

**WATER RESOURCES MANAGEMENT PLAN**

**ANNUAL REVIEW 2011**



**SOUTH STAFFORDSHIRE  
WATER PLC**

**Commercial in confidence**

**SOUTH STAFFORDSHIRE WATER PLC**

# WATER RESOURCES PLAN ANNUAL REVIEW 2011

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## **EXECUTIVE SUMMARY**

- **Implementation of the 2009 Water Resources Management Plan**
  - The Company has achieved the targets and outputs for 2010/11 it included in its 2009 Water Resources Management Plan and has not made any changes to its proposals for future years.
- **Levels of Service**
  - The Company has not imposed a hosepipe ban within the report year and has made no change to its planned level of service for hosepipe bans.
- **Leakage**
  - The Company has passed its new lower AMP5 leakage target despite the harsh winter.
- **Water Efficiency**
  - The Company has achieved its new Ofwat water efficiency target.
- **Metering**
  - The Company has progressed with implementation of its Change of Occupier metering policy and has achieved 2142 installations against a target of 2500 for the year.
  - New household and non-household connections were approximately in line with the forecasts in the Final Business Plan, Final Water Resources Management Plan and the Final Determination. Household connections were 2720 compared to a forecast of 2750 and non-household connections were 207 compared to a forecast of 250.
  - There has been a 33% increase in the number of new household connections compared to last year which is thought to reflect an improvement in the housing market and the start of recovery from the recession.

## EXECUTIVE SUMMARY CONTINUED

- **Customer Demand**
  - Annual average distribution input has shown a further decline in the report year.
  - Unmeasured per capita consumption has remained in line with the previous year whilst total household consumption has seen a modest decline of around 0.3%.
  - There has been a 4% reduction in non-household consumption in the year.
- **Sustainability Reductions**
  - The Company has embarked on a series of environmental investigations as part of the AMP5 Water Resources Natural Environment Programme (NEP).

## 1. INTRODUCTION

This document is the second annual review of the Company's 2009 Final Water Resources Management Plan, which was published on 21<sup>st</sup> August 2009, and the Company's Final Business Plan which was submitted to Ofwat in April 2009.

The focus of this document is to present data and information about water resources during the reporting year April 2010 to March 2011. The review details actual out-turn figures for the review year and is consistent with Tables 1, 7, 8 and 10 of the 2011 June Return submission to Ofwat. This report also details progress made to implement water resources related projects in the first year of AMP5 and is consistent with the Environment Agency's 'Annual Review of Water Resources Management Plans Guidance'.

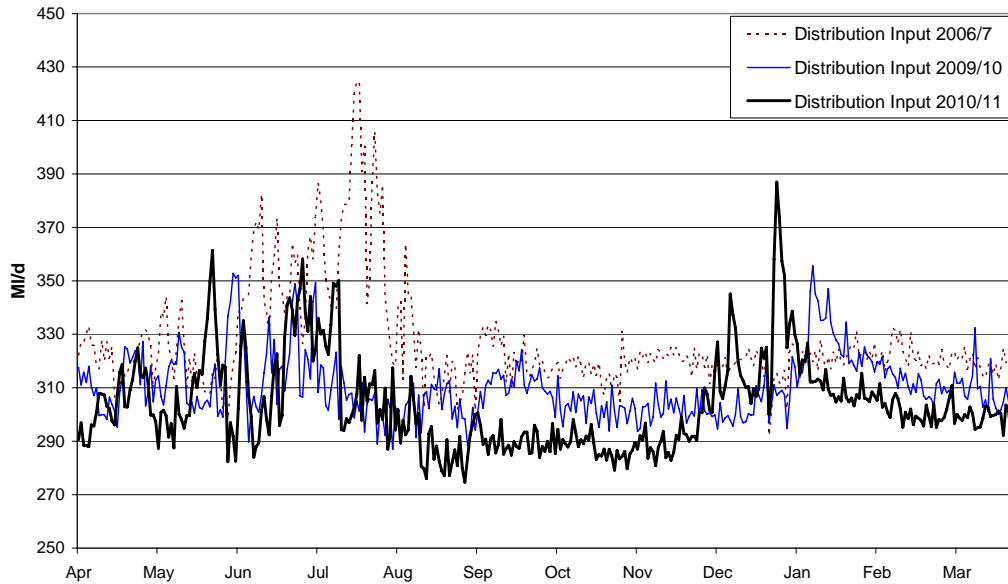
## 2. SUMMARY OF THE SUPPLY DEMAND BALANCE FOR 2010/11

### 2.1 Overview

Average distribution input for the year was 303.59 MI/d (post MLE) with a peak week demand in the week ending 27<sup>th</sup> June 2010 of 343.01 MI/d (MLE not applied). The daily demand profile is shown in the chart below, along with the previous year and the last year with a reasonable summer demand (2006/7) for comparison. A peak daily demand of 363MI/d was experienced on 23rd May and a further peak daily demand of 387MI/d was experienced on

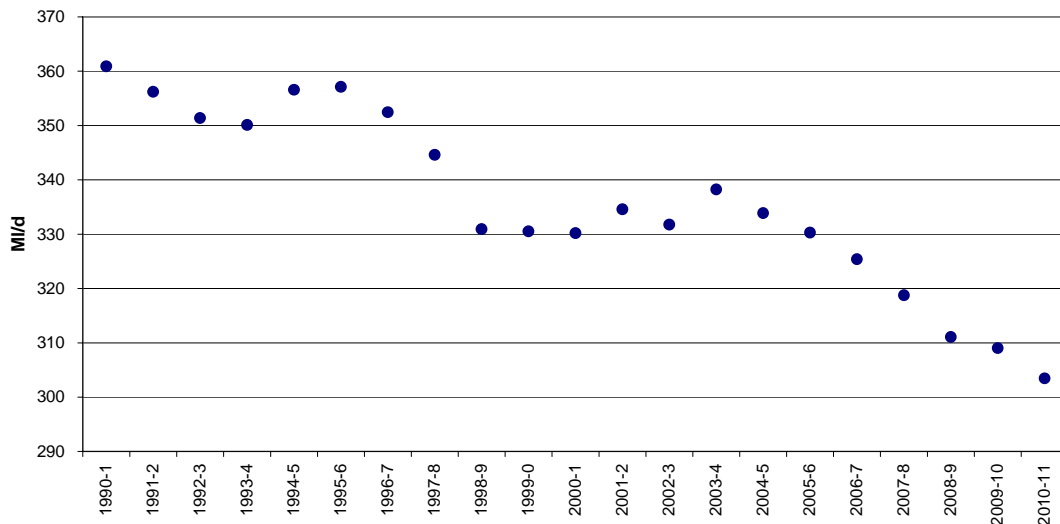
28th December. This winter peak was driven by the harsh winter and the impact this had on burst mains.

Distribution Input 2006/7, 2009/10 and 2010/11



The trend in annual average distribution input between 1990 and 2011 is also shown below.

South Staffordshire Water  
Annual Average Distribution Input



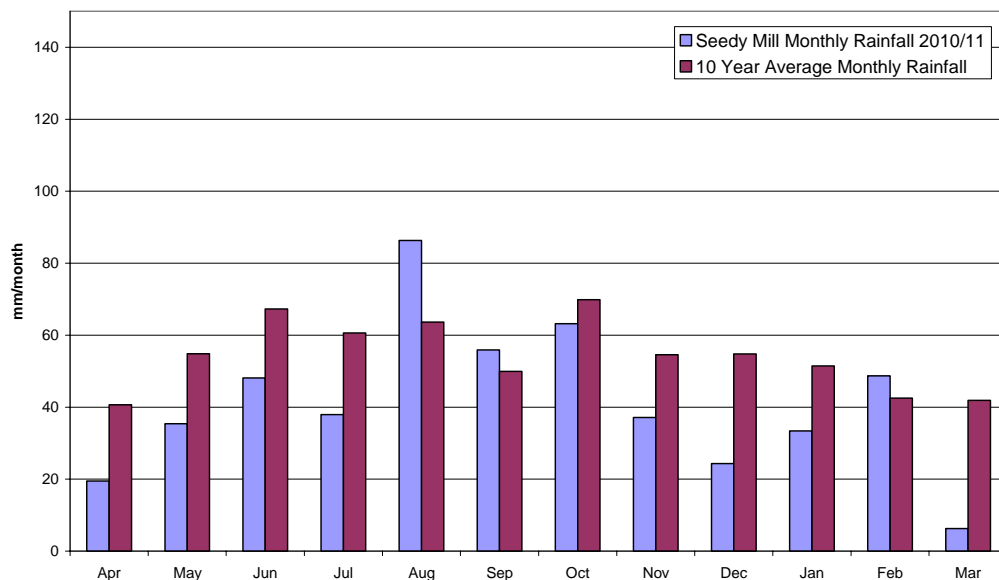
The annual average distribution input for 2010/11 was reduced by 6.69 MI/d from 2009/10 and follows a steady downward trend over the period since 2003. Summer peak demand was 3.44 MI/d higher than in 2009/10 and the

winter leakage event experienced in December 2010 significantly higher (355.35 MI/d versus 341.23 MI/d) than that from the previous winter in January 2010.

Total annual average rainfall figures (measured at Seedy Mill WTW) for 2010/11 show that overall the reported year was significantly drier (84%) than the 10-year annual average.

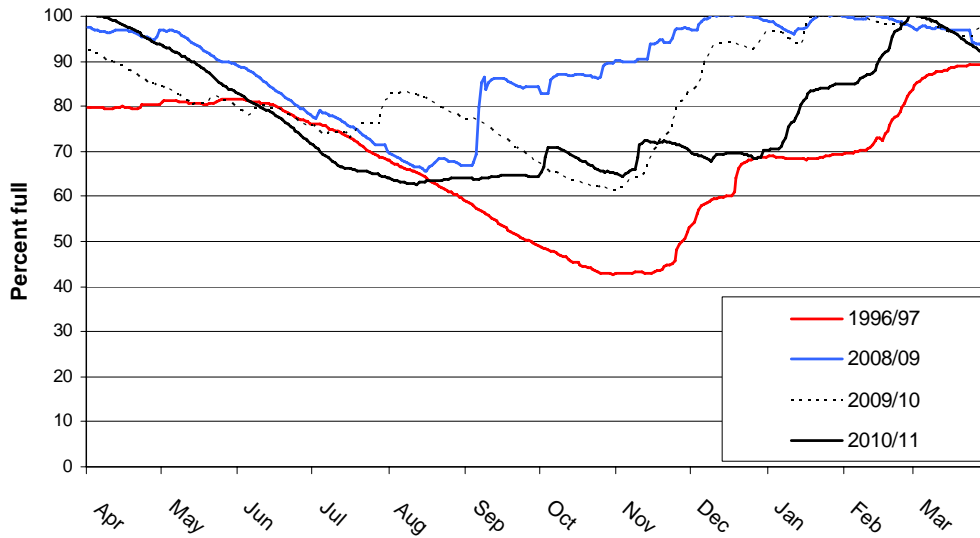
A comparison of monthly total rainfall at Seedy Mill WTW for 2010/11 against the 10-year average rainfall totals, shown below, confirms the drier than average conditions prevailing over the year. Dry periods were marked in the spring and early summer 2010 and in the following winter, with exceptionally dry months in December 2010 and March 2011. In contrast August was a wet month and brought an end to the higher than usual demands in June and July.

**Monthly Rainfall Seedy Mill 2010/11 vs 10 year Average Monthly Rainfall**



Storage levels at Blithfield Reservoir for 2010/11 are shown below. The plot illustrates the effect of the dry spring and early summer on reservoir drawdowns. In July 2010, reservoir storage levels fell below the drought monitoring curve and measures were taken to conserve reservoir resources including reductions in direct abstraction, recirculation of groundwater from Brindley Bank PS and surface water from the lower River Blithe and River Trent (when flow restrictions and the licence permitted), and use of the Company's high nitrate groundwater boreholes. Conservation measures continued until early February 2011. The reservoir was full for a brief period before drawing down again accompanying an unusually dry March.

### Blithfield Reservoir Storage



The Company had no concerns for supplies within the report year and the Company's supply demand balance remains healthy with a surplus over target headroom.

### 3. PROGRESS WITH IMPLEMENTATION OF THE FWRMP

The FWRMP demonstrates that the Company does not forecast a supply demand shortfall over the 25 year planning horizon, therefore no supply or demand interventions are necessary.

Progress on items such as sustainability investigations, and outturn figures for individual components such as leakage and metering are described in the following sections.

The Company has not made any changes to policy or planning assumptions in the report year. The latest information on planning and forecasting assumptions can be found in the Company's Final Water Resources Management Plan (2009).

### 4. GENERAL ITEMS

The following general items are identified in the Environment Agency Guideline for review.

General	Item	Review Criteria	Summary of Company Review
Water resources zones	<ul style="list-style-type: none"> <li>▪ Any changes to boundaries</li> </ul>	Requirement triggered by change	There have been no changes to the Company boundary
Level of service	<ul style="list-style-type: none"> <li>▪ Actual level of service for the year</li> </ul>	Requirement	See section 6
	<ul style="list-style-type: none"> <li>▪ Any changes to the proposed target level of service</li> </ul>	Requirement triggered by change	There are no changes to the target levels of service identified in the FWRMP

The Company' planned level of service is 1 in 40 years for a hosepipe ban, and 1 in 80 years for a non essential use ban. This planned level of service is used to define deployable output within the FWRMP. The Company has not calculated an actual level of service for the year 2010/11 as there is currently no recognised method to do so. However, given the relatively low demand, the Company's actual level of service for the outturn year must be greater than 1 in 40 for a hosepipe ban and 1 in 80 for a non essential use ban.

The Company has reported a Security of Supply Index of 100. This index confirms that if the year had been a dry year, the Company would have maintained a surplus of supply over demand.

## 5. SUMMARY OF DEMAND COMPONENTS

The following items are identified in the Environment Agency Guideline for review.

Demand Issue	Item	Review Criteria	Summary of Company Review
Demand forecasting	<ul style="list-style-type: none"> <li>▪ Highlight and explain any changes to the demand forecast. Give details of any change to the data-set used</li> </ul>	Requirement triggered by change	There have been no changes to the demand forecast in the FWRMP
Per capita consumption (pcc)	<ul style="list-style-type: none"> <li>▪ Highlight and explain actual pcc over the year.</li> </ul>	Requirement	See section 6
	<ul style="list-style-type: none"> <li>▪ Explain any change to the forecast pcc</li> </ul>	Requirement triggered by change	There have been no changes to the forecast pcc in the FWRMP
Metering	<ul style="list-style-type: none"> <li>▪ Provide an update on progress with household</li> </ul>	Requirement	See section 7

	metering (please distinguish your baseline metering from any included as an option)		
Leakage	<ul style="list-style-type: none"> <li>▪ Provide an update on progress with leakage reductions (please distinguish your baseline leakage reductions from any included as an option)</li> </ul>	Requirement	See section 8
Water efficiency	<ul style="list-style-type: none"> <li>▪ Provide an update on progress with water efficiency initiatives (please distinguish your baseline water efficiency initiatives from any included as an option)</li> </ul>	Requirement	See section 9

## 6. UNMEASURED PER CAPITA CONSUMPTION (UPCC)

The Company's uPCC monitor and estimating model has been developed according to industry best practice as defined in 'Best Practice for Unmeasured Per Capita Consumption Monitors' (99/WM/08/25), and 'Leakage Methodology Review: Variations in Per Capita Consumptions'.

There are a total of 105 DMA's used to monitor unmeasured pcc and which are potentially available for inclusion In the overall analysis. This gives the Company a comprehensive number of samples to ensure that uPCC estimates are robust.

The monitor has been developed with the assistance of Tynemarch System Engineering Ltd who has advised the Company on the optimum design, sample selection and methodology. Tynemarch has experience working with other water companies and was the appointed consultant for the work on national variations of PCC estimates.

To ensure consistency and transparency Tynemarch has also carried out an independent review of the 2010/11 uPCC estimate. This report has been

passed to the reporter for information in support of the detailed audit of the uPCC analysis.

A total of 91 DMAs are included in the 2010/11 estimate and each area's flow and pressure data has been checked and verified. A minimum requirement of 270 days accurate flow data is required for each DMA. Where there are less than 270 days of flow data each area is reviewed to determine if the data is still valid. Where the data is found to be flawed or inconsistent it is excluded from the analysis.

The upcc derived from the monitor for the report year is 140.31l/h/d (Pre MLE) +/- 4.12l/h/d.

## **7. METERING**

The Company continued to operate a number of metering policies in line with the PR09 Business Plan submission. These policies are:

- Change of occupier metering – Commenced in April 2010 applicable to property moves where a change of occupation has been confirmed.
- Free meter policy – domestic and commercial customers can opt for a meter free of charge with a 12 month reversion period for domestic customers.
- New supply policy – all new household and non-household properties must be metered.
- Sprinkler metering policy – domestic customers wishing to use unattended garden watering devices must be metered, although this is difficult to enforce.
- Swimming pool with capacity greater than 10,000 litres

The aim of the overall metering strategy for the Company is to increase the rate of meter penetration in line with its water resource and supply and demand balance forecasts in the 2009 Water Resource Management Plans. Increased meter penetration will ultimately enable more effective development and implementation of seasonal tariffs. This is consistent with the Company's medium term strategic view that the value of water should be demonstrated through price signals.

### **7.1 New connections**

There were 2,720 new household connections during 2010/11 not previously connected for water supply. The outturn for 2010/11 is only 30 less than the AMP5 forecast which suggested a slow recovery from the reduced number of connections observed in 2008/9 and 2009/10.

There were 207 new non-household connections during the reporting year not previously connected for water supply. This is only 43 less than the AMP5 forecast and 54 more than recorded in 2009/10.

## **7.2 Sprinkler metering**

During the report year there was no selected metering of unmetered sprinkler use due to the average summer experienced in 2010. The Company will continue to operate the sprinkler metering policy within its area during the coming summer. Wherever appropriate the sprinkler metering policy will continue to be promoted. Two household properties with swimming pools were subject to selective metering policy during the report year.

## **7.3 Change of Occupier metering**

The policy specifies that where there has been a complete change in occupation of a household property and no unmetered charges have been demanded from the new occupier, the Company may install a meter and charge that property by reference to volume. In addition the property must be served by a separate supply enabling a meter to be installed in the public highway; either in an existing boundary box or by the replacement of an existing stop tap with a boundary box.

2,142 meters have been fitted under the Change of Occupier policy in the year. This is below the target of 2,500 (14.3%) for the year. Change of Occupier activity was suspended through January due to the impact of the freezing conditions on the operational resources that deliver this strategy. Overall the strategy has been implemented and delivered successfully. The number of properties (3,014) identified as ineligible for meters under this policy due to being on a shared supply will be an area of focus for the Company for 2011/12 with improved vetting techniques implemented.

## **7.4 Meter Optants**

A total of 4,587 meters were installed under the free meter options strategy in 2010/11 compared to 6,322 meter optants installed in 2009/10. This is 2,413 (34.5%) lower than forecast (7,000) for the year. A total of 7,472 applications were sent and a total of 5,891 applications were returned during 2010/11 compared to 2009/10 when 7,852 applications were sent and 6,623 applications were returned.

The incumbent contactor for Free Meter Options changed during the report year. From 1st October 2010 Free Meter Options have been delivered under a new contract. The application requests and returned applications are handled by Echo Managed Services and the survey/installation contract is managed by Integrated Water Services (formerly known as Pipeline Services). The outgoing contractor, Integra Utility Services, installed its final meters under this strategy in December following a 3 month wind down period where all remaining jobs on their system were completed.

The transition to the new meter options contract has been smooth with no significant impact on customer service levels identified. A June Return pre-audit was completed by the Company's Ofwat Reporter in February 2011 following the change and he was satisfied with the systems and procedures delivering both elements of the contract.

## **7.5 Meter Location**

The Company's preferred meter location policy is that an external meter is fitted with a remote reading facility on or around the boundary of the property. The move to AMR meters from summer 2010 has enabled the remote reading potential to be improved with the use of touch pads no longer required.

Although the capital cost of external installations is higher than internal installation costs the Company has demonstrated in its Final Business Plan that external installations are more cost beneficial.

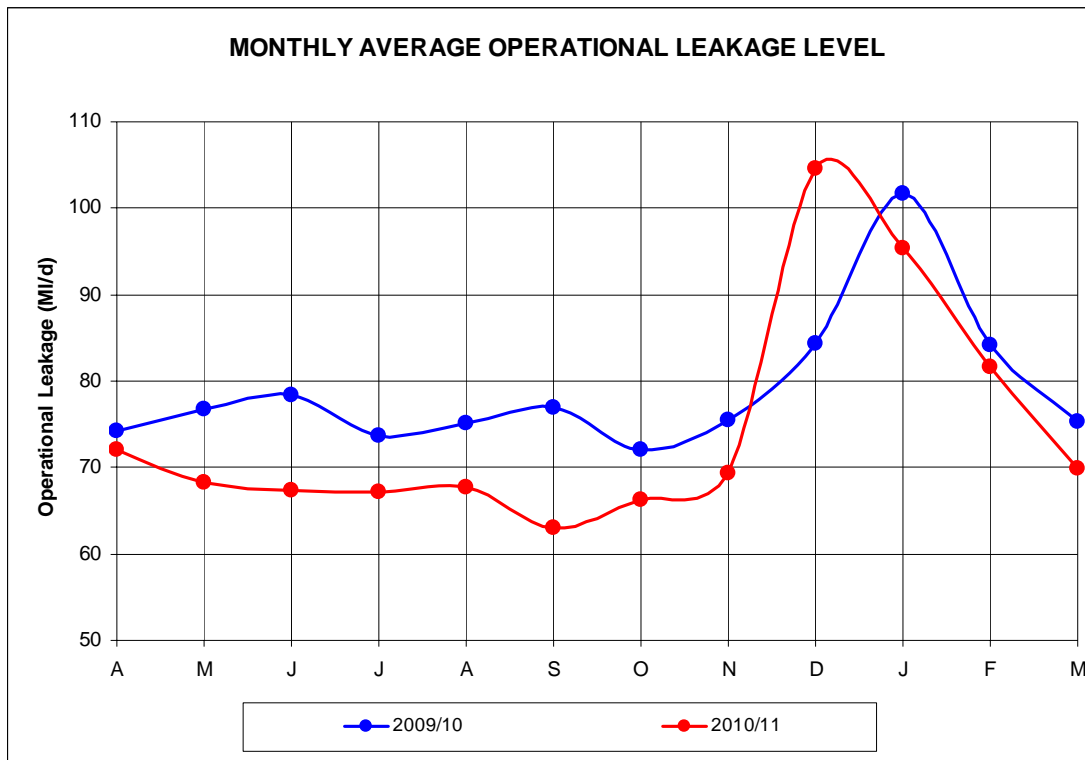
Internal meters will continue to be installed in apartments, communal or flat type properties or where internal installations are conducive to the supply pipe configurations.

## **8. LEAKAGE**

### **8.1 Leakage Trends**

The Company reported a total leakage level of 72.83 MI/d for 2010/11, this is within the leakage target of 74 MI/d. This excellent performance was delivered despite the elevated level of leakage experienced during the most severe winter of recent times.

To deliver success, increased levels of leakage activity were undertaken earlier in the year; partially to support recovery from what had at that time been the highest winter leakage impact, and partially to achieve a reduced AMP5 regulatory leakage target of 74 MI/d. Increased levels of activity have also been undertaken in the last quarter of the year leading to the successful leakage reduction necessary to achieve the target, as can be seen in the chart below:



In addition to the above operational tracking, using distribution input meters, additional monitoring is now undertaken using DMAs. These independent data sets confirm the same trends, giving improved confidence in the results.

## 8.2 Underground Supply pipe leakage

The Company has undertaken the annual reassessment of Underground Supply Pipe Leakage (USPL) using the UKWIR methodology. The assessment has used Company specific data and estimated USPL of unmeasured or internally metered households at 32.21 l/prop/day and 23.31 l/prop/day for externally metered households. This is based on report year data.

## 9. WATER EFFICIENCY

The following Company commentary sets out the water efficiency outturns for 2010/11 and the Company's Water Efficiency Strategy (WES) for 2011/12. The Company aims to deliver its Water Efficiency Target (WET) by.

- Reducing customer and company consumption
- Promoting the efficient use of water through the assumed savings and activities as defined in Ofwat's Table 1 'Reporting guidance and definition manual'.
- Improving the water efficiency evidence base.

The Company's WET became effective from 1<sup>st</sup> April 2010 and is an annual target of 0.53MI/d for each year of AMP5. The target is based on a saving of 1.0 l/prop/day and is calculated in the same way for all companies with per

capita consumption above 130 l/h/d. The target is a 3 year rolling average, where deficits or surpluses are carried over to subsequent years. OFWAT has issued guidance on the savings that can be claimed by different types of activity on which the strategy is developed.

The target requires activities in the following areas:

- Households
- Non-households
- Furthering knowledge and the evidence base of water efficiency
- Education

In calculating savings from water saving devices for the report year the Company adopted the standard assumptions on estimated savings and take-up rates published in Appendix 1 to the Ofwat Water Supply and Demand Policy and laid out in Chapter 1 of the June Return Reporting Guidance. In addition the Company assess 'soft' behavioural or educational changes using the November 2010 version of the spreadsheet calculator developed for UKWIR Report 09/WR/25/4: Estimating the water savings from baseline water efficiency activities".

The Company's water efficiency activities are in relation to Base Water Efficiency Targets (BSWE). The Company does not have a Sustainable Economic Level of Water Efficiency (SELWE).

## **9.1 Water Efficiency Activities in 2010/11**

### **2010/11 Performance Against Target**

The 2010/11 outturn against the Company's WET is 0.55 MI/d. This compares to an outturn figure of 0.07MI/d for the prior year and demonstrates a significant change in strategy, focus and resource allocation. This is an excellent result for the Company. The surplus of 0.02 MI/d will be added to the 2011/12 target resulting in a total revised target of 0.51 MI/d. In summary the 2010/11 savings have been achieved from a combination of activities in the following areas:

- Promotion of water butts = 0.0003MI/d
- Company site water audits = 0.004MI/d
- Distribution of cistern displacement devices = 0.10MI/d
- Educational / behavioural 'soft' options = 0.16MI/d
- Showersave promotion = 0.29MI/d

The Company has included the maximum saving (30% of target) against 'soft' behavioural measures.

The following are initiatives that formed the basis of the 2010/11 water efficiency strategy:

- Bill inserts promoting ShowerSave (flow regulator), Cistern Displacement Devices (CDDs) and WE information.
- Rango
- Big Tap Challenge
- Big Green Smile/ Sainsbury's WE promotion
- Household and Non-Household water audits
- Educational and Behavioural changes

### **Showersave Billing Promotions**

A significant part of the strategy involves the promotion of shower flow restrictors (Showersave), CDDs and water saving advice and audit information.

The availability of these devices was advertised in a leaflet inserted with customer bills. This advised customers of the free offer and made it available via the Company's website, by telephone or by sending the 'tear off' request form direct to the despatch company, Save Water Save Money (SWSM). The Company chose to encourage the customer to pick only water efficiency devices they required, rather than a standard pack being sent to every customer. This made it more likely that all devices sent were wanted and therefore would be fitted

The promotion was also offered directly via water efficiency pages on the Company's website and on the back of its metering strategy literature.

The promotion offers a number of routes by which the customer can request their individualised water efficiency pack. The following shows which communication routes have been the most effective.

SWSM call centre	6%
Promotion 'tear off' slip	66%
SSW Website	28%

It is clear that customers preferred to claim their packs by sending the 'tear off' coupon from their bill inserts using the pre-paid return option. It is assumed that this is because it is the most immediate way of participating i.e. the promotion was received with the bill and the decision of what they wanted was made quickly and easily.

### **Education and Behavioural changes**

The Company increased the visibility of its water efficiency messages and information across many of its customer interfaces by participating in a number of national campaigns.

The success of this increased activity and focus is reflected in the increased number of website visits and requests for CDDs compared to previous years.

## **The Big Tap Challenge**

The Company participated in the 'Big Tap Challenge' (BTC) national water efficiency promotion. The aim of this was to reinforce positive steps that can be taken to use tap water wisely and encourage everyone to make a pledge to reduce waste from the tap e.g. turning off the tap whilst brushing teeth.

To help promote the challenge and promote other water saving tips a section on the BTC was included in the Company's customer newsletter Waterline 2011 which is included in customer bills. Savings from this initiative were not considered for the reporting year and will be assessed in 2011/12.

The campaign was backed by 10 UK water companies and Waterwise and was spearheaded by famous former Olympic athlete Kriss Akabusi. The former athlete and TV personality stars in a short video highlighting simple ways people can use tap water wisely in and around their homes and gardens.

Customers of South Staffordshire Water can access the Company's website via the Big Tap Challenge website to make their water saving pledge and at the same time request free water saving devices.

## **Rango**

The Company has participated in a further national water efficiency campaign using the recently released Paramount film 'Rango' as the media focus.

Rango is spearheading a UK wide water efficiency campaign backed by 11 water companies and Waterwise to encourage water users to reduce waste and become more water efficient.

The Company has used the main theme of the film to highlight how water is a vital resource and worthy of protection. A promotional leaflet was included with the 2011/12 bills pointing customers to the Company's website from where free water saving devices can be requested and where water saving information can be downloaded or viewed.

Although this promotion was primarily aimed at 2010/11 the Company has not included water savings from the resulting behavioural and educational changes. Discussions between Ofwat and Waterwise, on the water savings attributable to the water companies, are currently ongoing and will not be completed in time to be counted against the 2010/11 target. When the discussions have been completed the savings will be allowed against the 2011/12 target.

## **Big Green Smile - Sainsbury's water efficiency promotion:**

The Company participated in a three week long 'front of store' promotion of energy and water efficiency products with Sainsbury's across its major UK stores.

This was the first national promotion of its kind and helped deliver the important message that being energy and water efficient is interlinked. The pack contained a shower flow regulator, a CDD and water and energy saving tips.

The Company committed to 12,245 packs out of those distributed in the Company's area of supply. As the packs were standardised, the Company has assumed a lower level of fitting than with its other more targeted promotions (50% vs. 70%). These resulted in a saving of 0.09 Ml/d in the reporting year.

### **Other activities**

- **Darlaston Town Centre Partnership:** The Company donated 3 water butts to the Darlaston Town Centre Partnership for their 'Heart of Britain in Bloom' entry. The donation was warmly received and will help the Partnership in next year's competition to satisfy the need to demonstrate a non dependency on tap water.
- **Toyota:** Further water efficiency support has been given to one of the Company's largest water using customers for their week-long 'Family Day'. The Company provided a water efficiency stand which offered help, advice and information on saving water and energy in the home.
- **Combining charity with water efficiency:** The Company attended a 'Twilight walk around Walsall Arboretum' in aid of Walsall Hospice when the opportunity was taken to promote water efficiency. A water butt was offered as a prize to participants who requested water efficiency information.
- **Water Audits:** The Company has asked a consultant to support its strategy to provide free water audits to non-household and commercial customers. To date there have been a small number of audits from which there has been no reported savings. However, the Company will be increasing its activities towards non-household customers in the 2011/12 strategy with a view to achieving water savings from this activity.

The activities described above do not contribute to the overall achievement of the Company's water efficiency target but highlight the Company's commitment to education and changing customers' use of water and reducing waste.

## **9.2 Proposed Activities in 2011/12**

The 2011/12 strategy builds on the successes of the initiatives undertaken during 2010/11 and proposes to develop these further and reinforce them with other initiatives to help achieve the 2011/12 water efficiency target.

## **Continuation of Current Initiatives**

The following are activities that will be continued in 2011/12:

- General messages on how to use water wisely (media, website and *Waterline 2011*).
- Provision of self-fit cistern displacement devices (CDDs) and shower flow regulators issued on request arising from bill inserts, SSW website and special promotion campaigns. Devices distributed by appointed management company (SWSM).
- Provision of water butts via Straights framework contract.
- Provision of household and non household water efficiency leaflets including information on water audits distributed on request.
- Education (water efficiency messages are given to school visits to Blithfield Education Centre as part of a wider range of educational activity).
- Non-household audits associated with water regulation visits.

In addition to these initiatives, savings from promotions launched in the last quarter of 2010/11 (Rango and Big Tap Challenge) will be rolled over for inclusion against the 2011/12 target.

## **Billing Promotions**

The most successful component of the 2010/11 strategy was the promotion of the ShowerSave regulator, CDDs and water efficiency information. This offered a 'pick list' of free-to-customer self-fit water efficiency devices and a water audit booklet.

The bill insert promotion has been repeated in time for 2011/12 and enhanced by the addition of aerated tap inserts to the request form to generate additional savings.

The 2010/11 customer response data has been used to guide planning of likely take-up rates; however it is recognised there is a risk that the promotion may be less successful the second time around.

## **Education and behavioural changes**

The measures to change water use behaviour through education and information are described as 'soft' measures. The savings attributed to these measures are calculated with the aid of a purpose-built UKWIR model.

Educational material will be redesigned by the Education and Recreation team to meet a greater level of engagement. Focus will be placed on 2,500 students receiving water efficiency "modules" at Blithfield Education Centre. There will be a further focus on taking education to schools via outreach programmes incorporating water efficiency material.

## **Non Household water audits**

Only very small savings have previously been identified from non-household water audits generated from Water Regulation visits and from download of company information from the website because contact numbers are low and savings for this type of activity are small.

An increased focus on non-households in 2011/12 is proposed through a partnering agreement with a contractor based on pilot work in 2010/11. A programme of mail shots will target groups of customers offering free water audits. The audits will identify water savings and the customer will be encouraged to invest in changes where payback periods are attractive.

## **Midlands Water Efficiency Collaboration**

The Company has entered into a regional 'water efficiency collaboration' agreement between the EA, Severn Trent and South Staffordshire Water and several large social housing landlords.

The Company will provide water and energy efficiency devices, education and information to social housing tenants via the social landlords' maintenance and void refurbishment programmes. This will be supported by training in behavioural change offered by the EA and its partners.

It is envisaged that this agreement will be reviewed at the end of 2011/12 to gauge the success of the project.

## **9.3 Research and Development**

Ofwat guidance makes specific reference for the need for each Company to contribute to the evidence base used to set savings by various activities through monitoring of water efficiency projects and other research.

The outcomes of the R&D are unclear at this point but SSW will monitor the Midlands Water Efficiency Collaboration project or react to any changes to Ofwat guidance to satisfy this requirement. The Company is currently participating in joint projects to be concluded for reporting in JR12. These are.

- Leaking Toilet Valves – joint water company project managed by Artesia.
- ShowerSave survey – Customer intelligence on satisfaction with shower save product and related devices.
- Outdoor water use - joint water company project managed by WRc
- Code for sustainable homes – joint water company project managed by WRc.

## 10. SUMMARY OF SUPPLY COMPONENTS

The following items are identified in the Environment Agency Guideline for review.

Supply	Item	Review Criteria	Summary of Company Review
Deployable output	<ul style="list-style-type: none"> <li>▪ Any changes to deployable output</li> </ul>	Requirement triggered by change	There have been no changes to deployable output
Outage	<ul style="list-style-type: none"> <li>▪ Explain reasons for any outage incidents and any work being done to reduce outage</li> </ul>	Requirement	See section 11
Bulk supply	<ul style="list-style-type: none"> <li>▪ Explain any changes to bulk supply agreements</li> </ul>	Requirement triggered by change	There have been no changes to the bulk supply agreements identified in the FWRMP
Sustainability reductions	<ul style="list-style-type: none"> <li>▪ Detail any alterations to the sustainability changes required. (changes to existing definite sustainability changes or new definite sustainability changes)</li> </ul>	Requirement triggered by change	See section 12
	<ul style="list-style-type: none"> <li>▪ Report on progress with implementation of sustainability changes.</li> </ul>	Requirement	See section 12

## 11. ACTUAL OUTAGE

Actual outage figures for the report year are reported for both the average and critical period scenarios. For 2010/11 the Company has collated data from its available records of planned and unplanned outages.

The reported average outage figure is 7.61 MI/d. This compares to a Dry Year planning figure of 10.9 MI/d which has been modelled for the PR09 FWRMP. This represents a significant rise in actual outage from that reported for 2009/10 due to an increase in planned maintenance at the start of AMP5 but remains lower than the planning allowance.

The reported Peak Week outage figure is 2.82 MI/d. This compares to a Peak Week planning figure of 7.05 MI/d which has been modelled for the PR09 FWRMP. The reported outage figure for peak week (week ending 27<sup>th</sup> June 2010) was lower than the previous year because there were no planned outages in the summer period of the reporting year.

## **12. SUSTAINABILITY REDUCTIONS**

The Company has embarked on a series of environmental investigations as part of the AMP5 Water Resources Natural Environment Programme (NEP). These cover three separate study areas:

- The Rising Brook. This catchment is in the Staffordshire Trent Valley CAMS area. There are concerns over the possible influence of groundwater abstraction from Company boreholes in the Rugeley Groundwater Unit on low river flows. Initial assessments by the EA identified the Rising Brook water body as being in 'very poor condition' hydrologically, and having a 'moderate' biological condition.
- The Bourne Brook (also known as Black Brook). This catchment is in the Tame and Anker CAMS area. There are concerns that groundwater abstraction from Company boreholes, in the Shenstone and Lichfield Groundwater Unit, is impacting on the ecological status of the Bourne Brook waterbody due to baseflow depletion. Wetland habitats within the Hopwas Hayes Site of Biological Importance have also been identified as potentially being impacted by abstraction from Company boreholes.
- The West Midland Sherwood Sandstone (WMSS) groundwater body. This is included in the Worcestershire Middle Severn (WMS) CAMS area. There are concerns over groundwater abstraction from South Staffordshire Water and Severn Trent Water boreholes in the WMS Groundwater Unit affecting the Water Framework Directive (WFD) Status of a number of Sites of Special Scientific Interest and the good ecological status both of individual surface water bodies and of the groundwater body as a whole.

The objectives of the NEP are to carry out a desk study of available data on each of the catchments, and subject to its finding:

- Carry out no further work
- Carry out further environmental monitoring
- Options appraisal
- Cost benefit analysis of the options

The Company has completed desk studies on all three catchments. The Rising Brook and Bourne/Black Brook catchments were studied independently by South Staffordshire Water, but the West Midlands Sherwood Sandstone (WMSS) area was studied jointly with Severn Trent Water. Each desk study

consisted of a confirmation with the Environment Agency of the scope and objectives of the investigation, a review and analysis of available environmental and ecological data, an assessment of existing ecological status and the impact of groundwater abstraction on that status, and recommendations on the scope of further investigations. These recommendations were under review at the end of the financial year and will form the basis of the work programme in 2011/12.

The AMP4 investigations and options appraisal work carried out by the Company at Checkhill Bogs SSSI fall within the WMSS study area. This work has been incorporated into the AMP5 programme.

### 13. CLIMATE CHANGE

The following items are identified in the Environment Agency Guideline for review.

Climate change	Item	Review Criteria	Summary of Company Review
UKCP09	<ul style="list-style-type: none"> <li>▪ Any work progressed on assessment of UKCP09 impacts on resources or demands.</li> </ul>	Requirement triggered by change	<p>No changes have been made to the FWRMP climate change assessment. The company is awaiting the results of ongoing UKWIR/EA research projects on how to use UKCIP09 data. Once these are complete we will be consulting in detail with neighbouring companies and the EA on the way forward.</p>

The Company prepared and submitted to Defra in January 2011 a report on Climate Change Adaptation. This considered risk assessments of all aspects of the Company's functions at risk from impacts due to climate change and how the Company was prepared to adapt to them. No significant issues were identified as requiring action.

A specific review of climate change impacts on resource availability using the UKCIP09 scenarios is planned as soon as both the guidance on the methodology for inclusion into water resources management plans is available

and the Company has completed implementation and development of its new water resources model planned for 2012.

#### 14. SUMMARY OF HEADROOM AND OPTIONS

The following items are identified in the Environment Agency Guideline for review.

Headroom and options	Item	Review Criteria	Summary of Company Review
Headroom	<ul style="list-style-type: none"> <li>▪ Give details of actual headroom</li> </ul>	Requirement	See section 15
	<ul style="list-style-type: none"> <li>▪ Any changes in actual headroom and target headroom</li> </ul>	Requirement triggered by change	There are no changes to target headroom. Actual headroom is discussed below.
Options	<ul style="list-style-type: none"> <li>▪ Progress with the planning and delivery of all options</li> </ul> <p>(include all options over and above those included in the baseline. For example additional supply or demand options; SELWE, selective metering, additional leakage control options)</p>	Requirement	No options were required in the FWRMP.
	<ul style="list-style-type: none"> <li>▪ Any changes to the options chosen</li> </ul>	Requirement triggered by change	No options were required in the FWRMP.

#### 15. ACTUAL HEADROOM

Actual headroom for the dry year annual average and critical period scenarios for the report year are derived in order to complete the Security Of Supply Index (SOSI) calculations for Table 10a of the June Return.

Actual distribution input is adjusted to produce a dry year and a critical period (peak week) demand. This is achieved by factoring up the household component of demand for a normal year. This results in a normalised annual average distribution input of 305.28 MI/d.

A dry year adjustment factor has been added to the normalised annual average distribution input. Household demand has been increased by 3.9%. This is the dry year factor used in the PR09 Final Water Resources Management Plan and is the difference between a normal year demand and the annual average demand from 1995/6. When applied to the normalised distribution input this produces a dry year annual average demand of 312.25 MI/d.

Dry year annual average target headroom for 2010/11 taken from the 2009 Final Water Resources Management Plan is 10.27MI/d. The 2009 FWRMP shows actual headroom for 201/11 of 31.22MI/d. The actual headroom for the calculated dry year reported in Table 10a of the June Return 2011 for 2010/11 was 40.46MI/d.

The approach used to calculate critical period (peak week) demand is the same as that used in the PR09 Final Water Resources Management Plan. The approach, developed by consultants Atkins, involves the modelling of historic data, and the calculation of a peak volume (74MI/d) which is added to the normal year. This approach is consistent with the UKWIR best practice approach for peak demand estimation. This produces a dry year peak week demand of 379.28 MI/d.

Critical period target headroom for 2010/11 taken from the 2009 Final Water Resources Management Plan is 11.96MI/d. The 2009 FWRMP shows actual headroom for 2010/11 was 33.44MI/d. The actual headroom for the calculated critical period reported in Table 10a of the June Return 2011 for 2010/11 was 42.29MI/d.

## **16. DROUGHT PLANNING**

The Company's Final Drought Plan was published on the South Staffs Water website in January 2008. The Company's stated level of service for hosepipe bans of 1 in 40 years on average is consistent between the Drought Plan and the PR09 Final Water Resources Management Plan. No changes to the drought plan have been made in 2010/11 however the statutory review process has started and the Company will be submitting an updated draft plan to the Secretary of State by October 2011.

## **17. CONCLUSIONS**

This review confirms that the Company had no concerns over the supply demand position for the year 2010/11. The Company reported a Security of Supply Index of 100.

The outturn figures for reported year are consistent with the figures in the FWRMP for the year 2010/11, and there is no need to change any of the forecasts within the FWRMP.

The Company is confident that the supply demand balance will remain in surplus throughout the 25 year planning period.