Water Resources Management Plan 2024

Tables Supplementary Note

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This supplementary note provides clarifications regarding information presented in our WRMP tables. This includes any assumptions which have been made, and any areas where there may be small deviations from the template or guidance.

Table & Row	Clarification, or Deviation & Explanation
All	Input data for all tables begins in 2021/22 and extends to 2074/75, aside from Table 2a where we include information for 2019/20 and include additional information below to assist Ofwat. Some cells beyond this which are populated by EA formulas may have values; however, no data beyond the range stated should be used.
Table 1	The methods used in the production of DO values in Table 1 provide the calculation of a '1 in 500-year source deployable output' value for each source, as opposed to the 'contribution towards 1 in 500-year WRZ DO'. As such, any conjunctive use impacts are not assigned to individual groundwater source DOs. In some cases, e.g. Gatehampton, this has involved stating a 'static' source DO where the contribution to WRZ DO within our modelling is more dynamic.
Table 1	Values adopted in Table 1 are aligned with AR22 source Deployable Output values, reflecting the point in time at which the supply forecast was derived. As such, some source DO values will not align with our AR23 Annual Review. An exception to this rule is the Nonsuch source, for which a 0 Ml/d DO is stated in this table, as the DO reduction was confirmed earlier in the year.
Table 1 and Table 3	There are some inconsistencies between transfers included in Table 1, and those that feature in our baseline SDB in each WRZ's Table 3. One aim of WRSE was to determine those existing transfers between WRSE companies which may be inefficient/unnecessary, either now or in the future. We have several transfers with WRSE companies which feature in our current baseline, e.g., transfer to Affinity Water at Fortis Green. Many of these transfers are contracted to exist in perpetuity, but could be terminated with the consent of both companies. Considering that all transfers between WRSE companies could be terminated via collaboration through WRSE, within our modelling we decided that most transfers between WRSE companies should be considered as 'options' (with no cost of construction), rather than 'baseline' All of those transfers which feature in Table 1 are in our current 'baseline', but those which it would be feasible to terminate have been considered as 'options'. Transfers to NAVs, and transfers to companies outside WRSE have been considered as baseline.

Table 2a – All	We have included figures below for 2017-18 and 2018-19, according to our most recent water balance back-cast. In our dWRMP, values presented were representative of uplifts/downlifts to a Normal Year weather scenario. In our rdWRMP24 and final WRMP24, the methods used to calculate the values presented in the tables are described below.
Table 2a – 1NY	Values for this line have been calculated using the following steps: • 2017-18 – 2023-24: outturn values • 2024-25: our most recent outturn household consumption forecast for the rest of the AMP, according to forecast delivery of metering and water efficiency measures. 2025-2026 onwards: we have assumed that the Ml/d demand reduction on which our DYAA demand management plan (including government-led savings) is based would reduce NY consumption by the same amount, and so have calculated values by adding consumption year-to-year changes to 2024-25 values.
Table 2a – 2NY	Values for this line have been calculated using the following steps: • 2017-18 – 2023-24: outturn values • 2024-25 onwards: 1NY divided by our population forecast Note: Our PCC forecast deviates from our PR24 performance commitment forecast, as slightly different population forecasts are adopted in the two plans. This is as a result of having re-based our population forecast in our PR24 plan.
Table 2a – 3NY	Values for this line have been calculated using the following steps: • 2017-18 – 2023-24: outturn values 2024-25 onwards: our rdWRMP24 FP NHH forecast, noting that very small changes were made between our business plan and final WRMP submissions
Table 2a – 4NY	Values for this line have been calculated using the following steps: • 2017-18 – 2023-24: outturn values • 2024-25: our most recent internal forecast of leakage for the rest of AMP7 • 2025-26 onwards: we have assumed that leakage reduction values calculated for the DYAA scenario would apply to this scenario, and so have calculated this line using year-to-year changes in leakage, starting from the 2024-25 value.
Table 2a – 5NY	Values for this line have been calculated using the following steps: • 2017-18 – 2022-23 – outturn values 2023-24 onwards – 1NY + 3NY + 4NY + DSOU + Water Taken unbilled

Table 2f	Our current levels of service are outlined in our Drought Plan. We have no confirmed plan to amend our Level of Service for TUBs/NEUBs, and our WRMP sets out the continued need for TUBs and NEUBs across the planning period. We have undertaken modelling of our final plan at different levels of demand in order to provide the information required to populate Table 2f. The level of demand adopted in the runs used to populate Table 2f is equal to Final Plan DI + DO reduction due to Environmental Destination + Outage Allowance + Target Headroom. This excludes climate change. The reason for this is that, for Thames Water, outage allowance, target headroom and climate change are all of similar magnitude and a more realistic view of restrictions implementation is likely to come from inclusion of two of these factors rather than all three. We have undertaken modelling for four key time slices: 2030 (close to the beginning of the plan period, 1 in 100-year resilience), 2033 (1 in 200-year resilience achieved), 2040 (1 in 500-year resilience achieved), and 2050 (when most Environmental Destination licence reductions are programmed). We have assumed that the 2030 result applies for the period 2022-2032, the 2033 result applies from 2033 to 2039, the 2040 result applies from 2040 to 2049, and the 2050 result applies from 2050 onwards. Modelling has been undertaken for the London WRZ only, as this zone is where most of our customers are located. Note: Modelling not re-done between rdWRMP24 and fWRMP24
Table 3	The climate change component of Target Headroom is zero after 2040, due to the application of a WRSE-developed method in which uncertainties are removed from Target Headroom when 'branching' occurs in the adaptive plan, in order not to double count. In addition, on a few occasions before 2040, negative contributions of climate change towards Target Headroom can be seen. These are due to the application of numerical methods and Monte Carlo sampling, are small, and should be regarded as anomalies.
Table 3 and Table 1	In relation to imports from New Appointments and Variations (NAVs), we have updated our tables with information received from each NAV up to the 10th of October. This information covers contracted BSA volumes, alongside forecasts of population, properties and consumption. We will report on updates that we receive from NAVs in our Annual Review 2025, and will reflect on the resultant alignment implications and materiality. If there is material misalignment we may update elements of our WRMP Tables at that point.

TWSLND	The Environment Agency requested that we amend our representation of licence reductions after our dWRMP submission. As such, we have included only DO reductions in line 7.3BL and have included DO benefits from flow returns in line 7.6BL.
Table 4	We have classified options as Unconstrained, Feasible or Preferred as aligned with Thames Water WRMP24 section 7 – Appraisal of Resource Options and Appendix P – Options list.
Table 4	Column BC is 'Freeform column 8'. Some options classified as 'In-Zone Infrastructure', 'New Resource' or 'Transfer'. Some options have no classification provided. The benefits of this column will be reviewed for the next round of WRMP.
Table 4	It is noted that the Table 4 metrics are developed from a methodology which relies on the WRSE Investment Model metrics.
Table 4, 5, 5a, 5b	Displayed costs for all SESRO options are 55% of the total, to reflect TW's share of the scheme.
Table 4, 5a, 5b, 8	Note that any information provided on water trading are indicative prices and at this stage are non-binding, for planning purposes only and liable to change.
Table 4, 5b	It is noted that there is a marginal difference in the carbon cost calculation methodology between Tables 4 and 5b. The methodology will be reviewed for the next round of WRMP24.
Table 5	Transfer options have been included for Affinity and Southern Water which are not included in Table 4 which only includes for TW options in alignment with TW dWRMP24 section 7 – Appraisal of Resource Options and Appendix P – Options list.
Table 5	No data is published beyond 2074-75 in Table 5. This may affect some options' WAFU values presented in Table 4 versus Table 5. Table 4 WAFU has been calculated for an 80-year period.
Table 5a	Table 5a NPC 'EA' calculation starts from 2024-25. Some of the options spend starts earlier than this date which will result in a variance as compared with the NPC published in Table 4. The early spend is required so that options can be delivered for when they are required. Therefore the formula in Table 5a has been overwritten to ensure that the full cost of the options with these early start dates are reported within NPC calculations and they align with values in Table 4.
Table 5b	It has been noted that New Reservoir – SESRO fencing (capex) costs are the same for all size variants of the reservoir. This will be reviewed ahead of the next round of WRMP.

Table 6 – 11.1FPD, 13.1 FPD, 16.1FPD	No uplifts have been applied to DI or TH in Table 6. Our DO calculations already account for amendments to bulk supplies during drought, so no amendments made to 13.1 FPD.
Table 6, 12FPD; all zones, 1 in 500-year return period	Our initial Level of Service (for EDOs) is '1 in 100-year', moving to '1 in 200-year' by 2033, and '1 in 500-year' by 2040. We have reflected our LoS in both our baseline WAFU and our final plan WAFU. As such, the formula used in line 12FPD would not show a '1 in 500-year' WAFU through the whole planning period. As such, we have amended the formula in 12FPD.
Table 6, 8FPD; all zones, all return periods	In our submission of Table 6, in the 'Level 3 drought permits/orders' row, we have made an assessment, consistent with our assessment in the TW drought plan, of the DO benefit that drought permits would bring. For London, this is based on modelling carried out for WRMP19, with simulation modelling of DO impacts of London's drought permits having not been undertaken for WRMP24 to date. In Table 3, and our wider WRMP planning, we have, in discussion with the EA, agreed those drought permits which we should consider in our supply-demand balance planning in the medium term (up to 2040), and those which we should not consider in this respect due to their environmental impact. In Table 6 we have assumed that drought permits that our current drought plan refers to are available throughout the planning period.
Table 7	In table 7, we have marked each programme within the adaptive plan as having 11% likelihood, as we have 9 future supply-demand pathways that we consider to be equally likely. The total of all likelihood figures is 88%, because this table excludes the 'preferred programme', which also has an 11% likelihood In table 7, we have marked the 'least cost programme' likelihood and "extra plan" (LTDS scenarios) as N/A. This is because these alternative programmes are identified through a different lens than our WRMP best value plan. Since we intend to adopt our best value plan, we do not consider there to be a likelihood of adopting these alternative plans.
Table 7	We have interpreted 'WRZs impacted' to mean all those WRZs in which a different supply-demand balance pathway is followed, rather than a pathway along which a different options selection is followed.
Table 7	Table 7 has not been updated between rdWRMP24 and final WRMP24, and so has been omitted from our October 2024 Tables submission and publication. This table is used for illustrative purposes, and will be updated in time for our AR25 submission.

Table 8b and 8c	Costs presented in WRMP Tables 8b and 8c are: • 2020/21 price base, as required by the Water Resources Planning Guideline • Post Frontier Shift Efficiency • Inclusive of a Thames Water overhead allowance
Table 8	Rows labelled F27 and F28 in the WRMP tables are assumed to be the equivalents of the rows labelled F1 and F2 (respectively) in the guidance for these tables.
Table 8f	The costs presented in this table are inclusive of leakage delivered through metering and through the LWICA programme (considered as baseline in the WRMP24), aligned with the information presented in PR24 table CW19 (noting FSE and price base differences).
TWSLND	We have not assessed a critical period supply-demand balance for London, due to the large amount of storage and interconnectivity afforded by the Ring Main in London WRZ.
Table 7, 8e and 8b (alternative programmes)	In this table, wherever a SESRO option is selected, regardless of size, it is assumed that 55% of the Deployable Output of the option would be allocated to Thames Water

Table 8b: Reference B13-B15, Strategic regional water resources	Costs for the Strategic Resource Options (SRO) in the WRMP24 preferred plan are aligned with our PR24 proposed enhancement expenditure (draft determination response). The PR24 expenditure has been adjusted from 2022/23 price base to WRMP24 2020/21 price base; • 2022/23 to 2021/22 = divide 1.08504762 • 2021/22 to 2020/21 = divide 1.03814131 The expenditure includes for the development of five SROs in AMP8 as set out in PR24; • CW8 – WRMP schemes (excluding leakage and metering activities), rows CW8.1 to CW8.5. • ADD24a – Large enhancement schemes expenditure – gated process, rows ADD24a.11 – ADD24a.16. • RAPID Expenditure by AMP – SRO data templates The Beckton water recycling (Reuse Beckton) and Severn Thames Transfer (STT) schemes are adaptive alternative solutions and costs are included for their ongoing development in the AMP8 (2025-2030) period only. The 'New Lower Thames Intake – Surbiton to Queen Mary Reservoir' SRO is at an early stage of development i.e. pre-RAPID gate one. The costs in Table 8b have excluded for the new low flow abstraction pumps installations at Datchet, Littleton and Staines totalling £9.506m (2020/21 price base) in AMP8. The new pumps capability is part of the wider scheme solution costs included in CW8 and ADD24a. For the whole life Capex in Table 8b we have included for Thames Water's allocation of expenditure for the future construction and asset replacement costs of SESRO which is captured separately in PR24 for the future Infrastructure Provider. Example for AMP8 expenditure; • Sum of **ADD24a**.11 to ADD24a.16, column O (2025-30) = **£485.685m** (2022/23 price base). • £485.685m divide 1.08504762 and divide 1.03814131 = **£431.171m** (2020/21 price base). • Sum of **Table 8b**, B13 columns 2025-26 to 2029-30 = **£421.665m** (2020/21 price base). • Variance between ADD24a and Table 8b-B13 for AMP8 period is £431.171m - £421.665m = **£9.506m.** • Variance is associated with 'New Lower Thames Intake – Surbiton to Queen Mary Reservoir' (LTWLR) SRO low flow pumps installations scope in AMP8. Variance also stated in OFW-REP-TMS-083 query response.

Table 8e	After the dWRMP24 we amended the information presented in this table. In the dWRMP we populated this table with cumulative supply-demand balance benefit delivered up to the year in question. This has now been replaced with in-period benefits (e.g., the 2034-35 value stated is the benefit delivered between 2030-31 and 2034-45)
Table 4, Table 5a, Table 8b, Table 8d	Redactions – we have redacted cost information for the period 2025-2030 for commercial confidentiality reasons related to a contract which is in place. This required us to redact operating and total costs, in order that the figures we have redacted could not be back-calculated. The redacted costs are relatively small in the context of our WRMP and so their redaction is not deemed material to the overall message delivered by the tables.
Table 4, Table 5, Table 5a, Table 5b	Demand Options – clarification Demand options have been aggregated into four programmes (Low, Medium, High and High+), as described in the "Modelling" sub-section of WRMP24 Section 8. Each intervention within each programme has been included as a separate option within our WRMP Tables. However, as is described in the "Modelling" sub-section of WRMP24 Section 8, some options are not considered within some programmes (e.g. the Low programme excludes "innovation" options), while some other interventions are considered "all-or-nothing" options. These "all-or-nothing" interventions are either not included in a given programme (according to the aims of the programme – e.g., the "Low" programme does not aim to meet the 110 l/h/d PCC target and so excludes "Household Innovation and Tariffs") or they are included in full (as these options are cost-effective compared to alternatives, for example the Advanced DMA intervention is included in all programmes which aim to achieve 50% leakage reduction). As above, within the WRMP Tables we have included an option for each intervention within each programme. With some options being either "all or nothing" or excluded from some programmes, in some cases, demand management options with no benefit and no cost are included (e.g., "Household Innovation and Tariffs Low" has no benefit and no cost as the Household Innovation and Tariffs Option is not included in the Low demand programme), while in other cases the same option appears as part of different programmes (e.g., the Advanced DMA Intervention option is duplicated as Advanced DMA Intervention Low, Advanced DMA Intervention Medium, Advanced DMA Intervention High, and Advanced DMA Intervention High+).

WRMP24 Reference	Component	2017-18	2018-19
1NY	Total Household Consumption	1439.0	1450.5
2NY	Average Household - PCC	145.2	146.4
3NY	Total Non-Household Consumption	487.6	474.7
4NY	Total Leakage	698.3	692.8
5NY	Distribution input	2688.89	2709.74


Thames
Water