Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
Household consumption	You must follow the WRMP Directions, 2012 in respect of your forecast household demand. For water companies that supply household customers, you should include the current and forecast per capita consumption you are assuming and detail the data and assumptions that you have based these on. You should provide a breakdown of per capita consumption into the micro-components of water use. The sum of your micro-component estimates should match your overall per capita consumption figure. You should make it clear how you have derived your data and the assumptions you have based your assessment on.	The WRMP Direction 2012. The WRPG – Guiding Principles (Appendix) provides an explanation of the Directions. Check the WRPG - technical methods and instructions to find out how to forecast household consumption. Use your own customer metering data, if you have them, to provide information about current consumption. If your supply is via a bulk supply agreement, it may be possible to use relevant micro-component data from your donor company. Otherwise these data can come from reconciling consumption monitors of neighbouring water companies with a similar customer base, your own or neighbouring water company customer surveys and from knowledge of your supply area. Alternatively, you could base your forecasting assumptions on the assumptions used by neighbouring water companies for comparable customer groups. Check their published plans for information on this.	Section 4.2.4/5 and Methods of Estimating Population and Household Projections (Environment Agency, updated in 2012) and outputs of Customer behaviour and the demand for water (UKWIR and Environment Agency CU02 2012) Demand Forecasting Methodology (UKWIR and NRA, 1995) and Forecasting Water Demand Components (UKWIR, 1997).
Non-household consumption	For water companies that supply non-household customers, you should include a forecast of the overall consumption you are assuming and detail the data and	Check the WRPG - technical methods and instructions to find out how to forecast non-household consumption. Use your own customer metering data, if you have them, to	Section 4.3 and Demand Forecasting Methodology

Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
	assumptions that you have based these on. You should make it clear how you have derived your data and the assumptions you have based your assessment on.	provide information about current consumption. You can base your consumption forecasts on your knowledge of your customers and customer surveys. You could also use data and assumptions from neighbouring water companies.	(UKWIR and NRA, 1995) and Forecasting Water Demand Components (UKWIR, 1997).
Metering and water efficiency	Water companies must meet the WRMP Direction, 2012 requirements in respect of metering and water efficiency. Water companies should meet Government expectations with regard to managing demand in areas of water scarcity or areas of high demand. Water companies should provide information and costs of current and future planned demand management measures and how these can be used to help manage the supply-demand balance. The Environment Agency expects to see evidence showing the cost of **both baseline and future planning options**. These could be over and above the measures taken to meet Ofwat's water efficiency requirements. A company's water efficiency policy should provide a framework to achieve its statutory duty to promote the efficient use of water. This will include delivery of the company's current metering programme and implementation of	The WRMP Direction 2012. The WRPG – Guiding Principles (Appendix) provides an explanation of the Directions. WRPG – Guiding Principles (pages 4-11) Your own water efficiency and metering programmes.	Section 4.2.5.2

Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
	current demand management initiatives. A company's baseline forecasts should include savings that arise from its existing water efficiency policies up to 2015. Beyond that, companies should factor in savings associated with continuing to meet their statutory duty to promote water efficiency.		
Climate change	You must follow the requirements of the WRMP Direction, 2012 in respect of climate change. You should consider the impact of climate change on baseline demand at a resource zone or water company level, depending on the water resources situation of your company. Our investigations have shown that the impact of climate change on water consumption is uncertain at the present time and that other factors are likely to have a larger effect. You should, therefore, make an allowance for the impact of climate change on the demand for water based on the current methods available. We expect this to be a small percentage of the consumption for both household and non-household use.	The WRMP Direction 2012. The WRPG – Guiding Principles (Appendix) provides an explanation of the Directions. Climate Change and the Demand for Water (DoE, 1996; Downing et al., 2003) provides some guidance for demand in different industrial sectors.	Section 4.2.5.2 and Climate Change and the Demand for Water (DoE, 1996; Downing et al., 2003)

Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
	You should make it clear how you have derived your data and the assumptions you have based your assessment on.		
Leakage	Leakage of water from a company distribution network can form a significant component of demand for water. As part of your demand forecast, you should estimate your baseline leakage over the next 25 years. Where you have identified a supply-demand deficit, you should consider proposed options to reduce leakage as part of the options appraisal process. You should make it clear how you have derived your data and the assumptions you have based your assessment on.	Check the WRPG - technical methods and instructions to find out how to assess and forecast leakage.	Section 4.4
3.5 Target headroom			Technical Guideline: Section 5 a buffer on the supply and demand forecast - target headroom
Target headroom	You should account for the uncertainty of your estimates for supply and demand, within your target headroom. You should make it clear how you have derived your data and the assumptions you	If you do not have a supply-demand deficit in any planning year, we expect that the 1998 headroom methodology (A practical method for converting uncertainty into headroom, UKWIR, 1998) would be the most appropriate methodology to use.	Section 5.0 and A practical method for converting uncertainty into headroom, UKWIR, 1998

Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
	have based your assessment on.	If you do have a supply-demand balance deficit, you should consider using the 2002 headroom methodology - An improved methodology for assessing headroom - final report UKWIR, 2002. If your supply comes from a bulk supply agreement from a donor company, check your bulk supply arrangement. It is likely that you will only need to account for the accuracy of supply-side data in the supply-side element of your headroom estimate.	and An improved methodology for assessing headroom - final report UKWIR, 2002.
3.6 Options appraisal			Technical Guideline: Section 6 - the balancing act and will a company need investment?
When to include an options appraisal	Decide whether you need to do an options appraisal.	Check section 6.0 of the WRPG - technical methods and instructions for guidance on whether you need to do an options appraisal.	Section 6.0
Metering	You must follow the WRMP Direction, 2012 in respect of metering.	The WRMP Direction 2012. The WRPG – Guiding Principles (Appendix) provides an explanation of the Directions.	
Unconstrained list	You should detail an unconstrained list of all the options you could consider. You should make it clear how you have derived your unconstrained list and the assumptions you have based them on.	Check the WRPG - technical methods and instructions to find out how to generate an unconstrained list of options.	Section 6.4
Feasible list	You should detail the assumptions and criteria	Check the WRPG - technical methods and instructions to find	Section 6.5 and

Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
	you have used to filter your unconstrained list to a more pragmatic, feasible list of options. You should include a detailed description of each feasible option. Your feasible list should include a combination of supply and demand management options. You should provide, as a minimum, average incremental costs and average incremental social costs for each option. You should detail the methodology you have used to quantify the environmental and social costs and benefits (including the cost of carbon) as well as the financial costs and benefits. You should detail all the assumptions you have used to generate your figures and the basis for these assumptions.	out how to generate a feasible list of options. You should generate your feasible list by filtering out options from your unconstrained list based on some basic assumptions of feasibility. You could check how neighbouring water companies have done this to see how they have approached it. The economics of balancing supply and demand (Environment Agency and UKWIR, 2002) contains guidance on determining feasible options. You may be able to use some of the costs and assumptions of neighbouring water companies in your assessment Table 6.1 in section 6.5.3 of the WRPG - technical methods and instructions provides further references for cost data.	The economics of balancing supply and demand (Environment Agency and UKWIR, 2002), The economics of demand management (Environment Agency and UKWIR, 1996) and the Benefits Assessment Guidance (Environment Agency, 2002)
Greenhouse gas emissions	You must follow the WRMP Direction, 2012.	The WRMP Direction 2012. The WRPG – Guiding Principles (Appendix) provides an explanation of the Directions.	
Least cost solution	You should appraise your feasible options to identify, in the first instance, a least cost solution. This least cost solution should take account of	Section 6.6 of the WRPG - technical methods and instructions provides further references to the appraisal of feasible options. The economics of balancing supply and demand	Section 6.6 and The economics of balancing supply and demand (Environment

Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
	the environmental and social costs of your feasible options where these can be monetised, as well as the carbon costs. The environmental (and social) impacts of feasible options that cannot be monetised may be used to influence your choice of solution in the next stage of the process. The cost of your least cost solution must be based on utilisation.	(Environment Agency and UKWIR, 2002) contains guidance on options appraisal.	Agency and UKWIR, 2002).
Programme appraisal, Strategic Environment Assessment and Habitats Regulation Assessment consideration of costs and benefits that cannot be monetised.	If your supply is via a bulk supply agreement only, you will not need to do an HRA or SEA. Impacts on the environment of a proposed option can be difficult to monetise but should be incorporated into how you decide on your preferred programme of options. There are two specific processes that help ensure the environmental requirements of a proposed plan are correctly assessed. These are Habitats Regulations Appraisal (HRA) and Strategic Environmental Assessment (SEA). These additional assessment environmental frameworks are derived from European legislation and as a competent authority, you are responsible for deciding whether to apply them to your plan.	Check section 6.7 of the WRPG - technical methods and instructions for further details. You may be able to use some of the costs and assumptions of neighbouring water companies in your assessment.	Section 6.7 and Strategic Environmental Assessment and Habitats Regulations Assessment - Guidance for Water Resources Management Plans and Drought Plans (UKWIR, 2012)

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	Both processes help ensure the environment is considered when developing a plan. The water resources management plan process does cover many aspects but as the two processes have legal standings, they must be considered explicitly. The processes can be integrated to reduce duplication.		
Preferred solution	You should detail the selection methodology you have followed in selecting your preferred solution and clearly justify your preferred solution. You should make it clear how you have derived your data and the assumptions you have based your assessment on. The cost of your preferred solution must be based on utilisation.	Section 6.8 of the WRPG - technical methods and instructions provides further details. The economics of balancing supply and demand (Environment Agency and UKWIR, 2002) contains guidance on determining the preferred solution.	Section 6.8 and The economics of balancing supply and demand (Environment Agency and UKWIR, 2002).

Category/guidance	What must/should I do?	Where can I get this information from?	References and other sources of guidance
3.7 Water resources planning tables			
Which tables should I submit?	You should provide all the tables necessary in Excel format by following the guidance on the WRP tables	You should populate your tables based on all the data that you have compiled in assessing your supply-demand balance. Section 1.2 provides the general guidance relating to producing WRP tables. Sections 2-5 provide the specific guidance relating to each table. Companies should publish the necessary WRP tables to support their plan.	Section 1.2 Sections 2-5 of the Water resources planning guideline - Technical instructions for the water resources planning guideline supply-demand tables

Please note: methodologies produced by the United Kingdom Water Industry Research (UKWIR) cannot be downloaded for free from the internet but are available from their website at a cost.

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