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# Chapter 10b Water balance component data by resource zone

Annual Information return reporting requirements and definitions manual 2009 Issue 1.0 – March 2009



## Section 2 Chapter 10b (tables (i/ii))

## Guidance

Note: This table and the following guidance are issued in AIR09 for information only and as a guide to potential future reporting requirements. No company return or reporter commentary is required for AIR09. The information requirements below reflect the current reporting requirements in England and Wales. When Articles relating to water resource management plans are commenced by DRD Water Policy Division, NIW will be required to provide similar information.

Tables 10b (i and ii) cover the annual review submission to the Environment Agency. The Environment Agency will use the information that companies provide to report on water supply during the year and on the work that companies have been carrying out on their water resources plans.

Water companies should submit out-turn data for the period from April 2008 to March 2009 using the table 10b(i). The table allows companies to report out-turns against supply/demand components. Companies should report annual average out-turns for all resource zones that were operational in the reported year.

Where critical period forecasts were submitted as part of the 2004 water resources plans, companies are asked to submit peak period information for the out-turn year in table 10b(ii). Where companies provide a peak submission, they must also include a graph showing the daily demand profile for the year. In zones that are sensitive to peak demands, peak information should be provided even if 2008-09 presented no peak issues for the company. Resource zones should be entered into the information capture system in alphabetical order. In all cases the total column should reflect the overall company-wide position and must be

In all cases the total column should reflect the overall company-wide position and must b consistent with company level data in the other Ofwat tables.

Companies should include an explanation of water balance reconciliation adjustments indicating which components have been modified and how this has been done. We expect companies to use the Maximum Likelihood Estimation (MLE) method for making adjustments. Companies should provide details of how the reconciliation has been applied at resource zone level. We recognise that the sum of resource zone values in table 10b (such as total leakage) may not equal the company total data in table 10

Lines 3, 8, 13, 14, 15 and 16 in table 7 are calculated lines. They are the sum of their equivalent lines for zonal data submitted in table 10b(i). We consider it is reasonable that the sum of the zonal data should equal the company-wide totals.

The total company leakage (from table 10, line 25) should also be reported in table 10b commentary.

The estimate of outage over the reporting year must be provided in line 2. Companies should explain in the commentary how they estimated actual outage.

The majority of the components in table 10b are the same as those used in the full Water Resources Planning Guideline tables. Definitions for the components of table 10b can be found at the end of this document



#### Company commentary

#### 1. Commentary on the out-turn data

All water companies should provide a commentary about the data. This report on the supplydemand balance needs to stand alone and must not refer back to the other tables in the Ofwat June return. It will be passed in its entirety to the Environment Agency who will scrutinise and report on the supply-demand balance information as in previous years.

The commentary should include an explanation of the out-turn data, outlining any exceptions and reasons for substantial differences in data when compared to previous years. As a minimum the commentary should include:

- an overview of the year including progress in water supply planning at resource zone and company level;
- a summary statement explaining how the reported year compares to the dry year scenario used for water resources planning, in terms of factors that influence supply and demand;
- details of any change in the resource zones in operation during the out-turn year;
- details of any changes to planned outage, including the new figure and how it has been derived.
- an explanation of any water balance reconciliation adjustments done at both resource zone and company level including detail of the components that have been adjusted and how this has been done;
- details should also be given about any work that needs to be undertaken during 2008-09.

Additional supporting information should also be provided where this serves to illustrate a particular issue.

#### 2. Progress on further work

Companies should provide information on the progress they have made against the headings listed below. Information should be at the resource zone level. Companies should also provide an update on the progress made against any milestones for 2008-09 that were included in the schedule of work submitted to the Environment Agency in November 2004.

- Sustainability reductions Companies should report on progress made in investigating
  impacts or implementing solutions at sites agreed with or specified by us. This should
  include those sites identified in the 1999 National Environment Programme where work is
  still outstanding. Companies should report any reductions in deployable output that
  occurred during 2008-09 in order to meet their statutory/environmental obligations.
- Water efficiency initiatives Companies should provide information on the range of initiatives and promotions undertaken including numbers of properties and people involved, results of audits, and details of savings/costs. Companies should also report on progress against water efficiency targets set by Ofwat in August 2007.
- **Resource zone leakage** Companies should provide their long-term resource zone economic level of leakage values and an explanation of how the figures were derived. Companies should also report what measures are being used to control resource zone leakage including mains replacement, number of reported/detected leaks and bursts, changes in the number and size of DMAs, pressure reduction (specifically AZNP), and methods of active leakage control. The total company leakage figure (from table 10) and an explanation of how it was calculated should also be provided.



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- **Metering** Companies should report progress on metering and include the numbers of metered household and non-=household properties by a category. As a minimum companies must report on optants, selective, change of occupancy and new households. Further categories may be added as required. Companies should provide, for each resource zone, both the annual increase in metered properties and the end of year totals for each category.
- Measured and unmeasured population, pcc and occupancy rate Companies should give an explanation for the derivation and sources of information in table 10b for the lines listed below. Unmeasured and measured household population (lines 23 and 26), unmeasured and measured household properties (linies 24 and 27), unmeasured and measured household occupancy rate (lines 25 and 28), and unmeasured and measured household pcc (lines 42 and 46).
- Distribution and production developments Companies should report on distributionside or production-side developments where work has been carried out over the reported year.
- Resource Developments Companies should report on resource developments where work has been carried out over the reported year. This should include improvements to existing licensed sources, and details of any changes to the scheme costs originally identified.
- Changes in policy / planning and forecasting assumptions We expect that any major policy assumption changes will have been included in the 2004 water resources plans. However, companies should identify any changes made during 2008-09 that have had an influence on operation of the company's supply system.

#### 3. Changes to water company water resources plans

In 2009 all companies will publish their new statutory Water Resources Management Plans to replace the existing 2004 water resources plans. In the table 10b commentary we expect that companies will only need to record significant changes to their existing plans covering the period to December 2009. The information needed on these changes will depend on the nature and scale of the changes. Companies should discuss this with their local Environment Agency Water Resources Planners and agree what needs to be included in their June return commentary<del>.</del>

## **Guidance for Reporters**

The Reporters should:

- confirm or otherwise that the company have calculated the fields correctly as outlined in the definitions below;
- confirm or otherwise that company wide totals in table 10b (i) compare to corresponding lines elsewhere in the submission. These can be found in table 7 and 10. Where the total company data can be directly calculated from the zonal level data in table 7 the processing rules for this data have been amended in table 7; and
- comment on company explanations for differences between out turn data and corresponding water resources plan data.



## Table 10b i/ii lines 1 to 55

| A BASIC RESOL   | JRCES   |      |         |
|-----------------|---|------|---------|
| 1               | Deployable output   | MI/d | 2dp     |
| Definition      | <ul> <li>The output of a commissioned source or group of bulk supply as constrained by:</li> <li>environment</li> <li>licence, if applicable</li> <li>pumping plant and/or well/aquifer properties</li> <li>raw water mains and/or aquifers</li> <li>transfer and/or output main</li> <li>treatment</li> <li>water quality</li> </ul> |      | s or of |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ince |         |
| Processing rule | Input   |      |         |
| Reference       | BN50000/C   |      |         |
| Responsibility  | Environment Agency  |      |         |

| 2               | Outage allowance                                     | MI/d     | 2dp     |
|-----------------|--|----------|---------|
| Definition      | A temporary loss of deployable output. The annual av | verage ( | (MI/d). |
| Primary Purpose | Environment Agency analysis of supply/demand bala    | nce      |         |
| Processing rule | Input  |          |         |
| Reference       | BN50005  |          |         |
| Responsibility  | Environment Agency                                   |          |         |

| 3               | Water available for use                           | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Deployable output minus actual outage.            |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala | ince |     |
| Processing rule | Calculated: line 1 minus line 2                   |      |     |
| Reference       | BN50010   |      |     |
| Responsibility  | Environment Agency                                |      |     |

## B RAW WATER

| 4               | Raw water abstracted  | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Raw Water Abstracted is taken from the Point of Chargeable<br>Abstraction, and together with Raw Water Imported less Raw<br>Water Exported, constitutes Raw Water Collected (UKWIR/NRA<br>(1995) <i>Demand Forecasting Methodology - Main Report</i> ). The<br>annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | nce  |     |
| Processing rule | Input   |      |     |
| Reference       | BN50015   |      |     |
| Responsibility  | Environment Agency  |      |     |



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|                 | 00010   |      | 101 10 |
|-----------------|---|------|--------|
| 5               | Raw water exported  | MI/d | 2dp    |
| Definition      | Raw water exported from the forecast geographical area to outside the forecast geographical area. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |        |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ince |        |
| Processing rule | Input   |      |        |
| Reference       | BN50020   |      |        |
| Responsibility  | Environment Agency  |      |        |

| 6               | Raw water retained                                | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Raw water abstracted minus raw water exported.    |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala | nce  |     |
| Processing rule | Calculated: line 4 minus line 5                   |      |     |
| Reference       | BN50025   |      |     |
| Responsibility  | Environment Agency                                |      |     |

| 7               | Raw water imported   | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Raw water imported from outside the forecast geographical area to the geographical area. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | ince |     |
| Processing rule | Input  |      |     |
| Reference       | BN50030  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 8               | Raw water collected                               | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Raw water retained plus raw water imported        |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala | nce  |     |
| Processing rule | Calculated: line 6 plus line 7                    |      |     |
| Reference       | BN50035   |      |     |
| Responsibility  | Environment Agency                                |      |     |

| 9               | Raw water losses   | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Net loss to the resource system(s) being considered, comprised of mains/aqueduct (pressure system) losses, open channel/low pressure system losses, and losses from break-pressure tanks and small reservoirs. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | ince |     |
| Processing rule | Input  |      |     |
| Reference       | BN50040  |      |     |
| Responsibility  | Environment Agency   |      |     |



| 10              | Raw water operational use   | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Regular washing-out of mains due to sediment build up and poor quality of source water. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand balance  |      |     |
| Processing rule | Input   |      |     |
| Reference       | BN50045   |      |     |
| Responsibility  | Environment Agency  |      |     |

| 11              | Non potable supplies  | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | All non-potable water supplied to supply area. The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala                         | nce  |     |
| Processing rule | Input   |      |     |
| Reference       | BN50050   |      |     |
| Responsibility  | Environment Agency  |      |     |

| 12              | Raw water into treatment                                | MI/d  | 2dp |
|-----------------|---|-------|-----|
| Definition      | Raw water into treatment works.                         |       |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala       | nce   |     |
| Processing rule | Calculated: line 8 minus line 9 minus line 10 minus lir | ne 11 |     |
| Reference       | BN50055   |       |     |
| Responsibility  | Environment Agency                                      |       |     |

## C POTABLE WATER TO POINT OF DELIVERY

| 13              | Treatment works losses  | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Made up of structural water loss and both continuos and intermittent over-flows (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | nce  |     |
| Processing rule | Input   |      |     |
| Reference       | BN50060   |      |     |
| Responsibility  | Environment Agency  |      |     |

| 14              | Treatment works operational use  | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Treatment process water – i.e., net loss that excludes water returned to source water. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | ince |     |
| Processing rule | Input  |      |     |
| Reference       | BN50065  |      |     |
| Responsibility  | Environment Agency   |      |     |



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| 15              | Potable water produced  | MI/d | 2dp |  |
|-----------------|---|------|-----|--|
| Definition      | Raw water into treatment less treatment work operational use and treatment work losses. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ) |      |     |  |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ince |     |  |
| Processing rule | Calculated: line 12 minus line 13 minus line 14   |      |     |  |
| Reference       | BN50070   |      |     |  |
| Responsibility  | Environment Agency  |      |     |  |

| 16              | Potable water imports   | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Potable water imports from outside the geographical area to the forecast geographical area. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ince |     |
| Processing rule | Input   |      |     |
| Reference       | BN50075   |      |     |
| Responsibility  | Environment Agency  |      |     |

| 17              | Potable water exports  | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Potable water from within the forecast geographical area to an area outside the geographical area. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | nce  |     |
| Processing rule | Input  |      |     |
| Reference       | BN50080  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 18              | Distribution input   | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | The amount of water entering the distribution system at the point of production. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | nce  |     |
| Processing rule | Input  |      |     |
| Reference       | BN50085  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 19              | Distribution losses   | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Made up of losses on trunk mains, service reservoirs, distribution mains and communications pipes. The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand balance  |      |     |
| Processing rule | Input   |      |     |
| Reference       | BN50090   |      |     |
| Responsibility  | Environment Agency  |      |     |



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| 20              | Water taken  | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Distribution input minus distribution losses. (UKWIR/NRA (1995)<br>Demand Forecasting Methodology - Main Report) |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | nce  |     |
| Processing rule | Calculated: line 18 minus line 19  |      |     |
| Reference       | BN50095  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 21              | Distribution system operational use   | MI/d | 2dp |
|-----------------|---|------|-----|
| 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. (UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main Report</i> ). The annual average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ince |     |
| Processing rule | Input   |      |     |
| Reference       | BN50100   |      |     |
| Responsibility  | Environment Agency  |      |     |

| 22              | Water delivered                                   | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Water delivered to the point of delivery.         |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala | nce  |     |
| Processing rule | Calculated: line 20 minus line 21                 |      |     |
| Reference       | BN50105   |      |     |
| Responsibility  | Environment Agency                                |      |     |

## D POTABLE WATER CUSTOMER BASE

| 23              | Unmeasured household - population   | 000 | 3dp |
|-----------------|---|-----|-----|
| Definition      | Average resident population in billed households supplied with<br>unmeasured water. |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand balance                                |     |     |
| Processing rule | Input   |     |     |
| Reference       | BN50110   |     |     |
| Responsibility  | Environment Agency  |     |     |

| 24              | Unmeasured household - properties                               | 000 | 3dp |
|-----------------|---|-----|-----|
| Definition      | Average number of households billed for unmeasured water within |     |     |
|                 | the supply area.  |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala               | nce |     |
| Processing rule | Input   |     |     |
| Reference       | BN50115   |     |     |
| Responsibility  | Environment Agency  |     |     |



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|                 | 00000  |      | aptor ro |
|-----------------|--|------|----------|
| 25              | Unmeasured household –occupancy rate               | h/pr | 2dp      |
| Definition      | Average population per household property supplied | with |          |
|                 | unmeasured water.                                  |      |          |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | ince |          |
| Processing rule | Calculated: line 23 divided by line 24             |      |          |
| Reference       | BN50120  |      |          |
| Responsibility  | Environment Agency                                 |      |          |

| 26              | Measured household – population                                | 000 | 3dp |
|-----------------|--|-----|-----|
| Definition      | Average resident population in billed households supplied with |     |     |
|                 | measured water.  |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala              | nce |     |
| Processing rule | Input  |     |     |
| Reference       | BN50125  |     |     |
| Responsibility  | Environment Agency   |     |     |

| 27              | Measured household - properties                               | 000 | 3dp |
|-----------------|---|-----|-----|
| Definition      | Average number of households billed for measured water within |     |     |
|                 | the supply area.  |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala             | nce |     |
| Processing rule | Input   |     |     |
| Reference       | BN50130   |     |     |
| Responsibility  | Environment Agency  |     |     |

| 28              | Measured household – occupancy rate                                | h/pr | 2dp |
|-----------------|--|------|-----|
| Definition      | Average population per household property supplied measured water. | with |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala                  | nce  |     |
| Processing rule | Calculated: line 26 divided by line 27                             |      |     |
| Reference       | BN50135  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 29              | Unmeasured non-household population                           | 000 | 3dp |
|-----------------|---|-----|-----|
| Definition      | Average resident population in billed non-households supplied |     |     |
|                 | with unmeasured water.  |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala             | nce |     |
| Processing rule | Input   |     |     |
| Reference       | BN50140   |     |     |
| Responsibility  | Environment Agency  |     |     |

| 30              | Unmeasured non-household properties  | 000 | 3dp |
|-----------------|--|-----|-----|
| Definition      | Average number of non-households billed for unmeasured water within the supply area. |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala                                    | nce |     |
| Processing rule | Input  |     |     |
| Reference       | BN50145  |     |     |
| Responsibility  | Environment Agency   |     |     |



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| 31              | Measured non-household population  | 000 | 3dp |
|-----------------|--|-----|-----|
| Definition      | Average resident population in billed non-households supplied with measured water. |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand balance                               |     |     |
| Processing rule | Input  |     |     |
| Reference       | BN50150  |     |     |
| Responsibility  | Environment Agency   |     |     |

| 32              | Measured non-household properties  | 000 | 3dp |
|-----------------|--|-----|-----|
| Definition      | Average number of non-households billed for measured water within the supply area. |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand balance                               |     |     |
| Processing rule | Input  |     |     |
| Reference       | BN50155  |     |     |
| Responsibility  | Environment Agency   |     |     |

| 33              | Total population   | 000 | 3dp |
|-----------------|--|-----|-----|
| Definition      | The sum of total average household and non-household population. |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala                | nce |     |
| Processing rule | Calculated field: sum of lines 23, 26, 29 and 31                 |     |     |
| Reference       | BN50160  |     |     |
| Responsibility  | Environment Agency   |     |     |

| 34              | Void household properties   | 000 | 2dp |
|-----------------|---|-----|-----|
| Definition      | Average number of household properties, within the supply area,<br>which are connected to the distribution system but do not receive<br>a charge as there are no occupants. |     |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | nce |     |
| Processing rule | Input   |     |     |
| Reference       | BN50165   |     |     |
| Responsibility  | Environment Agency  |     |     |

| 35              | Void non household properties   | 000  | 2dp |
|-----------------|---|------|-----|
| Definition      | Average number of non-household properties, within area, which are connected to the distribution system receive a charge as there are no occupants. |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ince |     |
| Processing rule | Input   |      |     |
| Reference       | BN50170   |      |     |
| Responsibility  | Environment Agency  |      |     |

| 36              | Total properties   | 000  | 2dp |
|-----------------|--|------|-----|
| Definition      | The sum of total average household and non-househ<br>properties including void properties. | old  |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | ince |     |
| Processing rule | Calculated: the sum of lines 24,27, 30, 32, 34 and 35                                      |      |     |
| Reference       | BN50175  |      |     |
| Responsibility  | Environment Agency   |      |     |

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#### E POTABLE WATER DELIVERED

| 37              | Water taken unbilled  | MI/d | 2dp |
|-----------------|---|------|-----|
| Definition      | Water taken legally unbilled plus water taken illegally unbilled<br>(UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main</i><br><i>Report</i> ) |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ince |     |
| Processing rule | Calculated: line 22 minus line 38   |      |     |
| Reference       | BN50180   |      |     |
| Responsibility  | Environment Agency  |      |     |

| 38              | Water delivered billed   | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Water delivered less water taken unbilled. It can be split into<br>unmeasured household, measured household, unmeasured non-<br>household and measured non-households water delivered billed.<br>(UKWIR/NRA (1995) <i>Demand Forecasting Methodology - Main</i><br><i>Report</i> ) |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | nce  |     |
| Processing rule | Calculated: the sum of lines 39,43, 47 and 50  |      |     |
| Reference       | BN50185  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 39              | Unmeasured household water delivered  | MI/d | 2dp    |
|-----------------|---|------|--------|
| Definition      | Average volume of water delivered to households bill<br>unmeasured water within the supply area. This is to in<br>pipe leakage. |      | supply |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | nce  |        |
| Processing rule | Input   |      |        |
| Reference       | BN50190   |      |        |
| Responsibility  | Environment Agency  |      |        |

| 40              | Unmeasured household – uspl  | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Estimated underground supply pipe leakage for households that<br>are supplied with unmeasured water. This figure applies to billed<br>unmeasured households. Underground supply pipe leakage is any<br>loss of water from the underground supply pipe. |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | ince |     |
| Processing rule | Input  |      |     |
| Reference       | BN50195  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 41              | Unmeasured household – consumption   | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Estimated consumption of households that are supplied with<br>unmeasured water. This figure applies to billed unmeasured<br>households and excludes underground supply pipe leakage. |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala  | ance |     |
| Processing rule | Calculated: the sum of line 39 minus line 40   |      |     |
| Reference       | BN50200  |      |     |
| Responsibility  | Environment Agency   |      |     |

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| 42              | Unmeasured household - pcc  | l/h/d     | 2dp |
|-----------------|---|-----------|-----|
| Definition      | Estimated per capita consumption of households tha<br>supplied with unmeasured water. This figure applies<br>unmeasured households and excludes underground<br>leakage. | to billed |     |
| Primary Purpose | Environment Agency analysis of supply/demand bala   | ance      |     |
| Processing rule | Calculated: line 41 multiplied by 1,000 divided by line   | e 23      |     |
| Reference       | BN50205   |           |     |
| Responsibility  | Environment Agency  |           |     |

| 43              | Measured household water delivered  | MI/d   | 2dp |  |
|-----------------|---|--|-----|--|
| Definition      | Average volume of water delivered to households billed for<br>measured water within the supply area. This is to include supply<br>pipe leakage. |  |     |  |
| Primary Purpose | Environment Agency analysis of supply/demand ba   | Environment Agency analysis of supply/demand balance |     |  |
| Processing rule | Input   |  |     |  |
| Reference       | BN50210   |  |     |  |
| Responsibility  | Environment Agency  |  |     |  |

| 44              | Measured household -uspl   | MI/d | 2dp |
|-----------------|--|------|-----|
| Definition      | Estimated underground supply pipe leakage for households that<br>are supplied with measured water. This figure applies to billed<br>measured households. Underground supply pipe leakage is any<br>loss of water from the underground supply pipe. The annual<br>average (MI/d). |      |     |
| Primary Purpose | Environment Agency analysis of supply/demand balance   |      |     |
| Processing rule | Input  |      |     |
| Reference       | BN50215  |      |     |
| Responsibility  | Environment Agency   |      |     |

| 45              | Measured household – consumption   | MI/d   | 2dp |
|-----------------|--|--------|-----|
| Definition      | Estimated consumption of households that are supplied with measured water. This figure applies to billed measured households and excludes underground supply pipe leakage. |        |     |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance |     |
| Processing rule | Calculated: line 43 minus line 44  |        |     |
| Reference       | BN50220  |        |     |
| Responsibility  | Environment Agency   |        |     |

| 46              | Measured household – pcc   | l/h/d  | 2dp |
|-----------------|--|--------|-----|
| Definition      | Estimated per capita consumption of households that are<br>supplied with measured water. This figure applies to billed<br>measured households and excludes underground supply pipe<br>leakage. |        |     |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance |     |
| Processing rule | Calculated: line 45 multiplied by 1,000 divided by line 26   |        |     |
| Reference       | BN50225  |        |     |
| Responsibility  | Environment Agency   |        |     |

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| 47              | Unmeasured non-household water delivered   | MI/d   | 2dp |
|-----------------|--|--------|-----|
| Definition      | Average volume of water delivered to non-households that are<br>supplied with unmeasured water. This is to include supply pipe<br>leakage. |        |     |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance |     |
| Processing rule | Input  |        |     |
| Reference       | BN50230  |        |     |
| Responsibility  | Environment Agency   |        |     |

| 48              | Unmeasured non-household –uspl   | MI/d   | 2dp |
|-----------------|--|--------|-----|
| Definition      | Estimated underground supply pipe leakage for non-households<br>that are supplied with unmeasured water. This figure applies to<br>billed unmeasured households. Underground supply pipe<br>leakage is any loss of water from the underground supply pipe.<br>The annual average (MI/d). |        |     |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance |     |
| Processing rule | Input  |        |     |
| Reference       | BN50235  |        |     |
| Responsibility  | Environment Agency   |        |     |

| 49              | Unmeasured non-household –consumption   | MI/d   | 2dp |
|-----------------|---|--------|-----|
| Definition      | Estimated consumption of non-households that are supplied<br>with unmeasured water. This figure applies to billed<br>unmeasured non-households and excludes underground supply<br>pipe leakage. |        |     |
| Primary Purpose | Environment Agency analysis of supply/demand ba   | alance |     |
| Processing rule | Calculated: line 47 minus line 48   |        |     |
| Reference       | BN50240   |        |     |
| Responsibility  | Environment Agency  |        |     |

| 50              | Measured non-household water delivered   | MI/d   | 2dp |
|-----------------|--|--------|-----|
| Definition      | Average volume of water delivered to non-househor<br>supplied with measured water. This is to include su<br>leakage. |        |     |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance |     |
| Processing rule | Input  |        |     |
| Reference       | BN50245  |        |     |
| Responsibility  | Environment Agency   |        |     |

| 51              | Measured non-household -uspl   | MI/d                 | 2dp        |
|-----------------|--|----------------------|------------|
| Definition      | Estimated underground supply pipe leakage for no<br>that are supplied with unmeasured water. This figu<br>billed non-measured households. Underground sup<br>leakage is any loss of water from the underground<br>The annual average (MI/d). | re appli<br>oply pip | es to<br>e |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance               |            |
| Processing rule | Input  |                      |            |
| Reference       | BN50250  |                      |            |
| Responsibility  | Environment Agency   |                      |            |



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|                 | 00018  |         | <u>aptor 10</u> |
|-----------------|--|---------|-----------------|
| 52              | Measured non-household – consumption   | MI/d    | 2dp             |
| Definition      | Estimated consumption of non-households that are<br>with measured water. This figure applies to billed m<br>non-households and excludes underground supply<br>leakage. | neasure |                 |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance  |                 |
| Processing rule | Calculated: line 50 minus line 51  |         |                 |
| Reference       | BN50255  |         |                 |
| Responsibility  | Environment Agency   |         |                 |

| 53              | Void properties – uspl  | MI/d    | 2dp |
|-----------------|---|---------|-----|
| Definition      | Estimated underground supply pipe leakage for voi<br>and non-households. Underground supply pipe lea<br>loss of water from the underground supply pipe. Th<br>average (MI/d). | kage is | any |
| Primary Purpose | Environment Agency analysis of supply/demand ba   | alance  |     |
| Processing rule | Input   |         |     |
| Reference       | BN50260   |         |     |
| Responsibility  | onsibility Environment Agency   |         |     |

### F LEAKAGE

| 54              | Total leakage  | MI/d                       | 2dp          |
|-----------------|--|----------------------------|--------------|
| Definition      | The sum of distribution losses and underground su<br>losses. (UKWIR/NRA (1995) <i>Demand Forecasting</i><br>- <i>Main Report</i> ) | pply pip<br><i>Metho</i> d | be<br>lology |
| Primary Purpose | Environment Agency analysis of supply/demand ba  | alance                     |              |
| Processing rule | Calculated: the sum of lines 19, 40, 44, 48, 51 and  | 53                         |              |
| Reference       | BN50265  |                            |              |
| Responsibility  | Environment Agency   |                            |              |

| 55              | Total leakage   | l/prop/d   | 2dp |
|-----------------|---|------------|-----|
| Definition      | The sum of distribution losses and underground<br>losses. (UKWIR/NRA (1995) <i>Demand Forecas</i><br>- <i>Main Report</i> ) |            |     |
| Primary Purpose | Environment Agency analysis of supply/deman   | d balance  |     |
| Processing rule | Calculated: line 54 multiplied by 1,000 divided   | by line 36 |     |
| Reference       | BN50270   |            |     |
| Responsibility  | Responsibility Environment Agency   |            |     |



## CHANGE CONTROL SHEET CHAPTER 10b

| 2008/1.0 | First issue of chapter for the SBP period  |
|----------|--|
| 2009/1.0 | Second issue of chapter for the SBP period |
|          | - No amendments                            |
|          |  |
|          |  |