



# Water Resources Planning Tables - Instructions

Supporting document for the Water Resources Planning Guidelines

Version 5

Revised February 2022

We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

These guidelines are being issued by the Environment Agency to water undertakers that are wholly or mainly in England, and by Natural Resources Wales to water undertakers that are wholly or mainly in Wales.

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# Executive summary

A water company's water resources management plan (WRMP) is supported by a series of data tables. These tables present the supply-demand balance of the plan and some of the key supporting information. The water resource planning tables (WRP tables) are used to help regulators, water company customers and other organisations understand and appraise the water company's plan. It does this by setting out the information in a consistent format, based on pre-agreed definitions.

The information required from water companies is set out in tables, which are summarised below:

WRMP Table	Content	
Title page	Title, version control, audit trail and sign off. Requires basic company, resource zone, and planning scenario details	
1. Base Year	Licences and transfers for your base year. Separated by individual, grouped, drought-only, unused, new licences, raw water transfers and potable water transfers.	
2. WC Level Data	Table 2a: WC Level Normal Year planning scenario	WC level normal year key demand metrics across planning period.
	Table 2b: WC Level DYAA – Microcomponents - Final planning	WC level micro-components, including additional rows to accommodate company specific microcomponents, across planning period.
	Table 2c: WC Level DYAA - Meter Installations (including meter replacements) - Final Planning	Total Smart meterWC level meter installations (final plan), broken down by meter type, across planning period.
	Table 2d: WC Level DYAA - Key Components - Baseline	WC level baseline DYAA forecast - auto calculated from WRZ data.
	Table 2e: WC Level DYAA - Key Components - Final planning	WC level final plan DYAA forecast - auto calculated from WRZ data.
	Table 2f: WC Level DYAA - Levels of Service - Final Planning	WC level final plan DYAA, levels of service split by minimum and modelled, across the planning period. This can demonstrate how resilience to your design drought changes over time.
3. WRZ data	Table 3a: DYAA - Baseline	WRZ level baseline DYAA forecasts across the planning period.
	Table 3b: DYAA - Final plan Options	WRZ level component benefits from final plan DYAA options for the WRZ, across the planning period.
	Table 3c: DYAA - Final plan	WRZ level final plan DYAA forecasts across the planning period. Mostly

WRMP Table	Content
	calculated from tables 3a and 3b, but input required for some metrics
	Table 3d: DYCP - Baseline WRZ level baseline DYCP forecasts across the planning period. Only applicable for critical period zones.
	Table 3e: DYCP - Final plan Options WRZ level component benefits from final plan DYCP options for the WRZ, across the planning period. Only applicable for critical period zones.
	Table 3f: DYCP - Final plan WRZ level final plan DYCP forecasts across the planning period. Mostly calculated from tables 3a and 3b, but input required for some metrics. Only applicable for critical period zones.
4. Options Appraisal Summary	Table setting out options appraisal across water company, covering all options including unconstrained, feasible and preferred options. Key cost and benefit metrics and opportunity for additional company specific metrics to be reflected in additional columns.
5. Options Benefit	Preferred and alternative programme option benefits across the planning period.
5a-5c. Cost Profiles	Option level cost profiles; Option level unit cost profiles; worked example
6. Drought Plan links	Table setting out the drought measures per WRZ, the assumed benefits of the measures under different drought severities and across the planning period. The resultant supply demand balance calculated from WRZ tab data and any adjustments made to DI, import/exports, and headroom.
7. Adaptive Programmes	Proposed information for presenting adaptive planning, including high level information per alternative programme, including basic supply demand balance, overall costs and details around triggers and monitoring. Example diagram on presenting adaptive planning.
8. Business Plan Links	Water Company level final plan cost data across the planning period to link into the business planning process.

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# 1. Introduction

Your water resources management plan (WRMP) is supported by a series of data tables. These tables present the supply-demand balance of the plan and some of the key supporting information. The water resource planning tables (WRP tables) will be published and will help regulators, water company customers and other organisations understand and appraise the plan. It does this by setting out the information in a consistent format, based on pre-agreed definitions. It also enables the Environment Agency and Natural Resources Wales to provide nationally consistent advice to Defra or the Welsh Government.

This document explains to you how to fill in your WRP tables and replaces the 2019 table instructions. The broader expectations around producing a water resources management plan are set out in the Water Resources Planning Guideline (WRPG), supplementary notes and the Government expectations).

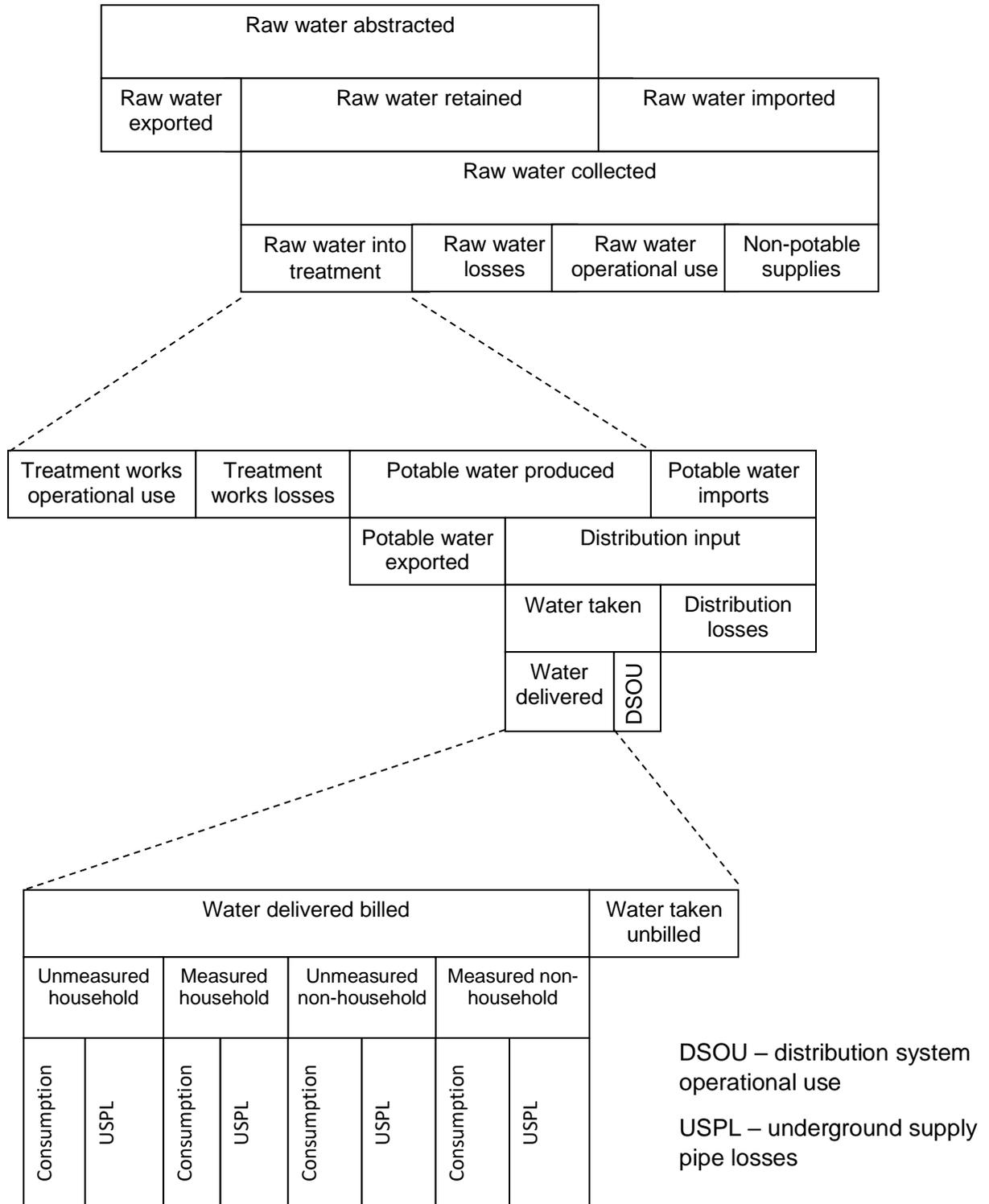
## Changes to the previous tables' guidance

Section 3 (Line definitions and guidance) provides definitions and guidance on the new WRP tables. There have been some changes to the WRP tables since WRMP19 data submissions, in response to feedback from stakeholders. These changes include:

- A set of tables per company rather than resource zone (WRZ), one tab per WRZ.
- Inclusion of additional transfer information in base year and options.
- Micro component reporting at company level only.
- Defined WRZ codes and defined option types.
- Normal year demand metrics at company level as per WRPG.
- Reporting of company level meter installations per year, by meter type.
- Key Supply Demand Balance data reported at company level.
- Levels of service at water company level over the planning period.
- WRZ additional deployable output changes - environmental destination and outage.
- Former table 6 sits in the WRZ table 3b, as an intermediary between BL and FP scenario.
- New options appraisal summary across company, showing costs and benefits and flagging which plan(s) options sit in and which WRZs benefit.
- Inclusion of natural capital impact metric and natural capital sub-metrics, with additional space for further best value metrics.
- Collection of aggregate cost data but exclusion of cost profiles across planning period in main tables (separate cost profile table will be used to ensure appropriate calculations).
- Drought plan links tab (previously table 10), including supply demand balance forecasts across planning period for drought scenarios.
- Adaptive programmes tab allowing presentation of alternative programmes, including narrative, high level data, and programme costs and benefits.
- Business plan links tab to allow business plan reporting on preferred (most likely), least cost and Ofwat core programmes.

## Water Balance

The water balance below sets out the fundamental water resources planning metrics that are central to water resources planning. Your WRP tables should be fully aligned to this.



## WRP Tables summary

WRMP Table	Content	
Title page	Title, version control, audit trail and sign off. Requires basic company, resource zone, and planning scenario details	
1. Base Year Licences	Licences and transfers for your base year. Separated by individual, grouped, drought-only, unused, new licences, raw water transfers and potable water transfers.	
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	Table 2e: WC Level DYAA - Key Components - Final planning	WC level final plan DYAA forecast - auto calculated from WRZ data.
	Table 2f: WC Level DYAA - Levels of Service - Final Planning	WC level final plan DYAA, levels of service split by minimum and modelled, across the planning period. This can demonstrate how resilience to your design drought changes over time.
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	Table 3c: DYAA - Final plan	WRZ level final plan DYAA forecasts across the planning period. Mostly calculated from tables 3a and 3b, but input required for some metrics
	Table 3d: DYCP - Baseline	WRZ level baseline DYCP forecasts across the planning period. Only applicable for critical period zones.
	Table 3e: DYCP - Final plan Options	WRZ level component benefits from final plan DYCP options for the WRZ, across the planning period. Only applicable for critical period zones.
	Table 3f: DYCP - Final plan	WRZ level final plan DYCP forecasts across the planning period. Mostly calculated from tables 3a and 3b, but input required for some metrics. Only applicable for critical period zones.

4. Options Appraisal Summary	Table setting out options appraisal across water company, covering all options including unconstrained, feasible and preferred options. Key cost and benefit metrics and opportunity for additional company specific metrics to be reflected in additional columns.
5. Options Benefit	Preferred and alternative programme option benefits across the planning period.
5a-5c. Cost Profiles	Option level cost profiles; Option level unit cost profiles; worked example
6. Drought Plan links	Table setting out the drought measures per WRZ, the assumed benefits of the measures under different drought severities and across the planning period. The resultant supply demand balance calculated from WRZ tab data and any adjustments made to DI, import/exports, and headroom.
7. Adaptive Programmes	Proposed information for presenting adaptive planning, including high level information per alternative programme, including basic supply demand balance, overall costs and details around triggers and monitoring. Example figures on presenting adaptive planning.
8. Business Plan Links	Water Company level preferred (most likely), least cost and Ofwat core programme cost data across the planning period to link into the business planning process.

The first table (Title Page) gives a summary of the content of all the WRP tables. A bespoke tables template will be generated and provided by us based on the defined WRZs we have listed for your company.

The WRP tables required will vary according to supply-demand circumstances and the planning scenarios required. The WRP tables needed for each situation are explained in section 2.

## 2. General instructions

### 2.1 How to complete the tables

Each WRP table provides a **unique row reference** for each component (e.g., 42BL). Use section 3 of this document to find definitions for individual components. All row references in the baseline tables are suffixed with BL, and all row references in the final plan tables are suffixed with FP. Your final plan should reflect your preferred (most likely) programme.

Cells in the table are **colour-coded** to indicate the type of content.

Clear cells - indicate an **input is required**

If there is no data to input e.g., no imports or exports, enter zeros, do not leave blank.

Companies should insert all data to the number of **decimal places** specified in the tables. If in doubt, companies should assume 2 decimal places. The exceptions are per capital consumption (PCC) related components, occupancy rate, consumption driven by climate change (all 1dp), and data given as percentages (0dp).

It is worth noting that companies are likely to take a **probabilistic approach** to develop certain components of their supply demand balance, and therefore hold more than one figure for each component for each year. Companies will need to choose which data to

include in the WRP tables and explain their choice in the commentary. This should be aligned to the WRPG.

Yellow shaded cells - indicates a **formula**.

Some cells in the WRP tables contain formulas. The calculations used in the tables are given in this document, as well as under the derivation column in the tables. In the tables the formula uses the row number. In this document both the row number and the input description are given.

Blue shaded cells - indicate **base year** data.

The plan will need to include a base year for supply and demand data. This could be based on outturn data for the latest year available before draft plan production, which is then adjusted for a dry year forecast. You should clearly explain how it has done this. Companies have not been prescribed a base year for WRMP24; therefore, each company will need to manually highlight its base year(s) for each WRZ in the tables and provide clear explanation through the commentary. If you change your base year between the draft and final plan, you should explain the reasons and detail the impacts on your plan.

Light grey shaded cells - indicate **preceding years**.

These are designed to provide context and data for the calculations which require data from a preceding year (e.g., property and population numbers). Where you present data within these columns you must state which year, the data is for.

Dark grey cells - indicate that **no data entry** is required.

Green shaded cells - indicate annualised not cumulative figures

Some cells in the WRP table rows require the input to be annualised figures rather than cumulative.

## 2.2 Which tables to complete

The tables that you need to submit will depend on your planning scenarios that you have chosen.

### Planning scenarios

Each company should submit your company workbook. However, the number of worksheets will depend on the total resource zones of the company. The WRZ tables accommodate **dry year annual average (DYAA) and critical period** planning scenarios.

All companies must plan to the DYAA in their WRMP, and therefore all companies should populate tables for the DYAA scenario in each water resource zone (WRZ) worksheet. For WRZs wholly or mainly in England this will be under the 1 in 500 year drought scenario. For WRZs wholly or mainly in Wales plan to worse historic drought as a minimum considering

more challenging but plausible droughts, unless it has been identified that 1 in 500 year drought planning is required e.g., where trading is being considered.

In addition to the dry year scenario, you may use other planning scenarios, such as the **critical period**. The critical period is the period when there is greatest stress on the ability of the supply system to meet demands (UKWIR 02/WR/27/3). Where your plan influenced by a critical period, you should populate a second set of WRZ tables to illustrate any dry year critical period scenario at the resource zone level. These tables are included in the template. **If you have more than one critical period, please discuss reporting requirements with you Environment Agency water company lead.**

Note that if a critical period preferred options set does not affect the final plan under the dry year scenario, you do not need to include critical period related options in the options tables (tables 4 and 5). However, if the critical period preferred options do have an effect on the DYAA scenario water resources situation, then you should include both sets of options in the options table. This has not changed since WRMP19 instructions.

**Table 2 Tables to submit for each water resource zone by planning scenario**

WRZ supply demand balance	DYAA (tables 3a - 3c)	Critical Period (CP) (tables 3d - 3f)
No deficit in DYAA or CP	✓	○
Deficit in DYAA only	✓	○
Deficit in CP only	✓	✓ (for each CP identified)
Deficit in DYAA and CP	✓	✓

## Programmes

Full tables are expected for your preferred (most likely) programme for each zone and at the water company level. We expect this to be your best value programme selected to deliver against what you have determined as your most likely scenario.

You are also expected to report against other programmes using tables 4, 5, 7 and 8:

### Ofwat Core Programme

The Ofwat core pathway is defined in Ofwat's long term delivery strategies and common reference scenarios discussion paper – published [here](#). We note that this is subject to change with any changes to guidance.

As set out by Ofwat, the Ofwat core pathway is not a central pathway between the alternative scenarios. It should fully reflect adaptive planning techniques and should include:

- investment that needs to be undertaken now to meet short-term requirements; PR24 and beyond: Long-term delivery strategies and common reference scenarios
- investment that is necessary to meet future low scenarios;
- investment required to keep future options open (such as enabling work), where possible, or is required to ensure that future options do not become significantly more expensive;

- 'no and/or low regrets' investments, for example investments that are required in both low or high scenarios, or across a wide range of plausible scenarios; and
- investment in learning and monitoring to ensure that the company is prepared for alternative pathways.

### **Least Cost Programme**

- A least cost benchmark to appraise other programmes against, as per section 10.4 of the WRP. This would reflect the lowest cost of delivering against your 'most likely' scenario.

### **Alternative programmes**

- As per section 10.6 of WRP, you should consider alternative programmes and can summarise these through the tables. This is particularly applicable if you have an adaptive plan.

### **Decision making tools**

Through the water resources planning process, you may have identified options to resolve a deficit or for other benefits, such as increased resilience.

You should report against the metrics defined in table 4, alongside additional metrics you have used in your appraisal of options to compile your best value programme. Section 10 of the WRP provides further guidance on how to compile your best value plan.

## **2.3 Making changes to the WRP tables**

Companies should not make any changes to the tables as it might compromise your transparency. For example, you should not delete or add rows and columns, use password protection, hide columns, rows or sheets, freeze panes or include links to other spreadsheets. This would adversely affect the regulators' ability to assess the data submitted.

In addition, you should not add new components or calculated fields to the WRP tables. If you wish to submit additional components or calculations not already included within the WRP table template, you should add an extra worksheet to the WRP submission and label it clearly. This should not replace the required data in tables, being collected consistently.

### **Structure**

For the present WRP tables, we have used excel tables rather than plain cells. This means formulae should be automatically carried over when you add additional rows, if added correctly. This will normally mean adding additional rows using the leftmost cell of the existing last table row. For more guidance, please visit: <https://support.microsoft.com/en-us/office/resize-a-table-by-adding-or-removing-rows-and-columns-e65ae4bb-e44b-43f4-ad8b-7d68784f1165>. To accommodate different requirements, we have developed the tables to make allowances for where water companies may need additional rows and columns, this is to ensure consistency.

You should not make any structural changes or additions to the worksheets. Freeform columns have been included in the options appraisal summary table to accommodate different metrics and approaches to decision making. As noted above, inclusion of additional components should be done separately.

On the options tables, you will need to insert in additional rows to reflect the company's options.

The planning period is a minimum of 25 years (plus previous lead in years). However, the tables have been produced to allow reporting beyond this, up until 2100.

In each workbook, the WRP tables should be presented on sequential worksheets (Table 1 Base Year, Table 2. WC Level Data, Table 3. Water Resource Zones), with each worksheet clearly labelled as the relevant table. The titles/labels of the tables cannot be renamed.

## Content

Formulae have been pre-populated to ensure consistent reporting and calculation of metrics. The default formulas are based on established good practice. If there is an exceptional need to overwrite any formulae, you should contact the EA or NRW to explain the change and clearly highlight the change in the tables. Where you have changed default formulae, you must explain what you have done, the reasons for doing so, and the impact this has had on the supply-demand data.

The final plan tables are calculated using a formula that adds together the relevant components in the baseline tables and the options tables. This is because we expect you to first establish the baseline (table 3a), then develop the options (table 3b), to give the final plan (table 3c). There may be circumstances where not all options impacts can be directly reflected in table 3c with the pre-defined formula. Under only these circumstances, you can remove the formulas from the final plan tables and manually input. However, we expect that the final planning scenarios should equal baseline supply-demand components plus the effects of options. Where this doesn't, you should clearly show the difference and explain your reason for changing these calculations. If removing formulas, you should change the colour coding of the cells, in line with the key, and highlight the change clearly in the derivation column.

## 2.4 Quality Assurance

Following feedback, the tables no longer highlight where data is missing, potential data errors, or unexpected data inputs. For WRMP24 it will be your responsibility to ensure the accuracy of its data, for both input components and calculated cells. We will be producing and utilising QA tools to ensure that the tables have been completed appropriately.

**You should look to submit your tables to the EA or NRW a month in advance of formal WRMP submission dates to facilitate the QA process and minimise data errors impacting the wider process.**

Where we identify discrepancies, we will follow this up and may return the tables to individual companies if these instructions have not been followed.

### How to submit the WRP tables

You should submit complete tables, including the cost information, to the Secretary of State and/or Welsh Ministers. If you think your tables contain commercially sensitive confidential information, then you should notify the secretary of state and provide an explanation. This will allow the Secretary of State to determine whether the information is or is not commercially confidential for the purposes of section 37B(2) of the Water Industry Act 1991.

When you publish your WRMP and tables you should redact only information that the Secretary of State has determined to be commercially confidential under section 37B(2) of the Water Industry Act 1991 and information where its publication would be contrary to the interests of national security. You should highlight any information you have redacted and include an explanation

Companies should submit the WRP tables for the company, covering each resource zone as a Microsoft Excel file. Any supplementary data should be provided separately in the same format.

Final tables for the draft plans should be labelled “draft plan final”. Final tables for the final plans should be marked “final plan final”. Workbook naming protocols are shown below:

watercompany\_dWRMP24\_tables\_v1\_YYMMDD

watercompany\_rdWRMP24\_tables\_v1\_YYMMDD

watercompany\_fWRMP24\_tables\_v1\_YYMMDD

If you have used a complex decision-making method and therefore need to submit benchmarking data, you should label these files appropriately. Make sure the essential information (planning scenario, resource zone name, plan version and date) is clear. We would still expect you to complete the options tables in the template provided alongside any additional data submission.

## 3. Line definitions and guidance

This section of the document provides definitions and guidance for each component in the tables. It is set out in the same order as the tables, starting with the title page and ending with table 8 (Business Plan Links).

### Table 1. Base Year Licences

Table 1 Baseline licences is for water company licensed abstractions, existing transfers, and deployable output (DO) information. Companies should report all current and proposed abstraction licences and sources and identify the DO figure for each source at a company level. Companies should also report all current transfers and identify their DO for each transfer.

If you need to consider both dry year annual average and critical period scenarios = you should input, the sources for each scenario in Table 1.

The information required for abstraction licences is grouped into five categories:

- Individual licences
- Grouped licences
- Unused licences - companies need to avoid double counting by excluding any drought only licences from this category
- Drought only licences
- Proposed new licences (within current Asset Management Plan )

For each licence, you should insert a licence number; source name; source type; a DO figure; an annual licensed quantity (except for conjunctive use); and explain the constraints on the DO.

The information required for transfers is grouped into two categories:

- Raw water transfers
- Potable water transfers

Enter as many lines as required under each category, however, ensure that you amend the yellow shaded calculated cells to take account of added rows and correctly sum the totals. You can add notes in column L to provide additional explanation if desired.

Companies should only complete these tables for the baseline. Changes to DO arising from all feasible options solution should be included within the options tables.

Notes on DO figures:

- You should refer to the WRPB for further details on what should be included within the DO figure.
- For conjunctive use, zonal DO will be greater than the sum of the individual sources. In these cases, it is acceptable to merge cells that are conjunctive use, to ensure that the table shows the DO that contributes to the total DO.
- Companies should enter information for each source regarding any constraints, length of historical data record for the source, and how the critical period has been determined, e.g., a specific year, or a modelled scenario. Further information should be provided in the commentary.
- The yellow shaded DO cells have been set up to calculate the total DO/annual licensed quantity for each category, however you should check these formulae still correctly calculate DO, particularly if you insert additional rows or merge cells.
- The sum of the total DO for the four categories is used to calculate the baseline DO in row 6BL (Table 3. WRZ Data). The definitions for the calculated cells are provided below.

Your water company should develop your resource zone baseline forecast without the effect of climate change and report this baseline deployable output in Table 3a for each WRZ. Rows 1BL, 2BL, 3BL, 4BL, 5BL are to be entered excluding the impacts of climate change.

The DO which is automatically entered in row 7BL is subsequently affected by baseline forecast changes in DO (due to sustainability changes, climate change, or other factors) and may differ from the DO in the final planning tables (depending on the options that are preferred).

You may have different approaches to what is included within DO. You may already have considered treatment works operational use, treatment works losses, raw water operational use and raw water losses within your DO or not. Information on how to deal with this is set out under the definitions of row 9BL.

**Table 1. Base Year licences**

<b>Table 1a</b>	<b>WC Level - Baseline licences - All individual licences</b>	<b>MI/d</b>
Definition:	DYAA and DYCP Deployable output and DYAA annual abstraction licence quantities for all licences that are used as single sources.	
Processing rule:	Input Calculation: sum of all licences inserted within section 0.1BL	
Method:	Single source information/resource zone modelling	

<b>Table 1b</b>	<b>WC Level - Baseline licences - Grouped licences</b>	<b>MI/d</b>
Definition:	DYAA and DYCP Deployable output and DYAA annual abstraction licence quantities for all licences used conjunctively or which have a group licence limit which limits deployable output. You should still reflect the annual licence limit for each licence individually, as well as any aggregate limits.	
Processing rule:	Input Calculation: sum of all licences inserted within section 0.2BL	
Method:	Resource zone modelling	

<b>Table 1c</b>	<b>WC Level - Baseline licences - Unused licences</b>	<b>MI/d</b>
Definition:	Deployable output and annual licensed quantity for existing licences which are unused in the baseline scenario.	
Processing rule:	Input Calculation: sum of all licences inserted within section 0.3BL	
Method:	Single source information	

<b>Table 1d</b>	<b>WC Level - Baseline licences - Drought only licences</b>	<b>MI/d</b>
Definition:	DYAA and DYCP Deployable output and DYAA annual abstraction licence quantities for all existing licences which are normally unused but specified as drought sources in your latest drought plan and would be used in the baseline scenario. Note: these licences should standby sources that would be used in drought and do not pose a risk of WFD Regs deterioration. Drought permits/orders must not be included in baseline and should not be reflected in table 1 at all.	
Processing rule:	Input Calculation: sum of all licences inserted within section 0.5BL	

<b>Table 1e</b>	<b>WC Level - Baseline licences - New licences (within current AMP)</b>	<b>MI/d</b>
Definition:	DYAA and DYCP Deployable output and DYAA annual abstraction licence quantities for any new licences which are anticipated (includes applications to submit awaiting a decision or issue) at any point within the current AMP of the WRMP planning are to be considered as contributing to your baseline deployable output.	
Processing rule:	Input Calculation: sum of all licences inserted within section 0.6BL	
Method:	Single source information/resource zone modelling	

<b>Table 1f</b>	<b>WC Level - Existing transfers - Raw water transfers</b>	<b>MI/d</b>
Definition:	Deployable output and annual licensed quantities of raw water transfers which are in place. Donor and recipient WRZs and agreement end date should be specified. This should cover inter-company and/or intra-company transfers. Any specific details of the transfer which may impact the deployable output should be included.	
Processing rule:	Input Calculation: sum of all licences inserted within section 0.6BL	
Method:	Single source information/resource zone modelling	

<b>Table 1g</b>	<b>WC Level - Existing transfers - Potable water transfers</b>	<b>MI/d</b>
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Definition:	Deployable output and annual licensed quantities of potable water transfers which are in place. Donor and recipient WRZs and agreement end date should be specified. This should cover inter-company and/or intra-company transfers. Any specific details of the transfer which may impact the deployable output should be included.
Processing rule:	Input Calculation: sum of all licences inserted within section 0.7BL
Method:	Single source information/resource zone modelling

The existing transfers in Tables 1f and 1g should reflect the current situation and impact that has on your base-year deployable output. This should include the impacts of climate change for your base year. There is no temporal element to these tables. We appreciate deployable output from transfers will change over time and we expect companies to reflect this in their baseline and final planning imports/exports in the WRZ tables, 3a and 3c.

Note: the annual abstraction licence quantity must be what is permitted in your abstraction licence. Should this be different for the critical period, explain why in the additional notes in column L.

## Table 2. Water Company (WC) Level Data

Table 2 Water Company Level Data sets out key information at the company level to set out your overall WRMP under your preferred (most likely) programme. This section provides guidance for tables 2a to 2f. This includes a normal year forecast against key demand metrics and dry year annual average for.

- microcomponents of your DYAA per capita consumption, your planned meter installations by meter type for final planning
- key water resources planning components for your baseline and final planning (preferred programme), and
- your minimum and modelled levels of service for final planning .

Assumptions made in populating these tables should be aligned to the assumptions you make for your WRZ level forecasts. The information in lines 1NY to 5NY is expected to be consistent with the information included in companies PR24 business plans for performance commitment levels relating to demand management. You should therefore use Ofwat's reporting guidance to ensure consistency with PR24 performance commitments. Final WRMP targets are expected to directly relate to PR24 business plan targets or performance commitments so should be developed in that context and will be scrutinised by Ofwat accordingly.

If a company cannot complete any parts of the tables detailed below, it should discuss this with regulators, outline why it cannot and how it will take steps to be able to do so as the plan develops.

### Table 2a: WC Level Normal Year planning scenario

As per the section 6 of the WRPG, we expect companies to present a normal year demand forecast annually for the first five years of your plan, and then at five-year intervals. Your normal year assumptions should be clearly detailed in your main plan, and as per the WRPG, should reflect demand in an average year.

1NY	Total Household Consumption	MI/d
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Definition:	Estimated consumption of all billed households across the water company under your company's normal year scenario, excluding underground supply pipe leakage (USPL) and unbilled (void) properties.
Processing rule:	Input

<b>2NY</b>	<b>Average Household - PCC</b>	<b>l/h/d</b>
Definition:	Estimated average per capita consumption for household use, both measured and unmeasured customers across the water company under your company's normal year scenario.	
Processing rule:	Input	

<b>3NY</b>	<b>Total Non-Household Consumption</b>	<b>MI/d</b>
Definition:	Estimated consumption of all billed non-households across the water company under your company's normal year scenario, excluding underground supply pipe leakage (USPL) and unbilled (void) properties.	
Processing rule:	Input	

<b>4NY</b>	<b>Total Leakage</b>	<b>MI/d</b>
Definition:	Estimated total leakage across the water company including all underground supply pipe leakage and distribution losses, under your company's normal year scenario.  Including: Distribution losses, unmeasured & measured household USPL, unmeasured & measured non-household USPL, void properties USPL	
Processing rule:	Input	

<b>5NY</b>	<b>Distribution input</b>	<b>MI/d</b>
Definition:	The volume of potable water from water treatment works plus any potable imports, and excluding exports as illustrated in the water balance diagram in Appendix A.  Report estimated distribution input across the water company under your normal year scenario.  Including: water delivered to measured and unmeasured household & non households, water taken unbilled, void property underground supply pipe leakage, distribution system operational use and distribution losses.	
Processing rule:	Input	

### **Table 2b: WC Level DYAA - Micro-components - Final planning**

This part of the table sets out measured household and unmeasured household PCC and their associated micro-components.

The micro-component assumptions are a key element to your demand forecast and we set out table 2b to allow you to reflect your micro-component breakdown at company level, over the planning period. You may include options in your final planning scenario which target particular microcomponents and there is an opportunity to reflect that here. We expect further detail around the approach including the inclusion or exclusion of new properties in your WRMP.

We expect you to provide your micro-component assumptions at the water company level, using the defined categories within Table 2b wherever possible, although we appreciate you may have additional micro-components identified. Companies can use the additional rows provided to accommodate further microcomponents, but these should be clearly defined.

We note, if you have significantly different assumptions between water resource zones, you should discuss this with the EA or NRW to determine whether any additional microcomponent data sharing is required.

More information about micro-components can be found in the UKWIR report (15/WR/02/9).

All estimates of per capita consumption (PCC) should be expressed in units of litres/head/day and exclude underground supply pipe losses. PCC in tables 2d, 3a and 3c is auto-calculated from consumption divided by population, not directly from the sum of micro-components (e.g., top down).

This is because company calculations of PCC may include elements of Maximum Likelihood Estimation. However, where measured and unmeasured PCC do not equal the sum of micro-components, you should highlight this within the tables and provide an explanation in the commentary.

<b>11.FPW</b>	<b>Measured Household - PCC</b>	<b>l/h/d</b>
Definition:	Estimated per capita consumption for billed households that are supplied with measured water. 11.FPW is auto calculated as the sum of the measured household micro-components. This line is not used in calculations elsewhere.	
Processing rule:	sum (11.1.FPW:11.9.FPW)	

<b>11.1.FPW</b>	<b>Measured toilet flushing</b>	<b>l/h/d</b>
Definition:	Estimated use of households billed for water supply - use for toilet flushing	
Processing rule:	Input	

<b>11.2.FPW</b>	<b>Measured personal washing</b>	<b>l/h/d</b>
Definition:	Estimated use of households billed for water supply - use for personal washing (shower/baths)	
Processing rule:	Input	

<b>11.3.FPW</b>	<b>Measured clothes washing</b>	<b>l/h/d</b>
Definition:	Estimated use of households billed for water supply - use for clothes washing (washing machines)	
Processing rule:	Input	

<b>11.4FPW</b>	<b>Measured dish washing</b>	<b>l/h/d</b>
Definition:	Estimated use of households billed for water supply - use for dish washing (dishwasher & hand washing)	
Processing rule:	Input	

<b>11.5FPW</b>	<b>Measured miscellaneous internal use</b>	<b>l/h/d</b>
Definition:	Estimated use of households billed for water supply - internal use (not covered in 11.1-11.4)	
Processing rule:	Input	

<b>11.6FPW</b>	<b>Measured external use</b>	<b>l/h/d</b>
Definition:	Estimated use of households billed for water supply - external use - i.e., car washing/garden watering/ponds/swimming pools	
Processing rule:	Input	

<b>11.7FPW - 11.9 FPW</b>	<b>Measured (other: define)</b>	<b>l/h/d</b>
Definition:	Define - optional rows for additional measured microcomponents.	
Processing rule:	Input	

<b>12FPW</b>	<b>Unmeasured Household - PCC</b>	<b>l/h/d</b>
Definition:	Estimated per capita consumption for billed households that are supplied with unmeasured water. 12FPW is auto calculated as the sum of the unmeasured household micro-components. This line is not used in calculations elsewhere.	
Processing rule:	sum (12.1FPW:12.9FPW)	

<b>12.1FPW</b>	<b>Unmeasured toilet flushing</b>	<b>l/h/d</b>
Definition:	Estimated per capita consumption for households that are supplied with unmeasured water - use for toilet flushing	
Processing rule:	Input	

<b>12.2FPW</b>	<b>Unmeasured personal washing</b>	<b>l/h/d</b>
Definition:	Estimated per capita consumption for households that are supplied with unmeasured water - use for personal washing (shower/baths)	
Processing rule:	Input	

<b>12.3FPW</b>	<b>Unmeasured clothes washing</b>	<b>l/h/d</b>
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Definition:	Estimated per capita consumption for households that are supplied with unmeasured water - use for clothes washing (washing machines)
Processing rule:	Input

<b>12.4FPW</b>	<b>Unmeasured dish washing</b>	<b>l/h/d</b>
Definition:	Estimated per capita consumption for households that are supplied with unmeasured water - use for dish washing (dishwasher & hand washing)	
Processing rule:	Input	

<b>12.5FPW</b>	<b>Unmeasured miscellaneous internal use</b>	<b>l/h/d</b>
Definition:	Estimated per capita consumption for households that are supplied with unmeasured water - internal use (not covered in 12.1-12.4)	
Processing rule:	Input	

<b>12.6FPW</b>	<b>Unmeasured external use</b>	<b>l/h/d</b>
Definition:	Estimated per capita consumption for households that are supplied with unmeasured water- external use - e.g., car washing/garden watering/ponds/swimming pools	
Processing rule:	Input	

<b>12.7FPW - 12.9 FPW</b>	<b>Unmeasured (other: define)</b>	<b>l/h/d</b>
Definition:	Define - optional rows for additional unmeasured microcomponents.	
Processing rule:	Input	

### Table 2c: WC Level DYAA – Meter Installations (including meter upgrades) - Final Planning

As per section 9.3.2 of the WRRPG, you are expected to consider smart metering. Table 2c provides a template for companies to set out meter installations by meter type (detailed below), demonstrating the role of smart meters in their plan. You should reflect the cumulative total number of smart meters for each year and the annual installations of different meter types at the company level across the final planning period.

This should include both new meter installations and meter upgrade/retrofit programmes where a demand saving is expected. The figures inputted are not used for calculations elsewhere, although we do expect consistency with assumptions in the WRZ level data.

<b>0FPM</b>	<b>Total Household Smart Meters (cumulative including existing)</b>	<b>000's</b>
Definition:	Total cumulative number of household smart meter in specified year across the water company under your final planning scenario. This should include smart meters as defined in the WRMP Direction 2022.  This should reflect your existing smart meters and the installation of new smart meters (either newly metered properties or upgrades), increasing cumulatively over the planning period.	

Processing rule:	Input
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<b>1.FPM</b>	<b>Total household meter installations</b>	<b>000's</b>
Definition:	Total number of household meter installations in specified year across the water company under your final planning scenario. This can include meter upgrades as well as new installations, where a demand saving is expected.	
Processing rule:	Sum (1.1FPM: 1.32FPM)	

<b>1.1FPM</b>	<b>Basic (non-automated) meter installations</b>	<b>000's</b>
Definition:	Total number of household basic non-automated meter installations in specified year across the water company. These meters require physical access and manual inspection to take a reading.	
Processing rule:	Input	

<b>1.21FPM</b>	<b>Automated Meter Reading (AMR) - new installations (household)</b>	<b>000's</b>
Definition:	Total number of new household AMR installations in specified year across the water company under your final planning scenario. These meters allow automatic readings without physical meter access, however, still require close proximity for data collection, e.g., via drive-by or walk-by meter reading devices.	
Processing rule:	Input	

<b>1.22FPM</b>	<b>Automated Meter Reading (AMR) - upgrades from basic meters (household)</b>	<b>000's</b>
Definition:	Total number of existing basic household meter installations replaced with/upgraded to AMR installations in specified year across the water company under its final plan.	
Processing rule:	Input	

<b>1.31FPM</b>	<b>Advanced Metering Infrastructure (AMI) - new installations (household)</b>	<b>000's</b>
Definition:	Total number of household AMI installations in specified year across the water company under your final planning scenario. These meters allow automatic readings without physical meter access, and data is automatically and remotely transferred to companies at frequent intervals.	
Processing rule:	Input	

<b>1.32FPM</b>	<b>Automated Meter Infrastructure (AMI) - upgrades from basic or AMR meters (household)</b>	<b>000's</b>
Definition:	Total number of existing basic or AMR household meter installations replaced with/upgraded to AMI installations in specified year across the water company under your final planning scenario.	
Processing rule:	Input	

<b>2FPM</b>	<b>Total non-household meter installations</b>	<b>000's</b>
Definition:	Total number of non-household meter installations in specified year across the water company under your final planning scenario.	
Processing rule:	Input	

<b>2.1FPM</b>	<b>Basic (non-automated) meter installations (non-household)</b>	<b>000's</b>
Definition:	Total number of basic non-household meter installations in specified year across the water company under your final planning scenario.	
Processing rule:	Input	

<b>2.2FPM</b>	<b>Automated Meter Reading (AMR) - installations (non-household)</b>	<b>000's</b>
Definition:	Total number of AMR non-household meter installations in specified year across the water company under your final planning scenario, including upgrades from basic meters where a resource benefit is forecast.	
Processing rule:	Input	

<b>2.3FPM</b>	<b>Automated Meter Infrastructure (AMI) - installations (non-household)</b>	<b>000's</b>
Definition:	Total number of AMI non-household meter installations in specified year across the water company under your final planning scenario, including upgrades from basic meters and AMR meters where a resource benefit is forecast.	
Processing rule:	Input	

**Table 2d: WC Level DYAA - Key Components - Baseline and Table 2e: WC Level DYAA - Key Components - Final planning**

Tables 2d and 2e reflect key water resources planning components for the DYAA baseline and final planning scenario (preferred programme) at the water company level. These are all auto-calculated based on the data input for each of your WRZs.

<b>1BLW &amp; 1FPW</b>	<b>Outage Allowance</b>	<b>MI/d</b>
Definition:	A temporary loss of deployable output. (Note that an outage is temporary in the sense that it is retrievable, and therefore deployable)	

	output can be recovered. The period of time for recovery is variable. If an outage lasts longer than three months, analysis of the cause of the problem would be required in order to satisfy the legitimacy of the outage).
Baseline Processing rule:	Sum (all WRZ 9BL)
Final Plan Processing rule:	Sum (all WRZ 9FP)

<b>2BLW &amp; 2FPW</b>	<b>Average Household - PCC</b>	<b>l/h/d</b>
Definition:	Estimated average per capita consumption for household use, both measured and unmeasured.	
Baseline Processing rule:	$((\text{Sum (all WRZ 14BL: 15BL)} - \text{Sum (all WRZ 25BL:26BL)}) * 1,000,000) / ((\text{Sum (all WRZ 39BL: 40BL)}) * 1,000)$	
Final Plan Processing rule:	$((\text{Sum (all WRZ 14FP: 15FP)} - \text{Sum (all WRZ 25FP:26FP)}) * 1,000,000) / ((\text{Sum (all WRZ 39FP: 40FP)}) * 1,000)$	

<b>3BLW &amp; 3FPW</b>	<b>Household metering penetration excl. voids</b>	<b>%</b>
Definition:	The percentage of total households that are measured with a water meter. This includes void properties in the denominator but not in the numerator, this is in alignment with the definition of a measured customer in the Water Industry Act 1991.	
Baseline Processing rule:	$\text{Sum (all WRZ 34FP)} / (\text{Sum (all WRZ 34FP)} + \text{Sum (all WRZ 34.7FP: 35.1FP)})$	
Final Plan Processing rule:	$\text{Sum (all WRZ 34FP)} / (\text{Sum (all WRZ 34FP)} + \text{Sum (all WRZ 34.7FP: 35.1FP)})$	

<b>4BLW &amp; 4FPW</b>	<b>Total non-household consumption</b>	<b>MI/d</b>
Definition:	Estimated consumption of non-households that are supplied with measured and unmeasured water. This figure applies to billed measured and unmeasured non-households and excludes underground supply pipe leakage.	
Baseline Processing rule:	$\text{Sum (all WRZ 12BL:13BL)} - \text{Sum (all WRZ 23BL:24BL)}$	
Final Plan Processing rule:	$\text{Sum (all WRZ 12FP:13FP)} - \text{Sum (all WRZ 23FP:24FP)}$	

<b>5BLW &amp; 5FPW</b>	<b>Total Leakage</b>	<b>MI/d</b>
Definition:	The sum of distribution losses underground and supply pipe losses (NRA/UKWIR, 1995a).	
Baseline Processing rule:	Sum (all WRZ 29BL)	

Final Plan Processing rule:	Sum (all WRZ 29FP)
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<b>6BLW &amp; 6FPW</b>	<b>Distribution input</b>	<b>MI/d</b>
Definition:	The amount of water entering the distribution system at the point of production (NRA/UKWIR, 1995a). For this row this must be the average for the planning scenario (dry year annual average or critical period).	
Baseline Processing rule:	Sum (all WRZ 45BL)	
Final Plan Processing rule:	Sum (all WRZ 45FP)	

<b>7BLW &amp; 7FPW</b>	<b>Target Headroom</b>	<b>MI/d</b>
Definition:	Target headroom – the threshold of minimum acceptable headroom that would trigger the need for total water management options to increase water available for use or decrease demand.	
Baseline Processing rule:	Sum (all WRZ 48BL)	
Final Plan Processing rule:	Sum (all WRZ 48FP)	

<b>8BLW &amp; 8FPW</b>	<b>Water Available For Use (own sources)</b>	<b>MI/d</b>
Definition:	The value calculated by deducting allowable outages, sustainability changes, raw water losses, and treatment works losses from deployable output in a resource zone	
Baseline Processing rule:	Sum (all WRZ 10BL)	
Final Plan Processing rule:	Sum (all WRZ 10FP)	

<b>9BLW &amp; 9FPW</b>	<b>Total Water Available For Use</b>	<b>MI/d</b>
Definition:	The value calculated by deducting raw and potable water exports and adding raw and potable water imports to Water Available For Use (own sources).	
Baseline Processing rule:	Sum (all WRZ 11BL)	
Final Plan Processing rule:	Sum (all WRZ 11FP)	

<b>10BLW &amp; 10FPW</b>	<b>Supply Demand Balance</b>	<b>MI/d</b>
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Definition:	The difference between available headroom and target headroom. A deficit drives the need for options to restore a secure supply-demand balance in your final planning scenario
Baseline Processing rule:	Sum (all WRZ 50FP)
Final Plan Processing rule:	Sum (all WRZ 50FP)

<b>11FPW</b>	<b>All Non-Household Properties (incl. voids)</b>	<b>000's</b>
Definition:	Number of non-household properties within the supply area.	
Processing rule:	Sum (all WRZ 31FP:33FP)	

<b>12FPW</b>	<b>All Household Properties (incl. voids)</b>	<b>000's</b>
Definition:	Number of household properties within the supply area	
Processing rule:	Sum (all WRZ 34FP) + Sum (all WRZ 34.7FP:35.1FP)	

## Table 2f: WC Level DYAA - Levels of Service - Final Planning

We expect companies to be able to report their resilience to different drought measures under their design drought scenario, over time. Table 2f has been designed to enable both the committed levels of service (minimum) and the forecast levels of service (modelled) to be reflected under the final plan supply demand balance. This will enable you to demonstrate how your reliance on severe drought measures (levels of resilience) is changing over time under the final planning scenario. We appreciate committed levels of service may not change over time.

Minimum levels of service are defined as an annual average risk as agreed with customers. Modelled levels of service are defined as the annual average risk as calculated. The difference reflects the modelled (and planned for) resilience benefit of any surplus against the minimum LoS.

<b>1.1FPL</b>	<b>Temporary Use Bans (modelled)</b>	<b>%</b>
Definition:	The calculated/modelled final Planning annual average risk of temporary use ban implementation as a percentage, based on modelled outputs.	
Processing rule:	Input	

<b>1.2FPL</b>	<b>Temporary Use Bans (minimum)</b>	<b>%</b>
Definition:	The target final planning annual average risk of temporary use ban implementation as a percentage aligned with levels, based on minimum customer level of service as agreed with customers.	
Processing rule:	Input	

<b>2.1FPL</b>	<b>Drought Permits/Orders (modelled)</b>	<b>%</b>
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Definition:	The calculated/modelled final planning annual average risk of drought permit/order implementation as a percentage, based on modelled outputs.
Processing rule:	Input

<b>2.2FPL</b>	<b>Drought Permits/Orders (minimum)</b>	<b>%</b>
Definition:	The target final planning annual average risk of drought permit/order implementation as a percentage aligned with levels, based on minimum customer level of service as agreed with your customers.	
Processing rule:	Input	

<b>3.1FPL</b>	<b>Non Essential Use Bans (modelled)</b>	<b>%</b>
Definition:	The calculated/modelled final Planning annual average risk of non-essential use ban implementation as a percentage, based on modelled outputs.	
Processing rule:	Input	

<b>3.2FPL</b>	<b>Non Essential Use Bans (minimum)</b>	<b>%</b>
Definition:	The target final planning annual average risk of non-essential use ban implementation as a percentage aligned with levels, based on minimum customer level of service as agreed with your customers.	
Processing rule:	Input	

<b>4.1FPL</b>	<b>Emergency Drought Orders (modelled)</b>	<b>%</b>
Definition:	The calculated/modelled final planning annual average risk of emergency drought order implementation as a percentage, based on modelled outputs.	
Processing rule:	Input	

<b>4.2FPL</b>	<b>Emergency Drought Orders (minimum)</b>	<b>%</b>
Definition:	The target final planning annual average risk of emergency drought order implementation as a percentage aligned with levels, based on minimum customer level of service as agreed with your customers.	
Processing rule:	Input	

### Table 3. Water Resource Tables

We are providing you with table templates which includes tabs for each of your water resource zones (WRZs). Table 3 will be duplicated for each of your WRZs. These tables should clearly demonstrate your baseline forecasts, the impact of your final plan options identified for the zone and the resultant final planning forecasts (preferred programme). You should consult the WRPg for further details around undertaking your forecasts, including what should and should not be included in your baseline.

We expect you to populate table 3 for each zone. You must complete tables 3a-3c for all your zones. You should use your WRMP24 plan to detail the approaches you have taken in producing your supply and demand forecasts. **Tables 3d-3f should be completed where you have identified that critical period planning is required, following the same definitions provided below.**

The tables include a supply demand balance chart which will be auto-generated when you input your WRZ data. The expectations for the components of each table are set out below:

**Table 3a: DYAA - Baseline, Table 3c: DYAA - Final Plan, Table 3d: DYCP - Baseline, Table 3f: DYCP- Final Plan**

<b>1BL &amp; 1FP</b>	<b>Raw water abstracted</b>	<b>MI/d</b>
Definition:	Raw water abstracted is taken from the point of chargeable abstraction, and together with raw water imported less raw water exported, constitutes raw water collected, Demand Forecasting Methodology - Main Report (NRA/UKWIR, 1995a).	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>1.1BL &amp; 1.1FP</b>	<b>Non-Potable water supplies (if applicable)</b>	<b>MI/d</b>
Definition:	Total non-potable water supplies. Only companies which have non-potable water supplies should fill in this. These are supplies of water that does not meet drinking water standards. Input data is not included in the Supply Demand Balance.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	1.1BL + 1.1FP	

<b>2BL &amp; 2FP</b>	<b>Raw water imported</b>	<b>MI/d</b>
Definition:	Total raw water imported from outside the forecast geographical area to the forecast geographical area (NRA/UKWIR, 1995a).	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	2BL + 2.1FP	

<b>3BL &amp; 3FP</b>	<b>Potable water imported</b>	<b>MI/d</b>
Definition:	Potable water imports from within the forecast geographical area to an area outside the forecast geographical area (NRA/UKWIR, 1995a).	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	3BL + 3.1FP	

<b>4BL &amp; 4FP</b>	<b>Raw water exported enter as -ve</b>	<b>MI/d</b>
Definition:	Raw water exported from the forecast geographical area to outside the forecast geographical area (NRA/UKWIR, 1995a)	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	4BL + 4.1FP	

<b>5BL &amp; 5FP</b>	<b>Potable water exported enter as -ve</b>	<b>MI/d</b>
Definition:	Potable water exports from outside the forecast geographical area to the forecast geographical area (NRA/UKWIR, 1995a).	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	5BL + 5.1FP	

<b>6BL</b>	<b>Deployable Output before forecast changes</b>	<b>MI/d</b>
Definition:	The output of a commissioned source or group of sources or of bulk supply as constrained by environment, licence if applicable, pumping plant and/or well/aquifer properties, raw water mains and/or aquifers, transfer and/or output main, treatment, water quality	
DYAA and DYCP Baseline Processing rule:	Input	

<b>6.1BL &amp; 6.1FP</b>	<b>Deployable Output post forecast changes</b>	<b>MI/d</b>
Definition:	Deployable Output with changes to Deployable Output applied.	

	<p>For the baseline, this reflects the DO once changes in 7BL have been applied (i.e. climate change impacts, sustainability reductions, prolonged outage and other changes to DO).</p> <p>For the final plan, this reflects 6.1 BL plus any changes posed by the options that increase DO including drought measures.</p>
DYAA and DYCP Baseline Processing rule:	6BL + 7BL
DYAA and DYCP Final Plan Processing rule:	6.1BL + 6.2FP + 6.3FP +7.01FP +7.02FP

7BL	Baseline forecast changes to Deployable Output	MI/d
Definition:	Changes in deployable output due to climate change or reductions required by the EA or NRW to meet statutory and/or environmental obligations	
DYAA and DYCP Baseline Processing rule:	Sum(7.1BL:7.6BL)	

7.1BL	Change in DO due to climate change	MI/d
Definition:	Direct assessment of climate change on sources. The direction of change should be -ve if it is a reduction and +ve if it is an increase	
DYAA and DYCP Baseline Processing rule:	Input	

7.2BL	Total confirmed DO reductions to restore sustainable abstraction enter as -ve	MI/d
Definition:	Specify and identify any reductions in DO that are required to meet statutory and/or environmental obligations (Sustainability changes)	
DYAA and DYCP Baseline Processing rule:	Input	

7.3BL	Total expected DO reductions to restore sustainable abstraction (Environmental Destination) enter as -ve	MI/d
Definition:	Specify and identify any expected reductions in DO that are required to meet your environmental destination as defined by EA or NRW. DO reductions in addition to row 7.2BL should be captured here. Companies should ensure there is no double counting sustainability reductions to restore abstraction (7.2BL) and to meet the environmental destination (7.3BL). 7.3BL should excl. any confirmed reductions.	

DYAA and DYCP Baseline Processing rule:	Input
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We appreciate that licence reductions will not be the only component of environmental destination, particularly given the Welsh legislation requirements for water companies within or affecting Wales . You should set out your environmental destination more broadly through the narrative of your WRMP.

7.4BL	Change in DO from prolonged Outage (reduction enter as -ve)	MI/d
Definition:	<p>A temporary loss of deployable output. (Note that an outage is temporary in the sense that it is retrievable, and therefore deployable output can be recovered. The period of time for recovery is variable. If an outage lasts longer than three months, analysis of the cause of the problem would be required in order to satisfy the legitimacy of the outage). Planned outage longer than 6 months should be recorded here as a loss of deployable output in this row. You should reflect this loss for the years applicable.</p> <p>Where you record a reduction in DO as a result of prolonged outage, you must exclude this from your calculation of outage allowance.</p>	
DYAA and DYCP Baseline Processing rule:	Input	
Method	Outage allowance and WRMP24 supplementary outage guidance. Companies should consider planned capital works on its assets.	

7.5BL	Change in DO from drought measures	MI/d
Definition:	<p>Water companies can identify any drought measures you would put in place as options within your final planning to allow you to reach 1 in 500 by 2039 (if relevant) before delivering the preferred (most likely) programme</p> <p>Drought permits/orders should benefit DO; therefore, this should be +ve (As per the WRPG, drought measures should not be included in the baseline. This row is included for companies to transparently declare this as zero).</p>	
DYAA and DYCP Baseline Processing rule:	Zero for baseline	

7.6BL	Total other changes to DO (e.g., nitrates/operational decline)	MI/d
Definition:	<p>This line is for any other categories of reduction e.g., Nitrates or operational decline, it allows a company to reflect long term reduction in availability resulting from other factors. The input should be one combined figure. Where applicable you should provide in your plan a full</p>	

	breakdown of the specific causes of the other changes to DO. If the sum of 7.1BL:7.5BL does not equal your forecast baseline changes to DO, use this line to balance.
DYAA and DYCP Baseline Processing rule:	Input

<b>8BL &amp; 8FP</b>	<b>Raw water losses, treatment works losses and operational use</b>	<b>MI/d</b>
Definition:	<p>Combined value for raw water losses, raw water operational use, treatment works losses and treatment works operational use.</p> <p>Raw water losses: Net loss from the resource system, comprised of mains/aqueduct (pressure system) losses, open channel/low pressure system losses, and losses from break-pressure tanks and small reservoirs (NRA/UKWIR, 1995a).</p> <p>Raw water operational use: Regular washing-out of mains due to sediment build up and poor quality of source water (NRA/UKWIR, 1995a).</p> <p>Treatment works losses: Made up of structural water loss and both continuous and intermittent over-flows (NRA/UKWIR, 1995a).</p> <p>Treatment works operational use: Treatment process water, i.e., net loss that excludes water returned to source water (NRA/UKWIR, 1995a).</p>	
DYAA and DYCP Baseline Processing rule:	Input Where you have not included raw water losses, operational use or treatment works losses in your calculation of deployable output, these losses should be entered here.	
DYAA and DYCP Final Plan Processing rule:	8BL + 8.1FP + 8.2FP	

The regulators have combined raw water losses, raw water operational use, treatment works losses and treatment works operational use, into the same row. However, if the EA or NRW considers the values are not sufficiently explained it will request that a company provides a further breakdown. You should include raw water losses, raw water operational use and treatment works losses even if they have been used to derive the estimates of DO, as they are reporting lines. If these losses have been used to derive DO, then the company must amend the formulae and the derivation in lines 10BL and 10FP to ensure that these losses are not double-counted. The company should highlight the change and provide an explanation in its plan. Outage allowance in row 9BL should be deducted after calculating deployable output. It will apply to the entire resource zone rather than individual sources. This component is deducted in the calculation of WAFU (own sources).

<b>9BL &amp; 9FP</b>	<b>Total Outage Allowance</b>	<b>MI/d</b>
Definition:	A temporary loss of deployable output. (Note that an outage is temporary in the sense that it is retrievable, and therefore deployable output can be recovered. The period of time for recovery is variable. If an outage lasts longer than three months, analysis of the cause of the	

	problem would be required in order to satisfy the legitimacy of the outage).
DYAA and DYCP Baseline Processing rule:	Input
DYAA and DYCP Final Plan Processing rule:	9BL + 9.1FP

10BL & 10FP	Water Available For Use (own sources)	MI/d
Definition:	The value calculated by deducting allowable outages, sustainability changes, raw water losses, and treatment works losses from deployable output in a resource zone.	
DYAA and DYCP Baseline Processing rule:	(6BL + 7BL) - (8BL + 9BL) (DO + changes to DO +ve or -ve) minus (raw water losses+ treatment works losses + outage)	
DYAA and DYCP Final Plan Processing rule:	(6FP + 7FP) - (8FP + 9FP) (DO + changes to DO +ve or -ve) minus (raw water losses+ treatment works losses + outage)	

11BL & 11FP	Total Water Available For Use	MI/d
Definition:	The value calculated by the deduction from deployable output of sustainability changes and outages. To these imports are added and exports deducted.	
DYAA and DYCP Baseline Processing rule:	10BL + sum (2BL:5BL) WAFU (own sources) + (raw and potable water imports) – (raw and potable water exports)	
DYAA and DYCP Final Plan Processing rule:	10FP + sum (2FP:5FP) WAFU (own sources) + (raw and potable water imports) – (raw and potable water exports)	

### Table 3 - Consumption (rows 12-30BL)

This section of the table contains information on the main components of water delivered to and consumption of unmeasured and measured household and non-household properties.

Where you have shown an impact of climate change on demand, the figures included within the baseline tables should show this. Your plan should explain how the effect of climate change on the demand forecast has been assessed. Company policy (such as metering) can be included in the baseline. As a minimum, you should include achievement of the savings associated with water efficiency, leakage reduction and metering activities assumed in price limits up to 2025. Beyond that, you should assume continuation of existing policies.

Rows 46BL to 50BL present the baseline supply-demand balance. This is the final part of the baseline process.

The baseline scenario should reflect known changes to WAFU (planned and approved changes to abstraction licences) and the continuation of current policies in demand

management (including the committed leakage levels and implementation of companies' water efficiency plans).

Where you have included existing, non-potable supplies in deployable output, this quantity should be subtracted from Total WAFU to avoid double counting. Where this is the case the derivation cell should be amended and highlighted.

Water available for use (own sources) in row 10BL is the sum of deployable output plus or minus any changes, minus raw water losses, treatment works losses, and outage.

You should show total leakage in this section of Table 3 BL Demand. Leakage for the base year should be the actual leakage reported to Ofwat for the same year, or you should clearly explain if it is different.

In the baseline data set, the supply-demand balance should include an estimate of leakage that assumes you will follow your current leakage policies and, where appropriate, meet any performance commitments. As per the WRPG, your baseline leakage should remain static from the first year of your plan (2025/26) throughout the planning period (unless otherwise agreed by regulators)

12BL & 12FP	Water delivered measured non-household	MI/d
Definition:	Average volume of water delivered to non-households that are supplied with measured water. <b>Note for 12FP only:</b> the line 12.2FP needs to include supply pipe leakage to make this line correct	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	12BL + 12.2FP	

12.1 BL & 12.1FP	Non-potable water consumption (if applicable)	MI/d
Definition:	Average non-potable water consumption forecast. These are demands of water that does not meet drinking water standards. <b>Note: this should not be included in distribution input or in the WRZ supply demand balance.</b>	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

13BL & 13FP	Water delivered unmeasured non-household	MI/d
Definition:	Average volume of water delivered to non-households that are supplied with unmeasured water. <b>Note for 13FP only:</b> the line 13.1FP needs to include supply pipe leakage to make this line correct.	

DYAA and DYCP Baseline Processing rule:	Input
DYAA and DYCP Final Plan Processing rule:	13BL + 13.1FP

14BL & 14FP	Water delivered measured household	MI/d
Definition:	Average volume of water delivered to households billed for measured water within the supply area. <b>Note for 14FP only:</b> the line 14.1FP needs to include supply pipe leakage to make this line correct.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	14BL + 14.1FP	

15BL & 15FP	Water delivered unmeasured household	MI/d
Definition:	Average volume of water delivered to households billed for unmeasured water within the supply area. <b>Note for 15FP only:</b> the line 15.1FP needs to include supply pipe leakage to make this line correct	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	15BL + 15.1FP	

16BL & 16FP	Percentage of consumption driven by climate change	%
Definition:	<p>Please note, we are not expecting separate reporting of the impact of climate change on non-household consumption within the tables. A narrative around assumptions made for non-household forecasting should be provided in the WRMP itself, including consideration and assumptions of climate change.</p> <p>The cells in this row are formatted as %. If copying and pasting values in these cells, companies will need to past numerical percentages in as values to ensure formatting is correct. For example, 0.01 will copy in a as 1%. You should ensure the % displayed is correct. Cells in the spreadsheet which use this row in its calculation have been updated to ensure the magnitude is correct.</p>	
DYAA and DYCP Baseline Processing rule:	Input	

DYAA and DYCP Final Plan Processing rule:	16BL
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17BL & 17FP	Volume of consumption driven by climate change	MI/d
Definition:	Volume of baseline consumption (sum of 12BL:15BL) per year that is driven by climate change. It is assumed that the forecast will include an element driven by climate change.	
DYAA and DYCP Baseline Processing rule:	$16BL * (\text{sum}(12BL:15BL) - \text{sum}(23BL:26BL))$	
DYAA and DYCP Final Plan Processing rule:	$16FP * (\text{sum}(12FP:15FP) - \text{sum}(23FP:26FP))$	

18BL & 18FP	Measured Household - PCC	MI/d
Definition:	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. Note: void properties should not be included.	
DYAA and DYCP Baseline Processing rule:	$((14BL - 25BL) * 1,000,000) / (39BL * 1,000)$	
DYAA and DYCP Final Plan Processing rule:	$((14FP - 25FP) * 1,000,000) / (39FP * 1000)$	

19BL & 19FP	Un-measured Household - PCC	l/h/d
Definition:	Estimated per capita consumption for households that are supplied with unmeasured water. This figure applies to billed unmeasured households and excludes underground supply pipe leakage. Note: void properties should not be included.	
DYAA and DYCP Baseline Processing rule:	$((15BL - 26BL) * 1,000,000) / (40BL * 1,000)$	
DYAA and DYCP Final Plan Processing rule:	$((15FP - 26FP) * 1,000,000) / (40FP * 1000)$	

20BL & 20FP	Average Household - PCC	l/h/d
Definition:	Estimated average per capita consumption for household use, both measured and un-measured.	

DYAA and DYCP Baseline Processing rule:	$\frac{(((14BL - 25BL) + (15BL - 26BL)) * 1,000,000)}{((39BL + 40BL) * 1,000)}$ Total household consumption / total household population
DYAA and DYCP Final Plan Processing rule:	$\frac{(((14FP - 25FP) + (15FP - 26FP)) * 1,000,000)}{((39FP + 40FP) * 1,000)}$ Total household consumption / total household population

<b>21BL &amp; 21FP</b>	<b>Water taken unbilled</b>	<b>MI/d</b>
Definition:	Water taken legally unbilled plus water taken illegally unbilled (NRA/UKWIR, 1995a). <b>This will include consumption from void properties.</b>	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	21BL + 21.1FP	

<b>22BL &amp; 22FP</b>	<b>Distribution system operational use (DSOU)</b>	<b>MI/d</b>
Definition:	Water knowingly used by a company to meet its statutory obligations particularly those relating to water quality. Examples include mains flushing and air scouring (NRA/UKWIR, 1995a).  This is treated as a source of demand and so is in WRP.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	22BL + 22.1FP	

<b>23BL &amp; 23FP</b>	<b>Measured Non-Household - USPL</b>	<b>MI/d</b>
Definition:	Estimated underground supply pipe leakage for non-households that are supplied with measured water. This figure applies to billed measured non-households. Underground supply pipe leakage is loss of water from the underground supply pipe.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	23BL + 23.1FP	

<b>24BL &amp; 24FP</b>	<b>Unmeasured Non Household - USPL</b>	<b>MI/d</b>
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Definition:	Estimated underground supply pipe leakage for non-households that are supplied with unmeasured water. This figure applies to billed measured non-households. Underground supply pipe leakage is loss of water from the underground supply pipe.
DYAA and DYCP Baseline Processing rule:	Input
DYAA and DYCP Final Plan Processing rule:	$24BL + 24.1FP$

<b>25BL &amp; 25FP</b>	<b>Measured Household - USPL</b>	<b>MI/d</b>
Definition:	Estimated underground supply pipe leakage for households that are supplied with measured water. This figure applies to billed measured non-households. Underground supply pipe leakage is loss of water from the underground supply pipe	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	$25BL + 25.1FP$	

<b>26BL &amp; 26FP</b>	<b>Unmeasured Household - USPL</b>	<b>MI/d</b>
Definition:	Estimated underground supply pipe leakage for households that are supplied with unmeasured water. This figure applies to billed unmeasured non-households. Underground supply pipe leakage is any loss of water from the underground supply pipe.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	$26BL + 26.1BL$	

<b>27BL &amp; 27FP</b>	<b>Void Properties - USPL</b>	<b>MI/d</b>
Definition:	Estimated underground supply pipe leakage for void households and non-households. Underground supply pipe leakage is any loss of water from the underground supply pipe.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	$27BL + 27.1FP$	

<b>28BL &amp; 28FP</b>	<b>Distribution losses</b>	<b>MI/d</b>
Definition:	Made up of losses on trunk mains, service reservoirs, distribution mains and communications pipes. Distribution losses are distribution input less water taken (NRA/UKWIR, 1995a). This is treated as a source of demand and therefore is in Table 3 BL Demand.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	28BL + 28.1FP	

<b>29BL &amp; 29FP</b>	<b>Total Leakage</b>	<b>MI/d</b>
Definition:	The sum of distribution losses underground and supply pipe losses (NRA/UKWIR, 1995a).	
DYAA and DYCP Baseline Processing rule:	sum (23BL:28BL)	
DYAA and DYCP Final Plan Processing rule:	sum (23FP:28FP)	

<b>30BL &amp; 30FP</b>	<b>Leakage per property</b>	<b>l/prop/day</b>
Definition:	The sum of distribution losses underground and supply pipe losses (NRA/UKWIR, 1995a), apportioned per property.	
DYAA and DYCP Baseline Processing rule:	$(29BL * 1,000,000) / (36BL * 1,000)$	
DYAA and DYCP Final Plan Processing rule:	$(29FP * 1,000,000) / (36FP * 1,000)$	

<b>31BL &amp; 31FP</b>	<b>Measured Non Household - properties</b>	<b>000s</b>
Definition:	Total number of measured non-household properties (excluding voids) Note: measured non-household properties must only contain properties billed by the meter. This is in alignment with the definition outlined in the Water Industry Act 1991.	
DYAA and DYCP Baseline Processing rule:	Input	

DYAA and DYCP Final Plan Processing rule:	Input
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<b>32BL &amp; 32FP</b>	<b>Unmeasured Non Household - properties</b>	<b>000's</b>
Definition:	Number of unmeasured non-household properties	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>33BL &amp; 33FP</b>	<b>All void non-households - properties</b>	<b>000's</b>
Definition:	total number of void non-household properties	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>34BL &amp; 34FP</b>	<b>Measured households - properties (excl. void)</b>	<b>000's</b>
Definition:	Total number of household properties (excluding voids) Note: measured household properties must only contain properties billed by the meter. This is in alignment with the definition outlined in the Water Industry Act 1991.	
DYAA and DYCP Baseline Processing rule:	Year before + sum (34.1BL:34.6BL)	
DYAA and DYCP Final Plan Processing rule:	Year before + sum (34.1FP:34.6FP)	

<b>34.1BL &amp; 34.1FP</b>	<b>New build properties - properties</b>	<b>000's</b>
Definition:	Estimated new build properties in each year	
DYAA and DYCP Baseline Processing rule:	Input (new builds in each year)	
DYAA and DYCP Final Plan Processing rule:	Input (new builds in each year)	

<b>34.2BL &amp; 34.2FP</b>	<b>Meter optants - properties</b>	<b>000's</b>
Definition:	Estimated meter optants in properties in each year. Note: this line must only contain properties billed by the meter. This is in alignment with the definition outlined in the Water Industry Act 1991.	
DYAA and DYCP Baseline Processing rule:	Input (meter optants in each year)	
DYAA and DYCP Final Plan Processing rule:	Input (meter optants in each year)	

<b>34.3BL &amp; 34.3FP</b>	<b>Compulsory metering - properties</b>	<b>000's</b>
Definition:	Estimated compulsory meters (if applicable) in each year. Note: this line must only contain properties billed by the meter. This is in alignment with the definition outlined in the Water Industry Act 1991.	
DYAA and DYCP Baseline Processing rule:	Input (compulsory meters in each year)	
DYAA and DYCP Final Plan Processing rule:	Input (compulsory meters in each year)	

<b>34.4BL &amp; 34.4FP</b>	<b>Metering on change of occupancy - properties</b>	<b>000's</b>
Definition:	Estimated number of change of occupancy meters in each year. Note: this line must only contain properties billed by the meter. This is in alignment with the definition outlined in the Water Industry Act 1991.	
DYAA and DYCP Baseline Processing rule:	Input (change of occupancy meters in each year)	
DYAA and DYCP Final Plan Processing rule:	Input (change of occupancy meters in each year)	

<b>34.5BL &amp; 34.5FP</b>	<b>Selective metering - properties</b>	<b>000's</b>
Definition:	Number of existing household properties metered because of a selective metering programme. Note: this line must only contain properties billed by the meter. This is in alignment with the definition outlined in the Water Industry Act 1991.	
DYAA and DYCP Baseline Processing rule:	Input (selective meters in each year)	

DYAA and DYCP Final Plan Processing rule:	Input (selective meters in each year)
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<b>34.6BL &amp; 34.6FP</b>	<b>Other changes to existing metering - properties</b>	<b>000's</b>
Definition:	Number of properties metered as a result of other changes. Note: this line must only contain properties billed by the meter. This is in alignment with the definition outlined in the Water Industry Act 1991. Also, this row is only to be used if the changes to metering do not fit in other metering categories in rows 34.1FP to 34.5FP.	
DYAA and DYCP Baseline Processing rule:	Input (other changes to meters in each year)	
DYAA and DYCP Final Plan Processing rule:	Input (other changes to meters in each year)	

<b>34.7BL &amp; 34.7FP</b>	<b>Measured household void properties</b>	<b>000's</b>
Definition:	Number of existing void household measured properties.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>35BL &amp; 35FP</b>	<b>Unmeasured households - properties (excl. void)</b>	<b>000's</b>
Definition:	Number of households billed for unmeasured water within the supply area, excluding void household properties.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>35.1BL &amp; 35.1FP</b>	<b>Unmeasured household void properties</b>	<b>000's</b>
Definition:	Number of existing void household unmeasured properties.	
DYAA and DYCP Baseline Processing rule:	Input	

DYAA and DYCP Final Plan Processing rule:	Input
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<b>36BL &amp; 36FP</b>	<b>Total Resource Zone Properties (incl. voids)</b>	<b>000's</b>
Definition:	The sum of total household and non-household properties including void properties.	
DYAA and DYCP Baseline Processing rule:	sum (31BL:34BL) + 34.7BL + 35BL + 35.1BL	
DYAA and DYCP Final Plan Processing rule:	sum (31FP:34FP) + 34.7FP + 35BL + 35.1BL	

<b>37BL &amp; 37FP</b>	<b>Measured Non Household - Population</b>	<b>000's</b>
Definition:	Resident population in non-households supplied with measured water.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>38BL &amp; 38FP</b>	<b>Unmeasured Non Household - Population</b>	<b>000's</b>
Definition:	Resident population in non-households whose water supply is not measured.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>39BL &amp; 39FP</b>	<b>Measured Household - Population</b>	<b>000's</b>
Definition:	Resident population in billed households supplied with measured water.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>40BL &amp; 40FP</b>	<b>Unmeasured Household - Population</b>	<b>000's</b>
Definition:	Resident population in billed households whose water supply is not measured.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>41BL &amp; 41FP</b>	<b>Total Resource Zone Population</b>	<b>000's</b>
Definition:	The sum of total household and non-household population.	
DYAA and DYCP Baseline Processing rule:	sum (37BL:40BL)	
DYAA and DYCP Final Plan Processing rule:	sum (37FP:40FP)	

<b>42BL &amp; 42FP</b>	<b>Average household occupancy rate (excl. voids)</b>	<b>h/prop</b>
Definition:	Average number of people per household property	
DYAA and DYCP Baseline Processing rule:	$(39BL + 40BL) / (34BL + 35BL)$	
DYAA and DYCP Final Plan Processing rule:	$(39FP + 40FP) / (34FP + 35FP)$	

<b>43BL &amp; 43FP</b>	<b>Total Household Metering penetration (excl. voids)</b>	<b>%</b>
Definition:	The percentage of total households that are measured with a water meter. This excludes void properties as no-one is present to use water.	
DYAA and DYCP Baseline Processing rule:	$34BL / (34BL + 35BL)$ Measured household properties/(Measured household properties (which does not include voids) + Unmeasured household properties) Cell format set to %	
DYAA and DYCP Final Plan Processing rule:	$34FP / (34FP + 35FP)$ Measured household properties/(Measured household properties (which does not include voids) + Unmeasured household properties) Cell format set to %	

<b>44BL &amp; 44FP</b>	<b>Total Household Metering penetration (incl. voids)</b>	<b>%</b>
Definition:	The percentage of total households that are measured with a water meter. This includes void properties in the denominator but not in the numerator, this is in alignment with the definition of a measured customer in the Water Industry Act 1991.	
DYAA and DYCP Baseline Processing rule:	$(34BL) / (34BL + 34.7BL + 35BL + 35.1BL)$ Measured household properties/(Measured household properties + Measured household property voids + Unmeasured household properties + unmeasured void households) Cell format set to %	
DYAA and DYCP Final Plan Processing rule:	$(34FP) / (34FP + 34.7FP + 35FP + 35.1FP)$ Cell format set to %	

<b>45BL &amp; 45FP</b>	<b>Distribution input</b>	<b>M/d</b>
Definition:	The amount of water entering the distribution system at the point of production (NRA/UKWIR, 1995a). For this row this must be the average for the planning scenario (dry year annual average or critical period).	
DYAA and DYCP Baseline Processing rule:	sum (12BL:15BL) +21BL + 22BL + 27BL + 28BL	
DYAA and DYCP Final Plan Processing rule:	sum (12FP:15FP) + 21FP + 22FP + 27FP + 28FP	

<b>46BL &amp; 46FP</b>	<b>Target headroom (climate change component)</b>	<b>MI/d</b>
Definition:	Target headroom – the threshold of minimum acceptable headroom that would trigger the need for total water management options to increase water available for use or decrease demand. Row 46BL requires the component of target headroom that is driven by climate change.	
DYAA and DYCP Baseline Processing rule:	Input	
DYAA and DYCP Final Plan Processing rule:	Input	

<b>47BL &amp; 47FP</b>	<b>Target headroom (All other components)</b>	<b>MI/d</b>
Definition:	Target headroom – the threshold of minimum acceptable headroom that would trigger the need for total water management options to increase water available for use or decrease demand. Row 47BL requires the component of target headroom that is driven by all other non-climate change related uncertainties	

DYAA and DYCP Baseline Processing rule:	Input
DYAA and DYCP Final Plan Processing rule:	Input

<b>48BL &amp; 48FP</b>	<b>Target Headroom</b>	<b>MI/d</b>
Definition:	Target headroom – the threshold of minimum acceptable headroom that would trigger the need for total water management options to increase water available for use or decrease demand.	
DYAA and DYCP Baseline Processing rule:	46BL + 47BL	Target headroom (climate change) + target headroom (all other components of uncertainty)
DYAA and DYCP Final Plan Processing rule:	46FP + 47FP	

<b>49BL &amp; 49FP</b>	<b>Available Headroom</b>	<b>MI/d</b>
Definition:	Available headroom – the difference between water available for use (including imported water) and demand at any given point in time.	
DYAA and DYCP Baseline Processing rule:	11BL - 45BL	Total Water Available For Use – Distribution Input
DYAA and DYCP Final Plan Processing rule:	11FP - 45FP	

<b>49.1BL &amp; 49.1FP</b>	<b>Available non-potable balance (if applicable)</b>	<b>MI/d</b>
Definition:	Available non-potable surplus or deficit based on the non-potable supply and demand data forecast. Note all non-potable water should not be included in the wider resource zone distribution input and supply demand balance, as it does not meet drinking water standards.	
DYAA and DYCP Baseline Processing rule:	1.1BL - 12.1BL	
DYAA and DYCP Final Plan Processing rule:	1.1FP - 12.1FP	

<b>50BL &amp; 50FP</b>	<b>Supply Demand Balance</b>	<b>MI/d</b>
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Definition:	The difference between available headroom and target headroom. A deficit drives the need for options to restore a secure supply-demand balance in a final planning scenario.
DYAA and DYCP Baseline Processing rule:	49BL - 48BL Available Headroom – target headroom
DYAA and DYCP Final Plan Processing rule:	49FP - 48FP Available Headroom – target headroom

### Table 3b: DYAA - Final plan Options and Table 3e: DYCP - Final plan Options

Table 3b and Table 3e should set out the quantity of additional water or the reduction of water used as a result of your final plan options at the WRZ level across the planning period. This table should set out the impact of your options on the water resources metrics. The output from this table is used to derive your final planning scenario for each of your WRZs. This should be consistent with the assumed benefit profiles of your preferred options set out in table 5. Where an option has benefits for more than one metric, you should split the total benefit over the metrics affected and ensure the combined benefit does not exceed that outlined in table 5.

Note, even for resource zones without a deficit in the baseline period, the benefits of your demand management options should be reflected here.

Notably, you should include the benefit of your drought measures in 7.51 here, and this should be aligned to the assumptions used for table 6.

<b>1.11FP</b>	<b>Non potable supplies input reductions as -ve and increases as +ve</b>	<b>MI/d</b>
Definition:	The net change into your non-potable supplies as a result of your final plan options.	
Processing rule:	Input	

<b>2.1FP</b>	<b>Raw water imports</b>	<b>MI/d</b>
Definition:	The change in raw water imports from outside the forecast geographical area to the forecast geographical area as a result of your final plan options.	
Processing rule:	Input	

<b>3.1FP</b>	<b>Potable water imports input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in potable water imports from within the forecast geographical area to an area outside the forecast geographical area as a result of your final plan options.	
Processing rule:	Input	

<b>4.1FP</b>	<b>Raw water exports input reductions as +ve and increases as -ve</b>	<b>MI/d</b>
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Definition:	The change in raw water exports from outside the forecast geographical area to the forecast geographical area as a result of your final plan options.
Processing rule:	Input

<b>5.1FP</b>	<b>Potable water exports input reductions as +ve and increases as -ve</b>	<b>MI/d</b>
Definition:	The change in potable water exports from outside the forecast geographical area to the forecast geographical area as a result of your final plan options.	
Processing rule:	Input	

<b>6.2FP</b>	<b>DO benefit from increase raw water abstractions</b>	<b>MI/d</b>
Definition:	The increased deployable output from increased raw water abstraction as a result of your final plan options.	
Processing rule:	Input	

<b>6.3FP</b>	<b>Other options to increase deployable output</b>	<b>MI/d</b>
Definition:	The increased deployable output from other options not covered elsewhere in table 3b as a result of the final plan options.	
Processing rule:	Input	

<b>7.01FP</b>	<b>DO benefit from supply side drought measures</b>	<b>MI/d</b>
Definition:	The increased deployable output from your supply side drought measures under your final plan scenario. This should be consistent with table 6 where further detailed breakdown should be provided. For WRZs wholly or mainly in England this should be the 1:500 event, for WRZs in wholly or mainly in Wales this will vary.	
Processing rule:	Input	

<b>7.02FP</b>	<b>Benefit from demand side drought measures</b>	<b>MI/d</b>
Definition:	The benefit your demand side drought measures (TUBs and NEUBs) under your final plan scenario. This should be consistent with table 6 where further detailed breakdown should be provided. For WRZs wholly or mainly in England this should be the 1:500 event, for WRZs in wholly or mainly in Wales this will vary.  Note: In the final plan table this benefit is treated as additional supply, although in reality it is reduction in demand. This helps avoid confusion around the impact of your long term demand reduction programme.	
Processing rule:	Input	

<b>8.1FP</b>	<b>Reduce raw water losses and operational use input as -ve</b>	<b>MI/d</b>
Definition:	The reduction to raw water losses and operational use as a result of your final plan options.	
Processing rule:	Input	

<b>8.2FP</b>	<b>Reduce treatment works losses input as -ve</b>	<b>MI/d</b>
Definition:	The reduction of treatment works losses as a result of your final plan options.	
Processing rule:	Input	

<b>9.1FP</b>	<b>Reduce outages input as -ve</b>	<b>MI/d</b>
Definition:	The reduction to your outage allowance as a result of your final plan options.	
Processing rule:	Input	

<b>12.2FP</b>	<b>Change volume delivered to measured non households input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in volume delivered to measured non-households as a result of your final plan options. <b>Please ensure USPL reductions in 23.1FP are included in this row as well. USPL in 23.1FP is not automatically pulled through to this row and therefore SDB will not take account of it if it is not included here.</b>	
Processing rule:	Input	

<b>13.1FP</b>	<b>Change volume delivered to unmeasured non households input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in volume delivered to unmeasured non-households as a result of your final plan options. <b>Please ensure USPL reductions in 24.1FP are included in this row as well. USPL in 24.1FP is not automatically pulled through to this row and therefore SDB will not take account of it if it is not included here.</b>	
Processing rule:	Input	

<b>14.1FP</b>	<b>Change volume delivered to measured households input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in volume delivered to measured households as a result of our final plan options. <b>Please ensure USPL reductions in 25.1FP are included in this row as well. USPL in 25.1FP is not automatically pulled through to this row and therefore SDB will not take account of it if it is not included here.</b>	
Processing rule:	Input	

<b>15.1FP</b>	<b>Change volume delivered to unmeasured households input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in volume delivered to unmeasured households as a result of your final plan options. <b>Please ensure USPL reductions in 26.1FP are included in this row as well. USPL in 26.1FP is not automatically pulled through to this row and therefore SDB will not take account of it if it is not included here.</b>	
Processing rule:	Input	

<b>21.1FP</b>	<b>Options to reduce water taken unbilled input as -ve</b>	<b>MI/d</b>
Definition:	The reduction in water taken unbilled as a result of your final plan options.	
Processing rule:	Input	

<b>22.1FP</b>	<b>Reduce distribution system operational use (DSOU) input as -ve</b>	<b>MI/d</b>
Definition:	The reduction in distribution system operational use as a result of your final plan options.	
Processing rule:	Input	

<b>23.1FP</b>	<b>Options impacting on measured Non Household - USPL input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in measured non-household USPL as a result of your final plan options. <b>Please ensure USPL reductions from this row are also included in 12.1FP. USPL is not automatically pulled through to 12.1FP and therefore SDB will not take account of it if it is not included.</b>	
Processing rule:	Input	

<b>24.1FP</b>	<b>Options impacting on unmeasured Non Household - USPL input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in unmeasured non-household USPL as a result of your final plan options. <b>Please ensure USPL reductions from this row are also included in 13.1FP. USPL is not automatically pulled through to 13.1FP and therefore SDB will not take account of it if it is not included.</b>	
Processing rule:	Input	

<b>25.1FP</b>	<b>Options impacting on measured Household - USPL input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in measured household USPL as a result of your final plan options. <b>Please ensure USPL reductions from this row are also included in 14.1FP. USPL is not automatically pulled through to</b>	

	<b>14.1FP and therefore SDB will not take account of it if it is not included.</b>
Processing rule:	Input

<b>26.1FP</b>	<b>Options impacting on unmeasured Household - USPL input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in unmeasured household USPL as a result of your final plan options. <b>Please ensure USPL reductions from this row are also included in 14.1FP. USPL is not automatically pulled through to 14.1FP and therefore SDB will not take account of it if it is not included.</b>	
Processing rule:	Input	

<b>27.1FP</b>	<b>Options impacting on Void properties - USPL input reductions as -ve</b>	<b>MI/d</b>
Definition:	The change in Void Property USPL as a result of your final plan options. USPL reductions from this row must NOT be included in rows 12.1FP to 14.1FP, this is included in the Distribution Input row (45FP).	
Processing rule:	Input	

<b>28.1FP</b>	<b>Reduce distribution losses input as -ve</b>	<b>MI/d</b>
Definition:	The change in distribution losses as a result of your final plan options.	
Processing rule:	Input	

## Table 4. Options Appraisal Summary

Table 4 should set out all your options across your water company and summarise the appraisal that has determined your selection of options for your final planning scenario and other scenarios. We expect table 4 to include your unconstrained, feasible and preferred options across your company.

For unconstrained options, we only expect columns C, D, E, G, H, I, Q and T to be completed. This will include reason for rejection and an indicative benefit of the option. The other columns are greyed out are not be expected. We appreciate in the past companies have reported unconstrained options separately. For transparency and consistent reporting in a usable format we now expect unconstrained options to be included through the tables. This follows challenges in looking nationally across WRMP19 unconstrained options data.

For feasible and preferred options, we expect completion of all relevant columns, aligning the definitions provided below. Information against option metrics (including carbon and biodiversity) is expected to be consistent with information in water company PR24 business plans performance commitments where possible. You should therefore check Ofwat's latest reporting guidance to ensure consistency with PR24 performance commitments. It is anticipated that targets/ commitments will read across directly to become business plan targets/ commitments, so should be developed in that context, and will be scrutinised by Ofwat accordingly.

Table 4 has been designed flexibly to accommodate both monetised and non-monetised inputs for natural capital and additional best value metrics. The WRPG supplementary

guidance note - Environment and society in decision making should be used to inform your approach.

Table 4 column	Definition/Notes
WRMP24 Reference	This is an auto-generated reference for the regulators to facilitate review and data analysis. It provides a reference for the option group and whether an option is unconstrained, feasible or preferred.
Option ID	Each option should be given a unique reference number. The reference is up to the company; however, it should be consistent throughout the plan and tables.  The option ID in column C of table 4 and column D of table 5 should be consistent between the tables.
Option Name	Each option should be given a name. The name is up to the company ; however, it should be consistent throughout the plan and tables.
Option Group	This option group field will auto generate based on the option type - categorising the option as a resource, production, distribution, or customer option.
Option type Defined List	You should state the option type using one of the predefined option types provided. Your input will auto-format red if you have selected a different option type.  See Appendix B for the defined list of option types.
WRZ(s) benefitting from option  Defined codes, accept multiples using "," separator, or "Company Wide"	This column should reflect the WRZs benefitting from the option. You must use the predefined WRZ codes here. If you have multiple WRZs please use commas to separate the WRZ codes. If the option is applied across the company, please state this as "Company wide".
Option status Defined	Here you should determine the status of the option. The option should be categorised as unconstrained, feasible or preferred.
Third Party Option Flag Y/N	This column should be used to flag your third party options using a "Y" or "N". Third party options are defined in 8.1.1 of the WRPG.
Partnership Option TOTEX – all parties (where applicable)	This column should be completed for partnership options. These are options which are co-funded and co-delivered. You should state the total cost of the scheme for all parties here to ensure transparency and consistency.

Interdependent Options (State one or more option IDs)	Interdependent options are options which are dependent on one another to occur. The option is reliant on the delivery of another option(s). We note that this may be options in the plans of other water companies. We expect communication and alignment to ensure interdependent options are flagged through this table. This helps ensure consistency with assumptions and clarity around the interdependencies to be aware of when regulators review your options appraisal and selection.
Preferred (most likely) Programme Y/N	This column should be used to set out which of your options are included in your preferred (most likely) programme (i.e., your final planning scenario). You should use a "Y" and "N" to specify inclusion or exclusion. This should be consistent with the options set out in table 5.
Least Cost Programme Y/N	This column should be used to set out which of your options are included in your least cost programme. You should use a "Y" and "N" to specify inclusion or exclusion. This should be consistent with the options set out in table 5
Ofwat Core Programme Y/N	This column should be used to set out which of your options are included in your Ofwat core programme. You should use a "Y" and "N" to specify inclusion or exclusion. This should be consistent with the options set out in table 5
Alternative Programme 1 Y/N	This column should be used to set out which of your options are included in your alternative programme 1 (if relevant). You should use a "Y" and "N" to specify inclusion or exclusion.  Alternative programmes should be clearly presented in table 7.
Alternative Programme 2 Y/N	This column should be used to set out which of your options are included in your alternative programme 2 (if relevant). You should use a "Y" and "N" to specify inclusion or exclusion.  Alternative programmes should be clearly presented in table 7.
Alternative Programme 3 Y/N	This column should be used to set out which of your options are included in your alternative programme 3 (if relevant). You should use a "Y" and "N" to specify inclusion or exclusion.  Alternative programmes should be clearly presented in table 7.
Reason for option rejection	This should clearly state the key reasons why the option has been rejected. This should be clear and logical.
WRZ transfer is from Defined List	This column must be populated for incoming and outgoing transfers of water. You should define the WRZ code where the transfer is coming from, from the predefined list.

WRZ transfer is to Defined List	This column must be populated for incoming and outgoing transfers of water. You should define the WRZ code where the transfer is going to, from the predefined list.
Gains in WAFU / Savings in Demand on full implementation (MI/d)	<p>Water resources benefit in megalitres per day (MI/d) resulting from either gains in water available for use or savings in demand following on full delivery and implementation of the option described. This should be the maximum possible WAFU for the option. Where companies do not include maximum WAFU (for example, metering could have a range of possible WAFU), they should state what is included in the option description section of the plan.</p> <p>Commentary should be clear regarding the drought severity that the WAFU is presented for, however expected to match the glidepath to 1-in-500-year drought resilience (if relevant).</p> <p>Note full benefit profiles for preferred options per WRZ should be provided in table 5.</p>
Option benefits lead-in time (Years)	Duration in full years between year when work commences on the option (cost are incurred) and the earliest achievable year for operational use (year option is first in use) with full implementation benefits. It is the minimum time to realise benefits from the option and provides awareness of how quickly an option could be delivered.
First year of option use in preferred programme (year) (Preferred programme (most likely) only)	Planned start date. This should state the first year that the option is scheduled available to be used and providing benefit in operational use (delivering benefits) in your preferred (most likely) programme. It is the date that the benefits from the option are realised This should be consistent with the benefit profile of the option in table 5.
Totex expenditure prior to option in use (£m)	<p>Totex expenditure required during the lead-in time from work commencing on the option to the year the option is first in use. This will include costs such as planning, development, and construction.</p> <p>The expectation is that this includes all costs prior to option in use, such as gaining planning permission and construction. We understand that this can be a mix of capex and opex, but likely to be predominantly capex.</p>
Totex expenditure per annum post option in use under maximum utilisation scenario (£m)	<p>Totex expenditure per annum of the option under the maximum possible use scenario which is likely to be the theoretical annual maximum.</p> <p>The expectation is that this includes all costs post option in use, such as operational and capital renewal costs.</p>
Average totex expenditure per annum post option in use (£m)	The expected long-term average totex expenditure per annum for the option from the year the option is first in use to the end of the planning period (or to decommissioning/end of life of option). This is calculated from the average option utilisation figure.

Average option utilisation used for average totex expenditure and operational carbon forecasts (MI/d)	The long-term average option utilisation in megalitres per day from the year of option in use to the end of the planning period (or to decommissioning/end of life of option). This average option utilisation should be based on the expected utilisation considering the probability of a range of scenarios occurring across the planning period. For example, this utilisation could be based on the majority of the years representing 'normal' conditions with a smaller sub-set experiencing more 'extreme' conditions. This average option utilisation should be used to forecast average totex expenditure and average operational carbon figures.
Maximum option utilisation across the planning period (MI/d)	The maximum option utilisation in megalitres per day forecast to occur from the year the option is first in use to the end of the planning period. This is likely to result from an extreme scenario where usage is the highest possible.
Embodied carbon emissions (tCO2 equivalent)	Total embodied carbon emissions in tonnes of carbon dioxide for an option across the planning period.
Operational carbon emissions under maximum utilisation scenario (tCO2 equivalent per annum)	Total operational carbon emissions per annum in tonnes of carbon dioxide per year for an option from the year of option in use to the end of the planning period under the maximum possible use scenario for the planning period. This is likely to result from an extreme scenario where usage is the highest possible. This is calculated from the maximum option utilisation across the planning period figure.
Average operational carbon emissions (tCO2 equivalent per annum)	Average operational carbon emissions per annum in tonnes of carbon dioxide per year for an option from the year the option is first in use to the end of the planning period (or to decommissioning/end of life of option). Forecast based on the average option utilisation.
Total Carbon Cost (£M)	The total carbon cost, considering the embodied and operational carbon of the option. Carbon costing approach expected is set out in the WRPG.

Average Incremental Cost (AIC) (p/m3)	Average incremental cost of the option as defined in the economics of balancing supply and demand (UKWIR/Environment Agency, 2002).
Total NPC (£m)	Total net present cost of the option as defined in the economics of balancing supply and demand (UKWIR/Environment Agency, 2002). This should be the sum of the costs.
Natural capital impact of option (define units)	This column should be expressed consistently for all options and will be dependent on the approach adopted for natural capital assessment. It is expected that this will present a summary of the natural capital impact of each option considering a range of factors. We appreciate that there are different approaches to this and expect you to define what units you have used for this, and provide further details of their approaches including assumptions, calculation, and definition of units in your plan commentary. There are also columns in table 4 (AJ to AU), which could accommodate your individual natural capital metrics (minimum of 5 for companies in England, and 6 for companies in Wales).
Biodiversity and Habitat (define units)	Assessment of biodiversity and habitat option benefits, as part of your overall natural capital assessment (or equivalent) of feasible options. You should clearly define the units you have used. There is the facility to report non-monetised and/or monetised information in columns AJ and AK.
Climate Regulation (define units)	Assessment of climate regulation option benefits, as part of your overall natural capital assessment of feasible options. You should clearly define the units you have used. There is the facility to report non-monetised and/or monetised information in columns AL and AM.
Natural Hazard Regulation (define units)	Assessment of natural hazard regulation option benefits, as part of your overall natural capital assessment of feasible options. You should clearly define the units you have used. There is the facility to report non-monetised and/or monetised information in columns AN and AO.
Water Purification (define units)	Assessment of water purification option benefits, as part of your overall natural capital assessment of feasible options. You should clearly define the units you have used. There is the facility to report non-monetised and/or monetised information in columns AP and AQ.
Water Regulation (define units)	Assessment of water regulation option benefits, as part of your overall natural capital assessment of feasible options. You should clearly define the units you have used. There is the facility to report non-monetised and/or monetised information in columns AR and AS.

Recreation & Tourism (define units)	Assessment of recreation option benefits, as part of your overall natural capital assessment of feasible options. You should clearly define the units you have used. There is the facility to report non-monetised and/or monetised information in columns AT and AU.  <b>(Note: Reporting against this sub-metric is compulsory for Welsh water companies only).</b>
Freeform column 1 - 5	There are additional freeform columns for companies to report against metrics which are not covered elsewhere in this table. In particular companies may wish to report against additional best value metrics used to assess options. You should clearly define the units you have used, including monetised where possible.

## Table 5. Options Benefits

This section provides guidance on Table 5.

You are required to manually complete Table 5 for preferred options and those that are included in alternative programmes. This table should reflect the benefit of each option across the planning period for each WRZ under your preferred (most likely) scenario, Ofwat core scenario and any alternative programmes where relevant. If an option applies to multiple WRZs you will need to use a row for each WRZ to reflect the benefit in the WRZ alone.

The benefits profile should reflect the utilisation of your option under the specified scenario. For the preferred (most likely) scenario, this should align with the benefits reflected in table 3b for each WRZ.

We are not proposing auto-population of table 5. We note that key option details should be consistent in tables 4 and 5, however table 5 should reflect the utilisation of an option as set out in its preferred (most likely) programme (for each WRZ). We want to avoid formula over data cells to ensure smooth running of the tables, where a company can easily copy and paste over relevant information and/or will have its own data systems to pull data from to populate table 5.

Options may also have sub-options which you must also enter in this table. Sub-options are a set of solution variants which can differ in aspects such as size of output, cost, and natural capital impact. Having a range of sub-options available for selection in allows real choices during investment modelling and programme appraisal.

Table 5 Column C	Option name
Notes:	Each option should be given a name. The name is up to the company however it should be consistent throughout the plan and tables.
Processing rules:	Input

Table 5 Column D	Option ID
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Notes:	Each option should be given a unique reference number. The reference is up to the company however it should be consistent throughout the plan and tables.
Processing rules:	Input

Table 5 Column E	Type of option
Notes:	Choose the type of option from the predefined list provided. See Appendix B for the list of options in detail.
Processing rules:	Input from defined list (Auto-formatting where an option type is not in the predefined list)

Table 5 Column F	Option Group
Notes:	This will auto-categorise your option group as a Resource, Production, Distribution or Customer, dependent on the option type you select.
Processing rules:	Auto-populates (requires use of defined option types)

Table 5 Column G	Sub-Option	(Y/N)
Notes:	For some demand options you may need to provide multiple rows for different components of the option. Here you can flag whether the option is a sub-option.	
Processing rules:	Input	

Table 5 Column H	Preferred, Ofwat Core, Least Cost or Alternative Programme	Specify
Notes:	You should specify whether the option is for your preferred, least cost or alternative programme. If your option features in your multiple programmes, you should list it as a separate row for each programme it is included in.	
Processing rules:	Input: Preferred, Ofwat Core, Least Cost or Alternative	

Table 5 Column I	WRZ
Notes:	Each option row in table 5 should be specific to a single WRZ. You must specify the WRZ code here.
Processing rules:	Input from defined list

Table 5 Column J	Unit
Notes:	This specifies the unit used for the gains in WAFU or savings in demand. This is in MI/d by default.
Processing rules:	Pre-determined

Table 5 Column K	Decimal Places
Notes:	This specifies the number of decimal places used for the gains in WAFU or savings in demand. This is in 2 decimal places by default.
Processing rules:	Pre-determined

Table 5 Column L - CN	Gains in WAFU / Savings in Demand on full implementation (MI/d) input as +ve
Notes:	<p>You should specify the expected gains in WAFU or savings in demand for each option. This should be the benefits expected for the option under the specified scenario for the defined WRZ.</p> <p>Note that this should reflect the utilisation expected across the planning period, as well as any lead-in time for benefits and change in benefits over time as a result of climate change or other factors.</p> <p>The figures must reflect the benefit to your WRZ in MI/d. For demand options where they reduce demand, this should still be shown as MI/d benefit rather than the reduction in demand in MI/d. Changes to demand should be reflected in tables 3b and 3c.</p>
Processing rules:	Input (numerical to 2 decimal places)

## Table 5a-5c. Cost Profiles

Tables 5a and 5b offer a template within the main set of tables for setting out option cost profiles across the planning period. All definitions are provided within the tables therefore are not repeated here. **Companies should submit these tables as a separate workbook alongside their main WRMP24 tables.**

- Table 5a will need to be completed for all feasible and constrained options.
- Table 5b will need to be completed for options >£100 million in total cost.

Table 5a: WC Level - Option Level Cost Profile Table	
Cost Metric / Sub-metric Name	Definition/Notes
Asset Life (Column G)	Estimated average number of years an asset is considered useable before its value is fully depreciated.
Capex	The total capex cost of the option (total capex enhancement) per annum in pounds (millions) at a company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g. a range of 1:500 year droughts], an average total capex

	cost per annum across the drought events may be given. At water company level and consistent with option level information within Table 4.
Opex	The total opex cost of the option (total opex enhancement) per annum in pounds (millions) at the company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g. a range of 1:500 year droughts], an average total opex cost per annum across the drought events may be given. At water company level and consistent with option level information within Table 4.
Financing Cost	<p>The total financing cost of the option per annum in pounds (millions) at a company level from the start of option planning through to the end of the planning period.</p> <p>The financing cost should be calculated as a stream of annual costs over the life of the option, where the annual cost is the cost of financing the net book value of assets that contribute to the Regulatory Capital Value, adjusted for straight-line depreciation, using the assumed average cost of capital (the wholesale weighted cost of capital in PR19 final determinations). See tab 5c 'Financing Cost - Worked Example'.</p>
Discount Rate	Standard declining long-term discount rate (STPR) reported in Table 6 of HM Treasury Green Book (2020) for periods through 0 – 125 years and Section 2.3 of Supplementary Green Book guidance (Intergenerational wealth transfers and social discounting) for periods longer than 125 years.
Discount Factor	$1 / [(1+r)]^n$ , where r is the discount rate and n is the number of years.
Capex – Costed Risk	Costs of avoiding, transferring, or mitigating risks associated with an option incurred on an expected value basis of the risk materialising.
Capex – Optimism Bias	Explicit uplift adjustment to account for the systematic tendency to be over-optimistic about key project parameters that have not been sufficiently defined or understood at the project stage.

Net Present Cost (NPC)	Net present value of total financing cost and opex, discounted using the standard declining long-term discount rate (STPR) reported in Table 6 of HM Treasury Green Book (2020) for periods through 0 – 125 years and Section 2.3 of Supplementary Green Book guidance (Intergenerational wealth transfers and social discounting) for periods longer than 125 years.
Total NPC	Sum of NPC in Columns O to Column CQ in row above.  This should match with the total NPC reported in table 4 for the same option.

<b>Table 5b: WC Level - Option Level Unit Cost Profile Table</b>	
	<b>Definition/Notes</b>
Opex Cost Fixed	The total fixed opex cost of the option (total opex enhancement) per annum in pounds (millions) at the company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g. a range of 1:500 year droughts], an average total fixed opex cost per annum across the drought events may be given. At water company level and consistent with option level information within Table 4.
Opex Cost Variable	The total variable opex cost of the option (total opex enhancement) per annum in pounds (millions) at the company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g. a range of 1:500 year droughts], an average total variable opex cost per annum across the drought events may be given. At water company level and consistent with option level information within Table 4.
<b>Capex Sub Metrics:</b> Land (Non depreciating) Planning and Development (Non depreciating) Other Non-Depreciating Assets (Non depreciating) Process-Related Carbon Media Including GAC Vehicles Computers and Data Logging Fencing Domestic Meters Building Services	The total fixed capex unit cost of the option (total capex enhancement) per annum in pounds (millions) at a company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g. a range of 1:500 year droughts], an average total fixed capex unit cost per annum across the drought events may be given. At water company level and consistent with option level information within Table 4.

Membranes ICA (Instrumentation, Control & Automation) Plant and Machinery M&E (Mechanical and Electrical) Works on Pumping Stations and Treatment Works Raw Water and District Meters Power Supply Steel/Timber/GRP Structures Landscaping/Environmental Works Borehole Screening and Casing Bridges Brick/Concrete Office Structures Treatment and Pumping Station Civils (incl. Intakes) Roads and Car Parks Water Towers Borehole Installation Headworks/Valves Underwater Assets Reinforced Concrete Tanks / Service Reservoirs Weirs Pipelines Tunnels Aqueducts Embankment Works	
Freeform rows 1-x	There are additional freeform rows for companies to include cost profiles relating to best value metrics. In particular companies may wish to include carbon and natural capital cost profiles.

**Table 5c: Financing Cost - Worked Example**

Notes:	A worked example of financing cost over a 5 year period considering the discount factor with calculations set out in column K. This should be used to specify input required from companies in tables 5a and 5b.
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**Table 6. Drought Plan Links**

In table 6, we expect the benefits of each drought measure across the planning period under different drought scenarios. If you only have benefit data for base year and a future year interpolation may be the only option and could be applied for climate change impacts to your options. You should be able to run your model under different drought scenarios and have selected the relevant ones (or water companies wholly or mainly in England 1 in 500 should align to your dry year annual average scenario). As per the WRP, you should not include drought measures in its baseline supply forecast.

Row 7.51FP of table 3b is where companies can set out the benefits of drought measures assumed (both supply side and demand side options) for their final planning scenarios at the

resource zone level. Table 6 should align to this whilst providing further detail around the components of the total benefits assumed for each year.

This is a new table for the current round of plans. The aim of this table is to further understand companies assumed benefits from its links to drought measures included within the company final drought plans. Further information about how to fill in this table can be found in the drought plan links supporting document.

General points:

- These tables should be based on final plan data
- The table should be completed once for the base year scenario, and if seeking drought resilience investment, completed again for the critical year in the planning horizon.
- It is up to companies to decide whether to include emergency storage in the DO calculations. Explain your assumptions in the summary report.
- You may need to make drought specific adjustments to DI, imports/exports and/or target headroom – reflecting the assumptions for that drought scenario. If this is the case, you should use the rows provided (11.1FPD, 13.1FPD, 16.1FPD).
- 1FPD to 10FPD are around drought measures and their assumed benefits under different drought severities for the WRZ. You should fill in the 'description column' to list the percentage demand savings, list sources or detail other measures and the 'drought plan reference column' to link to your final drought plan.
- 11.1FPD is DI adjustment to account for any specific uplift to design drought (if applicable).
- 11FPD is DI - accounting for DI in
- 12FPD - WAFU. This acts as a check whether benefits of drought measures assumed in final plan are equal to combined benefits set out in 10FPD.
- 13.1FPD - Import/Export adjustments under different droughts (if applicable)
- 13FPD - total WAFU as per formula.
- 16FPD - target headroom.  
16.1FPD allows for adjustment to target headroom if applicable for the drought scenario
- 17FPD shows available headroom
- 18FPD shows overall supply demand balance. Note this enable companies to demonstrate their expected resilience to different drought events (not just design drought for final planning scenario).
- Auto-calculations use data from your WRZ tab for the 1 in 500-year drought scenario, as this is the design drought for companies wholly or mainly in England. You will need to input in your own SDB data for other drought events, and this will be the only place in the tables for you to show your resilience to different drought severities.

1FPD	Appeals for restraint	MI/d
Notes:	Impact on DO from voluntary appeals for restraint, this should match the value in your final drought plan.  You should state the % savings assumed when implemented (non-cumulative).	
Processing rules:	Input	

<b>2FPD</b>	<b>Licensed drought only sources</b>	<b>MI/d</b>
Notes:	Combined DO benefit from your licenced drought only sources. List the sources in Column D.	
Processing rules:	Input	

<b>3FPD</b>	<b>Other level 1 drought measures</b>	<b>MI/d</b>
Notes:	Combined DO benefit from your other level 1 drought measures. List the sources in Column D.	
Processing rules:	Text Input	

<b>4FPD</b>	<b>Temporary Use Bans</b>	<b>MI/d</b>
Notes:	Impact on DO of temporary use bans, this should match the value in your final drought plan  You should state the % savings assumed when implemented (non-cumulative).	
Processing rules:	Input	

<b>5FPD</b>	<b>Level 2 Drought Permits/Orders</b>	<b>MI/d</b>
Notes:	Combined DO benefit from your level 2 drought permits/orders. List the sources in Column D.	
Processing rules:	Input	

<b>6FPD</b>	<b>Other level 2 drought measures</b>	<b>MI/d</b>
Notes:	Combined DO benefit from your other level 2 drought measures. List the sources in Column D.	
Processing rules:	Text Input	

<b>7FPD</b>	<b>Non Essential Use Bans</b>	<b>MI/d</b>
Notes:	Combined impact on DO of non-essential use bans (drought order), this should match the value in your final drought plan.  You should state the % savings assumed when implemented (non-cumulative).	
Processing rules:	Input	

<b>8FPD</b>	<b>Level 3 Drought Permits/Orders</b>	<b>MI/d</b>
Notes:	Combined DO benefit from your level 3 drought permits/orders. List the sources in Column D.	
Processing rules:	Input	

<b>9FPD</b>	<b>Other level 3 drought measures</b>	<b>MI/d</b>
Notes:	Combined DO benefit from your other level 3 drought measures. List the sources in Column D.	
Processing rules:	Input	

Note: we do not expect companies to rely upon benefits from level 4 measures to as part of your resilience to severe droughts. This is therefore not included in table 6.

<b>10FPD</b>	<b>Total Benefit</b>	<b>MI/d</b>
Notes:	Summation of the megalitre per day benefit from the above combined drought measures for the given drought scenario at points through the planning horizon (base year and critical years in the planning horizon for the given WRZ.	
Processing rules:	Automated calculation from sum of K7:K15	

<b>11.1FPD</b>	<b>Distribution Input Adjustment</b>	<b>MI/d</b>
Notes:	Drought Demand Enhancement in megalitres per day for the specific drought event, if an adjustment for this has been applied.	
Processing rules:	Input	

<b>11FPD</b>	<b>Distribution Input</b>	<b>MI/d</b>
Notes:	Final plan distribution Input adjusted for drought demand enhancement in megalitres per day for the specific drought event	
Processing rules:	45FP + 11.1FPD	

<b>12FPD</b>	<b>Water Available For Use (own sources)</b>	<b>MI/d</b>
Notes:	Final plan water available for use (own sources) minus change in DO from drought permits / orders plus total combined benefit from drought measures in megalitres per day for the given drought event.	
Processing rules:	10FP - 7.5FP + 10FPD	

<b>13.1FPD</b>	<b>Import (+ve) and Export (-ve) Drought Adjustment</b>	<b>MI/d</b>
Notes:	Positive imports and negative exports adjusted for drought demand enhancement in megalitres per day for the specific drought event, if an adjustment for this has been applied.	
Processing rules:		

<b>13FPD</b>	<b>Total Water Available For Use (own sources)</b>	<b>MI/d</b>
Notes:	Final plan Total Water Available for use including benefit of combined drought measures calculated by Water Available For Use (own sources) including combined benefit from drought measures	

	plus import (+ve) and export (-ve) and any drought adjustment to these, in megalitres per day.
Processing rules:	12FPD + sum(2FP:5FP) + 13.1FPD

16FPD	Target Headroom	MI/d
Notes:	Final planning target headroom. For wholly or mainly English WRZs, the 1 in 500 drought will be the default final plan DYAA scenario used. Different headroom figures will be relevant for other drought scenarios.	
Processing rules:	48FP	

16.1FPD	Target Headroom Adjustment (if applicable)	MI/d
Notes:	Adjustment to target headroom in final plan resulting from uncertainty from drought event, if an adjustment for this has been applied.	
Processing rules:	Input	

17FPD	Available Headroom	MI/d
Notes:	Final planning available headroom including impact of drought measures calculated from final plan total water available for use including benefit of combined drought measures minus final plan distribution input adjusted for drought demand enhancement.	
Processing rules:	13FPD - 11FPD	

18FPD	Supply Demand Balance	MI/d
Notes:	Final planning supply demand balance including impact of drought measures calculated from final plan total water available for use including benefit of combined drought measures minus distribution Input adjusted for drought demand enhancement plus final plan target headroom plus target headroom adjustment.	
Processing rules:	17FPD - (16FPD + 16.1FPD)	

## Table 7. Adaptive programmes

Table 7 provides a template for you to present any adaptive programmes included in your WRMP. This includes an example figure of how you may wish to present your different programmes.

- **All companies should report against your “least cost” and “Ofwat core” programmes here, as well as any alternative programmes you have.**
- You must present an adaptive plan visually
  - We expect the Ofwat core and preferred (most likely) programmes to be the same or very similar between 2025 and 2030

We note that table 4 and 5 also allow companies to flag where an options falls in an alternative programme. Data reported in table 7 should be consistent with this.

Rows 2-6 offer a template to provide a summary of each programme. We expect clear detail around what has triggered any alternative programme and what would activate it. It is also important that companies indicate the earliest year at which the programme could be triggered. You should refer to the latest WRPG for reporting expectations around adaptive programmes.

Tables 7a and 7b enable companies to state key supply demand balance information for an alternative programme. Whilst tables 7c and 7d allow companies an opportunity to state the Totex and Enhancement Expenditure associated with the alternative programme. You can report programme levels cost for least cost and best value alternative programmes here if applicable.

**Table 7a - WC level- alternative programme [specify] Baseline**

<b>AP1BL</b>	<b>Distribution input</b>	<b>MI/d</b>
Notes:	Baseline distribution Input in MI/d for alternative programme [specify] at water company level	
Processing rules:	Input	

<b>AP2BL</b>	<b>Total Water Available for Use</b>	<b>MI/d</b>
Notes:	Baseline Total Water Available for Use in MI/d for alternative programme [specify] at water company level	
Processing rules:	Input	

<b>AP3BL</b>	<b>Target Headroom</b>	<b>MI/d</b>
Notes:	Baseline Target Headroom in MI/d for alternative programme [specify] at water company level	
Processing rules:	Input	

<b>AP4BL</b>	<b>Supply Demand Balance</b>	<b>MI/d</b>
Notes:	Baseline Supply demand balance in MI/d for alternative programme [specify] at water company level	
Processing rules:	Input	

**Table 7b - WC level- alternative programme [specify] Final Plan**

<b>AP1FP</b>	<b>Distribution input</b>	<b>MI/d</b>
Notes:	Final planning programme distribution Input in MI/d for alternative programme [specify] at water company level built up from and consistent with option level information within Table 4.	
Processing rules:	Input	

<b>AP2FP</b>	<b>Total Water Available for Use</b>	<b>MI/d</b>
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Notes:	Final planning programme Total Water Available for Use in MI/d for alternative programme [specify] at water company level built up from and consistent with option level information within Table 4.
Processing rules:	Input

AP3FP	Target Headroom	MI/d
Notes:	Final planning programme Target Headroom in MI/d for alternative programme [specify] at water company level	
Processing rules:	Input	

AP4FP	Supply Demand Balance	MI/d
Notes:	Final planning programme Supply demand balance in MI/d for alternative programme [specify] at water company level	
Processing rules:	Input	

**Table 7c - WC level- alternative programme [specify] Totex**

AP6FP	Totex increases (base)	£m
Notes:	Final planning programme totex increases (based on the 2017 base year) for alternative programme [specify] at water company level built up from and consistent with option level information within Table 4.	
Processing rules:	Input	

AP7FP	Totex savings (base)	£m
Notes:	Final planning programme totex savings (based on the 2017 base year) for alternative programme [specify] at water company level built up from and consistent with option level information within Table 4.	
Processing rules:	Input	

AP8FP	Totex total (base)	£m
Notes:	Final planning programme total totex (based on the 2017 base year) for alternative programme [specify] at water company level built up from and consistent with option level information within Table 4.	
Processing rules:	Input	

**Table 7d - WC level- alternative programme [specify] Enhancement Expenditure**

AP9FP	Total enhancement expenditure - Capex	£m
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Notes:	The total capex cost of the option (total capex enhancement) per annum in pounds (millions) at a company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g., a range of 1:500 year droughts], an average total capex cost per annum across the drought events may be given. At water company level built up from and consistent with option level information within Table 4.
Processing rules:	Input

AP10FP	Total enhancement expenditure - Opex	£m
Notes:	The total opex cost of the option (total opex enhancement) per annum in pounds (millions) at the company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g. a range of 1:500 year droughts], an average total opex cost per annum across the drought events may be given. At water company level built up from and consistent with option level information within Table 4.	
Processing rules:	Input	

AP11FP	Total enhancement expenditure - Totex	£m
Notes:	The total totex cost of the option (total opex enhancement) per annum in pounds (millions) at the company level from the start of option planning through to the end of the planning period under the design drought scenario. Where a sequence of design droughts are tested [e.g., a range of 1:500 year droughts], an average total totex cost per annum across the drought events may be given. At water company level built up from and consistent with option level information within Table 4.	
Processing rules:	Input	

## Table 8. Business Plan Links

This is a new table for the current round of plans. The aim of this table is to provide a clearer link between WRMP and business plan submissions. This will provide a view of the impact of the WRMP on future business plan requirements in terms of costs and benefits delivered. It will allow for improved reconciliation between your company's WRMP and business plan submission. We would expect the table to be used as a point of reference when you explain any changes between their WRMP and business plan submissions. The cost base in which the numbers are reported should also be included and is expected to be 2020/21 as detailed in the WRPG.

**At a minimum you should complete table 8 for your preferred (most likely), least cost and Ofwat core programmes, as provided in the template. Any issues with this should be discussed with Ofwat.**

If you have alternative programmes, you can complete a repeat set of Table 8 for one or more of your alternative programmes. This may be requested by Ofwat.

**Table 8a - WC Summary Base Totex expenditure for programme consistent with RAG reporting requirements**

<b>A1</b>	<b>Totex increases (base)</b>	<b>£m</b>
Notes:	Total totex increases from baseline totex as a result of adopting the specified programme.	
Processing rules:	Input	

<b>A2</b>	<b>Totex savings (base)</b>	<b>£m</b>
Notes:	Total totex savings from baseline totex) as a result of adopting the specified programme.	
Processing rules:	Input	

<b>A3</b>	<b>Total totex variance (base)</b>	<b>£m</b>
Notes:	Total totex variance from baseline totex) as a result of adopting the specified programme.	
Processing rules:	This is an automated calculation based on A1 and A2 inputs.	

**Table 8b - Summary of supply-demand balance enhancement expenditure for programme consistent with RAG reporting requirements**

<b>B1</b>	<b>Supply-side improvements (capex)</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with schemes delivering supply-side (resource, and production and transfer from third-party options) enhancements. The benefits (M/d) associated with this expenditure are included in line E1. Expenditure recorded should relate to the adoption of the specified programme.	
Processing rules:	Input	

<b>B2</b>	<b>Supply-side improvements (opex)</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with schemes delivering supply-side (resource, and production and transfer from third-party options) enhancements. The benefits (M/d) associated with this expenditure are included in line E1. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B3</b>	<b>Supply-side improvements (totex)</b>	<b>£m</b>
Notes:	Total enhancement totex for all supply side options as a result of adopting the specified programme.	
Processing rules:	Automated calculation based on B1 and B2 inputs	

<b>B4</b>	<b>Demand-side improvements (excl. leakage and metering) - capex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with schemes delivering demand side (water efficiency options) enhancements. This excludes benefits from leakage and metering activities. The benefits (Ml/d) associated with this expenditure are included in line E2. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B5</b>	<b>Demand-side improvements (excl. leakage and metering) - opex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with schemes delivering demand side (water efficiency options) enhancements. This excludes benefits from leakage and metering activities. The benefits (Ml/d) associated with this expenditure are included in line E2. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B6</b>	<b>Demand-side improvements (excl. leakage and metering) - totex</b>	<b>£m</b>
Notes:	Total enhancement totex for all demand side options as a result of adopting the specified programme.	
Processing rules:	Automated calculation based on B4 and B5 inputs.	

<b>B7</b>	<b>Leakage improvements - capex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with schemes delivering leakage enhancements. The benefits (Ml/d) associated with this expenditure are included in line E3. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B8</b>	<b>Leakage improvements - opex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with schemes delivering leakage enhancements. The benefits (Ml/d) associated with this expenditure are included in line E3. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B9</b>	<b>Leakage improvements - totex</b>	<b>£m</b>
Notes:	Total enhancement totex for all leakage improvements as a result of adopting the specified programme.	
Processing rules:	Automated calculation based on B7 and B8 inputs	

<b>B10</b>	<b>Internal interconnectors - capex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with inter-zonal and intra-zonal connections delivering interconnectivity. The benefits (M/d) associated with this expenditure are included in line E4. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B11</b>	<b>Internal interconnectors - opex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with inter-zonal and intra-zonal connections delivering interconnectivity. The benefits (M/d) associated with this expenditure are included in line E4. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B12</b>	<b>Internal interconnectors - totex</b>	<b>£m</b>
Notes:	Total enhancement totex for all internal interconnectors as a result of adopting the specified programme.	
Processing rules:	Automated calculation based on B10 and B11 inputs	

<b>B13</b>	<b>Strategic regional water resources - capex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with strategic regional water resource solutions (funded at PR19 or added to the funded gated process). The benefits (M/d) associated with this expenditure are included in lines E1 to E3 as appropriate. Companies should clearly identify solutions they consider to be strategic regional solutions within their plans. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>B14</b>	<b>Strategic regional water resources - opex</b>	<b>£m</b>
Notes:	Expenditure that enhances the supply-demand balance. Includes expenditure associated with strategic regional water resource solutions (funded at PR19 or added to the funded gated process). The benefits (M/d) associated with this expenditure are included in lines E1 to E3 as appropriate. Companies should clearly identify solutions they consider to be strategic regional solutions within their	

	plans. Expenditure recorded should be that resulting from adoption of the specified programme.
Processing rules:	Input

<b>B15</b>	<b>Strategic regional water resources - totex</b>	<b>£m</b>
Notes:	Total enhancement totex for all strategic regional water resource options as a result of adopting the specified programme.	
Processing rules:	Automated calculation based on B13 and B14 inputs.	

<b>B16</b>	<b>Total supply demand expenditure - totex</b>	<b>£m</b>
Notes:	Total enhancement totex for all supply-demand balance options and enhancements as a result of adopting the specified programme.	
Processing rules:	Automated calculation based on B1-B15 inputs.	

### Table 8c - Summary of metering enhancement expenditure for programme consistent with RAG reporting requirements

Metering expenditure in each of these lines should be split between investment in basic, automated meter read (AMR) and advanced meter infrastructure (AMI) meter types. Each line X represents the total investment for all meter types with the lines below including expenditure by individual meter types, X.1 is basic, X.2 is AMR and X.3 is AMI. For example, line C1 is the total capex expenditure associated with new household optant meter installations and C1.1 is the proportion of this expenditure associated with basic meters, C1.2 AMR meters and C1.3 AMI meters.

<b>C1, C1.1, C1.2, C1.3</b>	<b>New meters requested by existing customers (optants) (Capex)</b>	<b>£m</b>
Notes:	Enhancement 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. Expenditure is split by meter type, basic, AMR and AMI. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>C2, C2.1, C2.2, C2.3</b>	<b>New meters requested by existing customers (optants) (Opex)</b>	<b>£m</b>
Notes:	Enhancement 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. Expenditure is split by meter type, basic, AMR and AMI. Expenditure recorded should be that resulting from adoption of the specified programme.	

Processing rules:	Input
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<b>C3</b>	<b>New meters requested by existing customers (optants) (Totex)</b>	<b>£m</b>
Notes:	Total enhancement totex related to metering (excluding cost of providing metering to new service connections) for provision of meters requested by existing customers (optants) resulting from adoption of the specified programme.	
Processing rules:	Automated calculation based on C1 and C2 inputs	

<b>C4, C4.1, C4.2, C4.3</b>	<b>New meters introduced by companies for existing - Capex</b>	<b>£m</b>
Notes:	Enhancement 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. Expenditure is split by meter type, basic, AMR and AMI. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>C5, C5.1, C5.2, C5.3</b>	<b>New meters introduced by companies for existing - opex</b>	<b>£m</b>
Notes:	Enhancement 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. Expenditure is split by meter type, basic, AMR and AMI. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>C6</b>	<b>New meters introduced by companies for existing - totex</b>	<b>£m</b>
Notes:	Total enhancement totex 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 resulting from adoption of the specified programme.	
Processing rules:	Automated calculation based on C4 and C5 inputs.	

<b>C7, C7.1, C7.2, C7.3</b>	<b>New meters for existing customers - business-capex</b>	<b>£m</b>
Notes:	Enhancement 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. Expenditure is split by meter type, basic, AMR and AMI. Expenditure recorded should be that resulting from adoption of the specified programme.
Processing rules:	Input

<b>C8, C8.1, C8.2, C8.3</b>	<b>New meters for existing customers - business- opex</b>	<b>£m</b>
Notes:	Enhancement 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. Expenditure is split by meter type, basic, AMR and AMI. Expenditure recorded should be that resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>C10/C11</b>	<b>Replacement of existing basic meters with AMR/AMI meters - capex</b>	<b>£m</b>
Notes:	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. These lines should only be completed by companies who were allocated enhancement expenditure to replace basic meters with smart meters in the PR19 final determinations.	
Processing rules:	Input	

<b>C12</b>	<b>Smart metering infrastructure - capex</b>	<b>£m</b>
Notes:	Enhancement expenditure related to the provision of infrastructure such as telemetry to support the residential and business smart meter network.	
Processing rules:	Input	

<b>C13/C14</b>	<b>Replacement of existing basic meters with AMR/AMI meters - opex</b>	<b>£m</b>
Notes:	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. These lines should only be completed by companies who were allocated enhancement expenditure to replace basic meters with smart meters in the PR19 final determinations.	
Processing rules:	Input	

<b>C15</b>	<b>Smart metering infrastructure - opex</b>	<b>£m</b>
Notes:	Enhancement expenditure related to the provision of infrastructure such as telemetry to support the residential and business smart meter network.	
Processing rules:	Input	

<b>C16/C17</b>	<b>Replacement of existing basic meters with AMR/AMI meters - totex</b>	<b>£m</b>
Notes:	Total enhancement totex related to the replacement of existing basic meters with AMR/AMI meters resulting from the adoption of the preferred plan.	
Processing rules:	Automated calculation based on inputs in C10 and C13 for AMR and C11/C14 for AMI.	

<b>C18</b>	<b>Smart metering infrastructure - totex</b>	<b>£m</b>
Notes:	Total enhancement totex related to the provision of infrastructure such as telemetry to support the residential and business smart meter network.	
Processing rules:	Automated calculation based on C13 and C15 inputs	

<b>C19</b>	<b>Total metering expenditure - totex</b>	<b>£m</b>
Notes:	Total metering enhancement expenditure, as totex across all types of new meter installations resulting from the adoption of the specified programme.	
Processing rules:	Automated calculation using C3, C6, C9, C16, C17 and C18	

**Table 8d - Summary of total enhancement for programme consistent with RAG reporting requirements**

<b>D1</b>	<b>Total enhancement expenditure (capex)</b>	<b>£m</b>
Notes:	Total capex enhancement expenditure for the specified programme.	
Processing rules:	Automated calculation based all capex inputs from tables 8b and 8c	

<b>D2</b>	<b>Total enhancement expenditure (opex)</b>	<b>£m</b>
Notes:	Total opex enhancement expenditure for the specified programme.	
Processing rules:	Automated calculation based all opex inputs from tables 8b and 8c	

<b>D3</b>	<b>Total enhancement expenditure (totex)</b>	<b>£m</b>
Notes:	Total totex enhancement expenditure for the specified programme	

Processing rules:	Automated calculation based all totex calculations from tables 8b and 8c
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**Table 8e - Summary of supply demand benefits for programme consistent with RAG reporting requirements**

<b>E1</b>	<b>New Supply-side improvements) (benefit)</b>	<b>MI/d</b>
Notes:	Incremental supply-side (resource and production) enhancement benefits forecast to be delivered during the year to the supply-demand balance. The forecast value should account for all water resource zones and be the maximum of dry year annual average or dry year critical period benefits. The expenditure associated with these benefits is reported in lines B1-B3. The benefits included should be those resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>E2</b>	<b>New Demand-side improvements (excluding leakage and metering) (benefit)</b>	<b>MI/d</b>
Notes:	Incremental demand-side (water efficiency, excluding leakage and metering) enhancement benefits forecast to be delivered during the year to the supply-demand balance. The forecast value should account for all water resource zones and be the maximum of dry year annual average or dry year critical period benefits. The expenditure associated with these benefits is reported in lines B4-B6. The benefits included should be those resulting from adoption of the specified programme.	
Processing rules:	Input	

<b>E3</b>	<b>Leakage improvements</b>	<b>MI/d</b>
Notes:	Incremental leakage enhancement forecast to be delivered during the year to the supply-demand balance. The forecast value should account for all water resource zones and be the maximum of dry year annual average or dry year critical period benefits. The expenditure associated with these benefits is reported in lines B7-B9. The benefits included should be those resulting from adoption of the defined programme. Leakage benefits associated with metering should be included in this line and identified clearly in the plan.	
Processing rules:	Input	

<b>E4</b>	<b>Internal interconnectors</b>	<b>MI/d</b>
Notes:	Incremental internal interconnection supply demand balance benefits forecast to be delivered during the year. The forecast value should account for all water resource zones and represents the total maximum capacity of internal interconnections delivered during the year to provide supply demand balance benefit. These	

	interconnectors do not increase supply or decrease demand but provide a supply demand benefit through additional transport capacity between areas of the distribution network. The expenditure associated with these benefits is reported in lines B10-B12. The benefits included should be those resulting from adoption of the specified programme.
Processing rules:	Input

<b>E5</b>	<b>Metering improvements</b>	<b>MI/d</b>
Notes:	<p>Total supply demand balance benefits resulting from delivery of all metering activities in the specified programme. This excludes leakage benefits. This includes both new meter installations and replacement metering activities, with the benefits recorded by meter type in the following supporting lines:</p> <p>E5.1 Benefits from new basic meter installations for existing customers (household)</p> <p>E5.2 Benefits from new AMR meter installations for existing customers (household)</p> <p>E5.3 Benefits from new AMI meter installations for existing customers (household)</p> <p>E5.4 Benefits from replacing (or upgrading) existing basic meters with AMR meters (household)</p> <p>E5.5 Benefits from replacing (or upgrading) existing basic or AMR meters with AMI meters (household)</p> <p>E5.6 Benefits from replacing (or upgrading) existing basic meters with AMR meters (non-household)</p> <p>E5.7 Benefits from replacing (or upgrading) existing basic or AMR meters with AMI meters (non-household)</p>	
Processing rules:	Input	

**Table 8f - Summary of totex leakage expenditure for programme consistent with RAG reporting requirements**

<b>F1</b>	<b>Total leakage activity - Maintaining leakage (totex)</b>	<b>£m</b>
Notes:	Total Totex from activities to maintain leakage in accordance with specified programme.	
Processing rules:	Input	

<b>F2</b>	<b>Total leakage activity - Reducing leakage (totex)</b>	<b>£m</b>
Notes:	Total Totex from activities planned to reduce leakage in accordance with the specified programme.	
Processing rules:	Input	

# Appendix A – Option Types

Option Type	Option Group	Description <sup>1</sup>
Aquifer recharge/Aquifer storage recovery	Resource Options	Options that provide resource benefits through aquifer recharge/aquifer storage recovery (ASR)
Catchment management	Resource Options	Options that provide resource benefits through catchment management measures. This may be through improving the treatability of water or counteracting deteriorating water quality.
Conjunctive use	Resource Options	Options that enable different water supplies to be used in-combination to enhance overall water available for use.
Desalination	Resource Options	Options that abstract and treat saline water to provide additional supply.
Drought permits/orders	Resource Options	Options that increase water available for use, through the application for and implementation of drought permits or orders.
External raw water bulk supply/transfer	Resource Options	Options involving the transfer of water from outside of the water company, within the UK.
Groundwater enhancement	Resource Options	Options to increase the deployable output of an existing groundwater source.
Internal raw water transfer	Resource Options	Options involving the transfer of water between water company zones.
International import	Resource Options	Options involving the importation of water from outside of the UK
Licence trading	Resource Options	Options involving the trading of unused

<sup>1</sup> Please note, these are not formal definitions for the options but instead provide a summary of the option type to encourage consistent categorisation of options. We appreciate companies may have slightly different definitions

		abstraction licence capacity to increase the company's water available for use.
New groundwater	Resource Options	Options involving developing a new groundwater source.
New reservoir	Resource Options	Options involving developing a new reservoir source.
New surface water	Resource Options	Options involving developing a surface water source, excluding any reservoir.
New technology	Resource Options	Options involving new technology not covered by other option types.
New water treatment works	Resource Options	Options involving the construction of new water treatment works.
Reduction of raw water losses	Resource Options	Options involving the reduction of raw water losses.
Reservoir enlargement	Resource Options	Options involving the enlargement of an existing reservoir.
Surface water enhancement	Resource Options	Options to increase the deployable output from a surface water source.
Water reuse	Resource Options	Options involving the reuse of water effluent. This can include direct and indirect reuse schemes for potable or non-potable supply.
New/Enhanced pumping station	Production Options	Options to construct a new or enhance an existing pumping station.
Outage reduction	Production Options	Options to reduce outage at water company assets (note catchment options should be reported under as "catchment management").
Water treatment works capacity increase	Production Options	Options that increase the capacity of a water treatment works.
Water treatment works loss recovery	Production Options	Options that reduce losses at a water treatment works.
Active leakage management	Distribution Options	Options that actively identify and target leakage directly.

External potable bulk supply/transfer	Distribution Options	Options that involve the transfer/bulk supply of potable water from another water company.
Internal potable transfer	Distribution Options	Options that involve the transfer/bulk supply of potable water within the water company.
Mains replacement (not trunk mains)	Distribution Options	Options involving the replacement of mains supply pipes, excluding trunk mains.
Other leakage control	Distribution Options	Other leakage options
Pressure management	Distribution Options	Options to manage pressure in the distribution network
Trunk mains renewal/new	Distribution Options	Options involving the renewal of, or construction of trunk mains
Change in levels of service	Customer Options	Options involving a change in levels of service to increase water available for use.
Household water audit	Customer Options	Water audit options (virtual or in-person) for household properties
Household water recycling	Customer Options	Options that increase water recycling in the home, such as the collection and reuse of greywater.
Metering change of occupancy	Customer Options	Metering options relevant to when a property has a change of occupier.
Metering compulsory	Customer Options	Compulsory metering options.
Metering optants	Customer Options	Metering options related to customers who choose to get/request a water meter.
Metering other selective	Customer Options	Other selective metering options.
Non-household water audit	Customer Options	Water audit options (virtual or in-person) for non-household properties
Other water efficiency	Customer Options	Other water efficiency options
Rainwater harvesting	Customer Options	Options that promote and increase rates of rainwater harvesting for household and/or non-household properties

Retrofitting indoor water efficiency devices	Customer Options	Options that involve retrofitting old water devices for more efficient ones.
Supply pipe repairs / replacement	Customer Options	Options involving the repair or replacement of customer supply pipes.
Tariff	Customer Options	Options involving the use of tariffs to motivate water efficient customer behaviours.
Water efficiency customer education / awareness	Customer Options	Options involving education and awareness raising programmes to improve customer water efficiency practices.
Drought - water use restrictions	Customer Options	Options involving drought water use restrictions including the use of Temporary Use Bans (TUBs) and Non-Essential Use Bans (NUEBs).

# Appendix B – Water Resource Zones

COMPANY	WRZ_NAME	WC id	WRZ id	Combined id
Affinity Water	1 Misbourne	AFW	MS1	AFWMS1
Affinity Water	2 Colne	AFW	CN2	AFWCN2
Affinity Water	3 Lee	AFW	LE3	AFWLE3
Affinity Water	4 Pinn	AFW	PN4	AFWPN4
Affinity Water	5 Stort	AFW	ST5	AFWST5
Affinity Water	6 Wey	AFW	WY6	AFWWY6
Affinity Water	7 Dour	AFW	DR7	AFWDR7
Affinity Water	8 Brett	AFW	BR8	AFWBR8
Anglian Water	Essex Central	AWS	EXC	AWSEXC
Anglian Water	Essex South	AWS	EXS	AWSEXS
Anglian Water	Fenland	AWS	FND	AWSFND
Anglian Water	Hartlepool	AWS	HPL	AWSHPL
Anglian Water	Lincolnshire Bourne	AWS	LNB	AWSLNB
Anglian Water	Lincolnshire Central	AWS	LNC	AWSLNC
Anglian Water	Lincolnshire East	AWS	LNE	AWSLNE
Anglian Water	Lincolnshire Retford and Gainsborough	AWS	LNN	AWSLNN
Anglian Water	Norfolk Aylsham	AWS	NAY	AWSNAY
Anglian Water	Norfolk Bradenham	AWS	NBR	AWSNBR
Anglian Water	Norfolk East Dereham	AWS	NED	AWSNED
Anglian Water	Norfolk East Harling	AWS	NEH	AWSNEH
Anglian Water	Norfolk Happisburgh	AWS	NHA	AWSNHA
Anglian Water	Norfolk Harleston	AWS	NHL	AWSNHL
Anglian Water	Norfolk North Coast	AWS	NNC	AWSNNC
Anglian Water	Norfolk Norwich & the Broads	AWS	NTB	AWSNTB
Anglian Water	Norfolk Wymondham	AWS	NWY	AWSNWY
Anglian Water	Ruthamford Central	AWS	RTC	AWSRTC
Anglian Water	Ruthamford North	AWS	RTN	AWSRTN
Anglian Water	Ruthamford South	AWS	RTS	AWSRTS
Anglian Water	Ruthamford West	AWS	RTW	AWSRTW
Anglian Water	South Humber Bank	AWS	SHB	AWSSHB
Anglian Water	Suffolk East	AWS	SUE	AWSSUE
Anglian Water	Suffolk Ixworth	AWS	SUI	AWSSUI
Anglian Water	Suffolk Sudbury	AWS	SUS	AWSSUS
Anglian Water	Suffolk Thetford	AWS	SUT	AWSSUT
Anglian Water	Suffolk West & Cambs	AWS	SWC	AWSSWC
Bristol Water	Bristol	BWX	BRS	BWXBRS
Cambridge Water	Cambridge	CAM	CAM	CAMCAM
Dwr Cymru Welsh Water	Alwen /Dee	DCW	ALW	DCWALW
Dwr Cymru Welsh Water	Bala	DCW	BAL	DCWBAL
Dwr Cymru Welsh Water	Blaenau Ffestiniog	DCW	BFF	DCWBFF
Dwr Cymru Welsh Water	Brecon	DCW	BCN	DCWBCN
Dwr Cymru Welsh Water	Clwyd Coastal	DCW	CCT	DCWCCT
Dwr Cymru Welsh Water	Dyffryn Conwy	DCW	CWY	DCWCWY
Dwr Cymru Welsh Water	Elan/Builth Wells	DCW	EBW	DCWEBW
Dwr Cymru Welsh Water	Harlech/Barmouth	DCW	HBA	DCWHBA
Dwr Cymru Welsh Water	Hereford C.U. System	DCW	HRF	DCWHRF
Dwr Cymru Welsh Water	Lleyn	DCW	LLN	DCWLLN
Dwr Cymru Welsh Water	Llyswen	DCW	LYW	DCWLYW
Dwr Cymru Welsh Water	Mid & South Ceredigion	DCW	MSC	DCWMSC
Dwr Cymru Welsh Water	Monmouth	DCW	MNM	DCWMNM
Dwr Cymru Welsh Water	North Ceredigion	DCW	NTC	DCWNTE
Dwr Cymru Welsh Water	North Eryri / Ynys Mon	DCW	NTE	DCWNTE
Dwr Cymru Welsh Water	Pembrokeshire	DCW	PBK	DCWPBK
Dwr Cymru Welsh Water	Pilleth	DCW	PLH	DCWPLH
Dwr Cymru Welsh Water	Ross-on-Wye	DCW	ROW	DCWROW
Dwr Cymru Welsh Water	SE Wales C.U. System	DCW	SEW	DCWSEW
Dwr Cymru Welsh Water	South Meirionydd	DCW	SMR	DCWSMR
Dwr Cymru Welsh Water	Tywi C.U. System	DCW	TYW	DCWTYW

Dwr Cymru Welsh Water	Tywyn / Aberdyfi	DCW	TYN	DCWTYN
Dwr Cymru Welsh Water	Vowchurch	DCW	VWH	DCWVWH
Dwr Cymru Welsh Water	Whitbourne	DCW	WTB	DCWWTB
Essex and Suffolk Water	Blyth	ESW	BLY	ESWBLY
Essex and Suffolk Water	Essex	ESW	ESX	ESWESX
Essex and Suffolk Water	Hartismere	ESW	HRT	NWLHRT
Essex and Suffolk Water	Northern Central	ESW	NCT	ESWNCT
Hafren dyfrdwy	Llandinam and Llanwrin	HDD	LAL	HDDLAL
Hafren dyfrdwy	Llanfyllin	HDD	LLF	HDDLFF
Hafren dyfrdwy	Saltney	HDD	SAL	HDDSAL
Hafren dyfrdwy	Wrexham	HDD	WRX	HDDWRX
Northumbrian Water	Berwick-Fowberry	NWL	BWF	NWLBWF
Northumbrian Water	Kielder	NWL	KLD	NWLKLD
Portsmouth Water	Portsmouth	PWS	PRT	PWSPRT
SES Water	SES Water	SES	SES	SESSES
Severn Trent Water	Bishops Castle	SVT	BCS	SVTBCS
Severn Trent Water	Chester	SVT	CHS	SVTCHS
Severn Trent Water	Forest and Stroud	SVT	FAS	SVTFAS
Severn Trent Water	Kinsall	SVT	KSL	SVTKSL
Severn Trent Water	Mardy	SVT	MDY	SVTMDY
Severn Trent Water	Newark	SVT	NWK	SVTNWK
Severn Trent Water	North Staffs	SVT	NST	SVTNST
Severn Trent Water	Rutland	SVT	RTL	SVTRTL
Severn Trent Water	Ruyton	SVT	RYN	SVTRYN
Severn Trent Water	Shelton	SVT	SHN	SVTSHN
Severn Trent Water	Stafford	SVT	STF	SVTSTF
Severn Trent Water	SvT - Nottinghamshire	SVT	NTT	SVTNTT
Severn Trent Water	SvT- Strategic Grid	SVT	SGD	SVTSGD
Severn Trent Water	Whitchurch and Wern	SVT	WAW	SVTWAW
Severn Trent Water	Wolverhampton	SVT	WVH	SVTWVH
South East Water	Ashford (8)	SEW	AF8	SEWAF8
South East Water	Bracknell (4)	SEW	BK4	SEWBK4
South East Water	Cranbrook (7)	SEW	CB7	SEWCB7
South East Water	Eastbourne (3)	SEW	EB3	SEWEB3
South East Water	Farnham (5)	SEW	FN5	SEWFN5
South East Water	Haywards Heath (2)	SEW	HH2	SEWHH2
South East Water	Maidstone (6)	SEW	MT6	SEWMT6
South East Water	Tunbridge Wells (1)	SEW	TW1	SEWTW1
South Staffordshire Water	South Staffordshire	SSW	SSW	SSWSSW
South West Water	Bournemouth	SWW	BNM	SWWBNM
South West Water	Colliford	SWW	CLF	SWWCLF
South West Water	Roadford	SWW	RDF	SWWRDF
South West Water	Wimbleball	SWW	WMB	SWWWMB
South West Water	Isles of Scilly	SWW	IOS	SWWIOS
Southern Water	Hamps Andover	SWS	HAD	SWSHAD
Southern Water	Hamps Kingsclere	SWS	HKC	SWSHKC
Southern Water	Hamps Rural	SWS	HRU	SWSHRU
Southern Water	Hamps Winchester	SWS	HWN	SWSHWN
Southern Water	Isle of Wight	SWS	IOW	SWSIOW
Southern Water	Kent Medway East	SWS	KME	SWSKME
Southern Water	Kent Medway West	SWS	KMW	SWSKMW
Southern Water	Kent Thannet	SWS	KTH	SWSKTH
Southern Water	Southampton East	SWS	HSE	SWSHSE
Southern Water	Southampton West	SWS	HSW	SWSHSW
Southern Water	Sussex Brighton	SWS	SBR	SWSSBR
Southern Water	Sussex Hastings	SWS	SHT	SWSSHT
Southern Water	Sussex North	SWS	SNT	SWSSNT
Southern Water	Sussex Worthing	SWS	SWR	SWSSWR
Thames Water	Guildford	TWS	GLF	TWSGLF
Thames Water	Henley	TWS	HNY	TWSHNY
Thames Water	Kennet Valley	TWS	KNV	TWSKNV
Thames Water	London	TWS	LND	TWSLND
Thames Water	Slough Wycombe Aylesbury	TWS	SWA	TWSSWA
Thames Water	SWOX	TWS	SWX	TWSSWX

United Utilities	Carlisle	UUX	CRL	UUXCRL
United Utilities	North Eden	UUX	NED	UUXNED
United Utilities	UU-Strategic	UUX	STG	UUXSTG
Veolia Water Projects	Veolia Water P	VWP	TDW	VWPTDW
Wessex Water	Wessex	WXW	WSX	WXWWSX
Yorkshire Water	East SWZ	YWS	EST	YWSEST
Yorkshire Water	Grid SWZ	YWS	GRD	YWSGRD

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