npc opex excluding developer services	Sum of lines 8 to 10.	
<b>CW11.12</b>	Developer services non-s185 diversions opex	Opex costs relating to non-s185 diversions.	
<b>CW11.13</b>	Total third party water service costs ~ non price control (operating expenditure)	Sum of lines 11 to 12.	
<b>CW11.14</b>	Non potable water (which are not bulk supplies)	Capex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.15</b>	Rechargeable capex - Fluoridation	Capex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.16</b>	Rechargeable capex - Fire hydrant install & repair	Capex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.17</b>	Rechargeable capex - third party damage	Capex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.18</b>	Rechargeable capex - build over	Capex costs relating to activities set out in RAG 4.10, Appendix 1.	

Line	Title	Definition	RAG 4.10 line reference
<b>CW11.19</b>	Other rechargeable capex	Other third party water service capex costs (price control) included in RAG 4.10 Appendix 1 not covered in lines 14 to 18.	
<b>CW11.20</b>	Total third party water service costs ~ price control (capital expenditure)	Sum of lines 14 to 19.	
<b>CW11.21</b>	Bulk supplies	Capex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.22</b>	Reservoir operating agreements	Capex costs relating to activities set out in RAG 4.10, Appendix 1.	
<b>CW11.23</b>	Other excluded charge capex	Other third party water service capex costs (non-price control) included in RAG 4.10 Appendix 1 not covered in lines 21, 22 or 25.	
<b>CW11.24</b>	Third party water npc capex excluding developer services	Sum of lines 21 to 23.	
<b>CW11.25</b>	Developer services non-s185 diversion capex	Capex costs relating to non-s185 diversions.	
<b>CW11.26</b>	Total third party water service costs ~ non price control (capital expenditure)	Sum of lines 24 to 25.	

## CW11 Additional guidance

14.1 This table reports third party water service costs split between operating and capital expenditure and between those included in the price control and those outside of the price control.

## CW11 Commentary requirement

14.1 Companies should include the following commentary to this table;

- An explanation of any material year-on-year variations.

## 15. CW12 – Transitional spending in the wholesale water service

### Table CW12 line definitions

The line definitions for this table are the same as for table CW3 but for 2024-25 capex only.

### CW12 Additional guidance

- 15.1 The purpose of this table is for companies to identify the accelerated ('transition') water service capital expenditure they would make in the last year of the current price control period (2020-25) in preparation for the early delivery of their outcomes in the next price control period (2025-30). Following review, Ofwat will then exclude this early expenditure from the totex reconciliation for 2020-25 (AMP7) but include this expenditure in 2025-30 (AMP8). We expect the majority of transition expenditure to be associated with delivering the future investment programme for the water network plus price control but, in exceptional circumstances, we will also allow the transition programme in the water resources control.
- 15.2 To ensure consistency, companies should ensure their estimates of forecast transition expenditure are compiled on the same basis, using the same process and approaches, as the forecasts of expenditure reported in tables CW1, CW2 and CW3.
- 15.3 Allocation between capital maintenance and enhancement drivers - where an investment has both a maintenance and enhancement benefit, companies should proportionally allocate the expenditure in line with the proportional allocation approach used in their APR submissions. The maintenance expenditure should be included in the appropriate line for maintaining the long-term capability of the assets and the enhancement expenditure should be allocated to lines appropriate to the relevant cost category. If the enhancement component has more than one quality driver, please see guidance below.
- 15.4 Quality enhancement schemes' investment with more than one cost driver - where a quality enhancement scheme (or the proportionally allocated component of a quality enhancement scheme) in AMP8 has more than one cost driver, companies should allocate the expenditure attributable to the primary driver to the relevant line. Any net additional cost for delivering any further drivers should be included in the additional lines.
- 15.5 Expenditure in this table should be included in 2025-30 forecast expenditure and **not** 2024-25 expenditure in table CW3.

## **CW12 Commentary requirement**

15.6 Companies should include the following commentary to this table;

- An explanation of why it is efficient to bring the investment forward.
- An explanation of why it was not included in its outcomes and long-term planning at PR19.
- An explanation of the deadlines for investment and the statutory requirement to which it relates.

15.7 In each case, an appropriate level of table commentary is expected to explain the company's allocation approaches.



## 16. CW13 – Best value analysis; enhancement expenditure – water resources and water network+

### Table CW13 line definitions

- 16.1 This table will collect expenditure data to aid the calculation of benefit to cost ratios for the enhancement proposals in the company business plan. It requests information on capex, opex, third-party contributions and present value of capex and opex for each of the categories of expenditure in table CW3.

### CW13 Additional guidance

- 16.2 Expenditure and third-party contribution figures for the AMP8 and AMP9 periods should only refer to those enhancement projects which are expected to start in AMP8. Therefore, figures in this table may not align with other tables that collect long-term costs. This guidance also applies to the present value data requested in this table.
- 16.3 Figures presented in Table CW13 should reflect the mean forecast of the expenditure and third-party contributions that companies expect to achieve in relation to the proposed enhancement projects over the specified period. Again, these options should be those which are due to start in AMP8.
- 16.4 Costs and third-party contributions should be adjusted to 2022–23 prices using the CPIH Index financial year average.
- 16.5 To calculate the present value of costs, companies should apply the social time preference rate as set out in the ['The Green Book'](#) (HM Treasury, 2020).<sup>2</sup> To calculate the present value of capex, costs should be converted to a stream of annual costs over the appraisal period, where the annual cost is made up of depreciation costs plus the allowed return on capital. Depreciation (or run-off) costs should be calculated using straight-line depreciation during the whole life of the asset. The allowed returns should be calculated using the PR19 allowed return on capital rate unless we specify a new rate for PR24.
- 16.6 Companies should provide present value of cost figures for a 30-year appraisal period as a minimum. Companies can also provide present value of costs over a longer appraisal period if judged appropriate (e.g. if there are significant additional costs/benefits to be

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<sup>2</sup> See paragraphs 2.23, and 5.32 to 5.39.

realised beyond the 30-year period). A free-form column is available for companies to present these figures if companies choose to.

16.7 There is no need to provide present value figures for third-party contributions.

### **CW13 Commentary requirement**

16.8 Companies should include the following commentary to this table;

- An explanation of key assumptions made to calculate present value of cost figures (e.g., asset lifetimes, WACC rate, risks, uncertainties).
- An indication of the level of uncertainty and sensitivity of the present value and third-party contribution figures.
- A justification for including present value figures for a period longer than 30 years where company chooses to present these figures. Company should set out the length of the appraisal period used.

## 17. CW14 – Best value analysis of least cost option; enhancement expenditure – water resources and water network+

### Table CW14 line definitions

- 17.1 This table will collect expenditure data to aid the calculation of benefit to cost ratios for the least cost enhancement option – against which the proposed option will be assessed. It requests information on capex, opex, third-party contributions and present value of capex and opex of the least cost options for each of the categories of expenditure in table CW3.

### CW14 Additional guidance

- 17.2 The least cost option is the option that minimises the whole life expenditure needed to meet the required statutory outcomes. This option can be best value or not. This option can also be the enhancement option proposed in the company business plan, in which case the same expenditure and third-party contribution figures that were used to inform Table CW13 should be used in this table.
- 17.3 Expenditure and third-party contribution figures for the AMP8 and AMP9 period should refer to those least cost projects which would have been expected to start in AMP8 if they had been taken forward, as opposed to the proposed option in the company business plan. This guidance also applies to the present value data requested in this table.
- 17.4 Figures presenting in Table CW14 should reflect the mean forecast of the expenditure and third-party contributions that companies expect to achieve over the specified period for the least cost options. Again, these options should be those which would have been due to start in AMP8.
- 17.5 Cost and third-party contribution figures should be adjusted to 2022-23 prices using the CPIH Index financial year average.
- 17.6 To calculate the present value of costs, companies should apply the social time preference rate as set out in the ['The Green Book'](#) (HM Treasury, 2020).<sup>3</sup> To calculate the present value of capex, costs should be converted to a stream of annual costs over the appraisal period, where the annual cost is made up of depreciation costs plus the allowed return on capital. Depreciation (or run-off) costs should be calculated using

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<sup>3</sup> See paragraphs 2.23, and 5.32 to 5.39.

straight-line depreciation during the whole life of the asset. The allowed returns should be calculated using the PR19 allowed return on capital rate unless we specify a new rate for PR24.

17.7 Companies should provide present value of costs for a 30-year appraisal period as a minimum. Companies should also provide present value of costs for a longer appraisal period if also provided in Table CW13. The longer appraisal period should be consistent to that used in Table CW13. A free-form column is available for companies to present these figures.

17.8 There is no need to provide present value figures for third-party contributions.

### **CW14 Commentary requirement**

17.9 Companies should include the following commentary to this table;

- An explanation of the least cost solutions underpinning the expenditure in each cost category.
- An explanation of key assumptions made to calculate present value of cost figures (e.g., asset lifetimes, WACC rate, risks, uncertainties).
- An indication of the level of uncertainty and sensitivity of the present value and third-party contribution figures.

## 18. CW15 – Best value analysis; benefits – water resources and water network+

### Table CW15 line definitions

- 18.1 This table seeks to collect benefit data to aid the calculation of benefit to cost ratios for the enhancement proposals included in the company business plan. It requests information on the number of units of benefit created and benefit value that will be generated by these proposals for each of the categories of expenditure in table CW3. The table also requests information on the present value of the benefits to be created by the expenditure proposals for each category of expenditure.
- 18.2 The data on number of units of benefit created will be used to help map the estimated benefit impact of the company enhancement proposals to performance commitments.

### CW15 Additional guidance

- 18.3 For each category of enhancement expenditure, the benefit information needs to be split out by benefit type. There are ten lines available for each category of expenditure. Companies need to select the benefit types that are relevant to the proposals underpinning each cost category. These can be selected from the drop-down list in the 'benefit type' column. Companies will need to fill out the benefit information requested for each of the 'selected' lines.
- 18.4 Benefit figures for the AMP8 and AMP9 periods should refer to those enhancement projects which are expected to start in AMP8. This guidance also applies to the present value data requested in this table.
- 18.5 Figures in Table CW15 should reflect the mean forecast of the benefit impacts that companies expect to achieve from the proposed enhancement projects over the specified period. Again, these projects should be those which are due to start in AMP8.
- 18.6 To inform benefit value impacts, companies should use the valuations identified by the collaborative research on indicative outcome delivery incentives. Where the collaborative outcome delivery incentive rates research cannot be used to derive a monetary value, companies should use the WINEP options development guidance which provides recommended values for a range of environmental and social outcomes. Where companies consider that the standardised values are not suitable or applicable to the benefits that are expected from company actions, then companies can use alternative unit values. In these instances, companies will have to present compelling evidence supporting these alternative values. Sources of evidence used to support these values

must be considered robust, sufficiently detailed and be openly available to us to verify if required.

18.7 Benefit value figures should be adjusted to 2022-23 prices using the CPIH Index financial year average.

18.8 To calculate the present value of benefits, companies should apply the social time preference rate as set out in the ['The Green Book'](#) (HM Treasury, 2020).<sup>4</sup>

18.9 Companies should provide present value of benefits figures for the 30-year appraisal period as a minimum. Companies should also provide present value of benefits over a longer appraisal period if also provided in Tables CW13 and CW14. A free-form column is available for companies to present these figures. The longer appraisal period (if used) should be consistent to that used in Tables CW13 and CW14.

## CW15 Commentary requirement

18.10 Companies should include the following commentary to this table;

- An explanation of the key assumptions underpinning the benefit and present value figures (e.g., unit benefit values, benefit impacts, risks, uncertainties).
- An explanation of the sources of evidence used to inform benefit impacts and unit benefit values.
- An indication of the level of uncertainty and sensitivity of benefit impact and present value figures.

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<sup>4</sup> See paragraphs 2.23, and 5.32 to 5.39.

## 19. CW16 – Best value analysis of least cost option; benefits – water resources and water network+

### Table CW16 line definitions

19.1 This table seeks to collect benefit data to aid the calculation of benefit to cost ratios for least cost options – against which the proposed enhancement schemes will be assessed. It requests information on the number of units of benefit created and benefit value that will be generated by the least cost options for each of the categories of expenditure in table CW3. The table also requests information on the present value of the benefits to be created by the least cost options for each category of expenditure.

### CW16 Additional guidance

- 19.2 The least cost option is the option that minimises the whole life expenditure needed to meet the required statutory outcomes. This option can be best value or not. This option can also be the proposed enhancement option in which case the same benefit information which was used to inform Table CW15 should be used in this table.
- 19.3 For each category of enhancement expenditure, the benefit information needs to be split out by benefit type. There are ten lines available for each cost category. Companies need to select the benefit types that are relevant to the least cost options underpinning each cost category. These can be selected from the drop-down list in the 'benefit type' column. Companies will need to fill out the benefit information requested for each of the 'selected' lines.
- 19.4 Benefit figures for the AMP8 and AMP9 periods should refer to those least cost projects which would have been expected to start in AMP8 if they had been taken forward, as opposed to the proposed option in the company business plan. This guidance also applies to the present value data requested in this table.
- 19.5 Figures in Table CW16 should reflect the mean forecast of the benefits that companies expect to achieve from the least cost options over the specified period. Again, these options should be those which would have been due to start in AMP8.
- 19.6 To inform benefit value impacts, companies should use the valuations identified by the collaborative research on indicative outcome delivery incentives. Where the collaborative outcome delivery incentive rates research cannot be used to derive a monetary value, companies should use the WINEP options development guidance which provides recommended values for a range of environmental and social outcomes. Where

companies consider that the standardised values are not suitable or applicable to the benefits that are expected from company actions, then companies can use alternative unit values. In these instances, companies will have to present compelling evidence supporting these alternative values. Sources of evidence used to support these values must be considered robust, sufficiently detailed and be openly available to us to verify if required.

19.7 Benefit value figures should be adjusted to 2022–23 prices using the CPIH Index financial year average.

19.8 To calculate the present value of benefits, companies should apply the social time preference rate as set out in the ['The Green Book'](#) (HM Treasury, 2020).<sup>5</sup>

19.9 Companies should provide present value of benefit figures for the 30-year appraisal period as a minimum. Companies should also provide present value of benefits for a longer appraisal period if also provided in Table CW15. A free-form column is available for companies to present these figures. The longer appraisal period (if used) should be consistent to that used in Table CW15.

## **CW16 Commentary requirement**

19.10 Companies should include the following commentary to this table;

- An explanation of the key assumptions made to derive benefit and present value figures (e.g., unit benefit values, benefit impacts, risks, uncertainties).
- An explanation of the sources of evidence used to inform benefit impacts and unit benefit values.
- An indication of the level of uncertainty and sensitivity of benefit impact and present value figures.

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<sup>5</sup> See paragraphs 2.23, and 5.32 to 5.39.



## **20. CW17 Additional driver information - water resources and water network+ (placeholder)**

20.1 This is a placeholder.

## 21. CW18 – Cost adjustment claims – base expenditure: water resources and water network+

Table CW18 line definitions

Line	Title	Definition	RAG 4.10 line reference
<b>CW18.1</b>	Description of cost adjustment claim	Description of costs being put forward for a cost adjustment claim. A separate block should be filled in for each cost adjustment claim.	
<b>CW18.2</b>	Type of cost adjustment claim	Type of cost adjustment claim proposed. This will be one of 'atypically large investment', 'new legal requirements', 'regional operating circumstances', or 'other (specify)'. See draft methodology document for identification of what can be considered as a cost adjustment claim.	
<b>CW18.3</b>	Symmetrical or non-symmetrical	Indication of whether the proposed cost adjustment claim is symmetrical (ie the upward adjustment proposed for the company is offset by downward adjustments to the other companies) or non-symmetrical.	
<b>CW18.4</b>	Reference to business plan supporting evidence	Reference to the business plan supporting documents that set out the case to the cost adjustment claim.	
<b>CW18.5</b>	Total gross value of the claim	Base expenditure claimed on the proposed cost adjustment. The expenditure should be gross of any implicit allowance (ie the proportion of the claim that is covered by our modelled cost baselines), and should be gross of any contributions or grants.	
<b>CW18.6</b>	Implicit allowance	Value of the implicit allowance calculated for the cost adjustment claim (ie the proportion of the claim that is covered by our modelled cost baselines).	
<b>CW18.7</b>	Total net value of the claim	The difference between CW18.5 and CW18.6.	
<b>CW18.8</b>	Historic base expenditure	Historic base expenditure related to the proposed cost adjustment claim. This should be gross of any capital contributions or grants.	
<b>CW18.9</b>	Totex for the control	This line should be equal to 'net totex' line CW1.15 for the relevant control.	
<b>CW18.10</b>	Materiality	The ratio between CW18.6 and CW18.9. Materiality of the cost adjustment claim should be assessed against the materiality thresholds indicated in the cost assessment appendix to the PR24 draft methodology.	

### CW18 Additional guidance

21.1 Please see Appendix 9 (setting expenditure allowances at PR24) and Appendix 10 (enhancement and cost adjustment claim assessment criteria) to the PR24 draft methodology for more details.

## **CW18 Commentary requirement**

21.2 Please see Appendix 9 (setting expenditure allowances at PR24) and Appendix 10 (enhancement and cost adjustment claim assessment criteria) to the PR24 draft methodology for more details.

## 22. CW19 – Leakage expenditure and activity data

22.1 This table is added as a placeholder to recognise the need to collect further data on forecast leakage expenditure and activities. Currently we have included all data requested under information note 22/02. We will amend the data requirements for final business plan tables following review of the data submitted by companies in response to information note 22/02.

### Table CW19 line definitions

22.2 Please see document [Leakage information request – supporting guidance](#) for details of line definitions, additional guidance and commentary requirements. The business plan tables include the line references relevant for this document.

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is a non-ministerial government department.  
We regulate the water sector in England and Wales.**

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