



South Staffs Water

**FINAL WATER RESOURCES  
MANAGEMENT PLAN**

**Non Technical Summary**

**August 2009**

## Background

South Staffordshire Water's Final Water Resources Management Plan (FWRMP) shows how we intend to maintain the balance between available water supply and the demand for water over the next 25 years.

Following the Water Act 2003 water company water resources management plans are now statutory documents, which are submitted to the Secretary of State (DEFRA), and are made available for public consultation. These plans are prepared every 5 years. This document summarises the Company's revised plan following public consultation.

## Company Overview

South Staffordshire Water is responsible for public water supply across part of the West Midlands serving some 1.25 million people. The area of supply stretches from the edge of Ashbourne in the north, to Halesowen in the south, and from Burton on Trent in the east to Kinver in the west.



The Company has a single well integrated resource zone. The two principal water resources are Blithfield Reservoir (supplying Seedy Mill water treatment works) and the Hampton Loade river abstraction from the River Severn. The Hampton Loade abstraction feeds Chelmarsh Reservoir, which is a bankside storage reservoir, before supplying Hampton Loade water treatment works. These surface water sources provide approximately 50% of the Company's water resources in the critical dry year.

The Company also supplies water from 27 groundwater sources, abstracting from the Sherwood Sandstone aquifer.

### **Public Consultation**

The Company's Draft Water Resources Management Plan was published on our website ([www.south-staffs-water.co.uk](http://www.south-staffs-water.co.uk)) on the 5<sup>th</sup> May 2008, and this was followed by a period of 15 weeks for public consultation, ending on Monday 25th August 2008.

Following the end of the consultation period the Company published a statement of response to any representations on February 2<sup>nd</sup> 2009. DEFRA have reviewed our Statement of Response and have given approval for the publication of our FWRMP.

### **Overview**

The FWRMP sets out our water resources and demand projections for the Company's area of supply, for the next 25 years, and it identifies where investment is required in the event of a deficit between supply and demand. The plan demonstrates that the Company does not forecast a supply demand deficit within the 25 year planning horizon, therefore major resource development or demand management measures are not required to meet a supply shortfall.

We will continue to review this plan over subsequent years to ensure that we take account of new information. This is particularly important given the uncertainty in the future over climate change, over potential future reductions in licensed abstraction (to comply with the Water Framework Directive), and because of uncertainty over the pace of future housing and population growth.

### **Key Policies**

The past few years have seen a series of extreme weather events across England and Wales. The 2005 and 2006 drought affected much of the south of England and the floods of summer 2007 were unprecedented. These events provide supporting evidence of the very serious impacts of climate change. The Company recognises that the pressures of climate change and the need to reduce the Company's carbon footprint bring the need for a change in Company policies.

Climate Change presents a real challenge to South Staffordshire Water and we aim to play our part in tackling this issue, and to reducing the Company's carbon footprint.

South Staffs Water will continue to focus on our successful energy management programme and maintain our pumps to the highest efficiency levels in the industry. We will also continue to review and implement plans where appropriate for renewable energy schemes, and we will also reduce the amount of water we treat and pump on a daily basis through a range of demand management programmes.

One of the most important new policies that the Company will implement to help reduce the amount of water we pump is the introduction of change of occupier metering, where new meters will be installed when someone moves house.

Greater numbers of households with metered supplies will enable the future development of different charging structures (tariffs). Examples include cheaper water for low volumes of use, increasing in price when higher volumes are used, or higher charges associated with peak summer demands. Although the Company has no plans to use new tariffs in the short term we believe that they may be an important tool in the future as they demonstrate the value of water to customers through price signals.

Research with our customers has shown that most agree that meters are the fairest way to pay for water but have concerns over affordability. We understand these concerns and will work hard with the regulators and customer groups to ensure that appropriate protection is provided for vulnerable customers.

Alongside the new metering programme, we will refocus and reinforce our activities in the area of water efficiency to provide our customers with the information they need to make informed decisions about using water wisely. We will also continue to work hard to maintain leakage at the economic level.

## **Water Resources Planning Scenarios**

Our water resources plan considers the balance between supply and demand over a 25 year period for two scenarios, a Dry Year and a Peak Week. High demand during peak summer weeks have historically caused the most stress to the Company's water resource availability, and this continues to be the case.

## **The Supply Forecast**

The amount of water resource available for supply in a dry year is called Water Available For Use (WAFU). Our forecast of water available for use remains relatively flat across the period of the plan for the dry year annual average and peak week scenarios.

The plan includes a small reduction in water available for use (for the Dry Year scenario) in 2014/15 resulting from a need to address environmental issues at a designated environmental site (Checkhill Bogs, Site of Special Scientific Interest). The expected reduction of 2Ml/d is less than 1% of water available for use.

The impacts of climate change on deployable output have also been estimated. A small reduction (less than 1Ml/d) is forecast in the baseline water available for use. The uncertainty around this assessment has also been included in the plan.

### **The Demand Forecast**

There are a number of pressures on demand. Some of these are positive pressures and work to drive demand upwards. Others are negative pressures and work to drive demand downwards. Some of these pressures off set each other to have a counterbalancing effect.

The Company's baseline demand forecast for the next 25 years for the dry year annual average scenario is relatively flat, rising less than 2% over the period. The forecast includes impacts due to climate change.

Non-household (industrial and commercial) demand has fallen significantly in 2008/9 and 2009/10 due to the economic downturn. This is forecast to remain relatively stable across AMP5 at this lower base, followed by modest growth over the remainder of the 25 year period.

Total connected household properties are projected to increase by 120,000 by the year 2034/5. This includes 39,000 household properties identified though the West Midlands Regional Spatial Strategy (RSS). This sets out the government's proposals for housing growth within the West Midlands. This RSS growth will be focussed in the urban regeneration of the Black Country and in Burton-upon-Trent which has been designated as a growth point.

Population is projected to increase from 1.257 million in 2007/8 to 1.399 million in 2034/5. This forecast is based on the latest census data, population growth and migration forecasts.

Within the next 25 years it is expected that household water using appliances will become more efficient and the consumption of water per person and per household will be driven down. This will be supported by the adoption of the government's Code for Sustainable Homes in all new housing developments. One of the aims of the code is to reduce household water consumption by the installation of more efficient water appliances. The Company's overall per capita consumption for a normal year is projected to fall from 144 ltrs/head/day in 2007/8 to 126 ltrs/head/day by 2034/5.

As a result there will be a counterbalancing effect against the pressures of increasing numbers of households and increasing population and reducing

household size. As a result of this the Company forecasts household demand to rise by less than 2% under average conditions.

The continuation of the Company's other existing metering policies and the introduction of the change of occupier metering programme will mean that meter penetration is forecast to increase from around 20% up to 77% by the end of the plan period.

The plan assumes that the effects of metering will also suppress peak demand.

### **Leakage**

The Company has calculated a forecast sustainable economic level of leakage (SELL) for 2008/9. This is the level of leakage below which it becomes uneconomic to undertake additional leakage reduction activity. The forecast SELL is 74.4MI/d. The Company has used this figure within our final scenario demand forecasts. Leakage is forecast to remain at this level throughout the forecast period. However, the Company will have to work hard to do this as there will be more mains in the ground, more connections and an ageing mains network.

### **The Balance Between Supply and Demand (Baseline)**

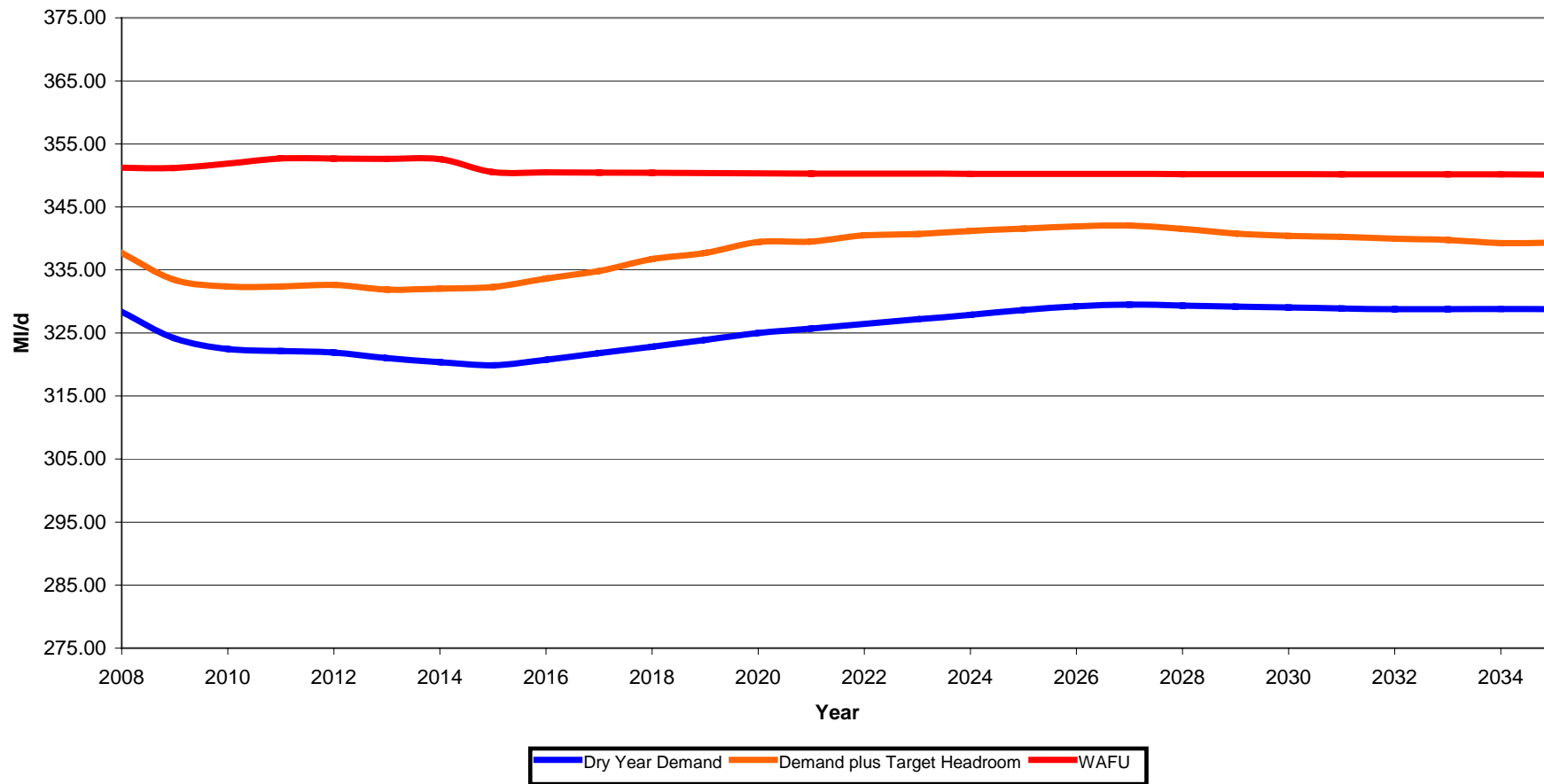
Using the baseline demand forecast and supply forecast the Company has sufficient resources to meet dry year annual average demand and peak week demand throughout the 25 year plan period.

It should be noted that this healthy supply demand balance position does not mean that ongoing investment in the supply demand balance category is required to a lesser extent in future. Investment must be maintained to meet the increasing challenges of ongoing leakage control, the costs of providing connections for new housing under the Regional Spatial Strategy, delivery of the Company's metering strategies and water efficiency activities.

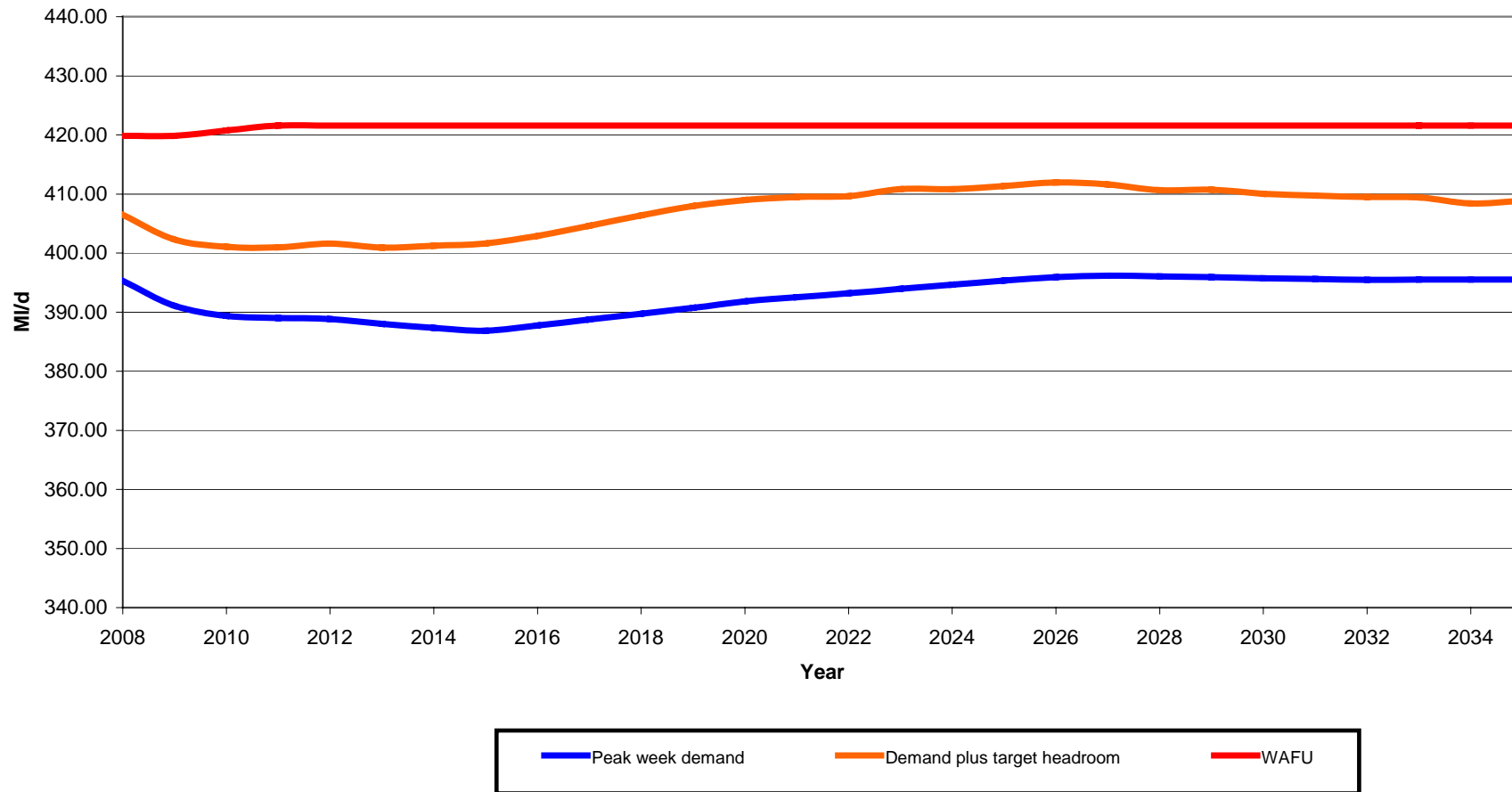
The baseline supply demand balance is illustrated in the following graphs.

When comparing supply and demand the uncertainties around all the components are grouped together and called headroom. This figure for uncertainty is effectively a planning safety margin and it is added onto the demand forecast. Water Available For Use is then compared to demand plus Target Headroom.

### Dry Year Annual Average Supply Demand Balance (Baseline)



### Peak Week Critical Period Supply Demand Balance (Baseline)



## **Levels of Service**

South Staffordshire Water is proud of its record of not imposing a hosepipe ban for many years. Despite the drought conditions experienced in 1995, the Company has not imposed a hosepipe ban since the record drought on the River Severn in 1976.

A hosepipe ban frequency equivalent to once in every 40 years has been adopted for the Company's 2007 Drought Plan and also for this Final Water Resources Management Plan. This level of service is consistent with the Company's previous (2004) Water Resources Management Plan. There is no proposed change in the level of service throughout the plan period.

## **The Environment**

The Company is committed to working with the Environment Agency and other stakeholders to better understand the competing pressures of public water supply abstraction and the potential impacts of this on the environment. We have included abstraction licence reductions at Checkhill Bogs (SSSI) following identification by the Environment Agency. We will be working closely with the Agency to clarify the detail of this scheme in the next 5 years.

The Company is concerned that more significant abstraction licence reductions may be required in the medium to long term (for example, as may be identified under the EU Water Framework Directive). This is one of the uncertainties which was been examined within our Final Water Resources Management Plan sensitivity analysis.

## **Strategic Environmental Assessment**

During the preparation of the Draft Water Resources Management Plan the Company took a precautionary approach and undertook a Strategic Environmental Assessment (SEA). This process considered the potential effects of the plan on the environment, and in particular the options that might have been required under certain sensitivity scenarios.

The DWRMP and the FWRMP have confirmed that the Company has sufficient resources to meet forecast demand for annual average and peak week conditions throughout the plan period and that there is no requirement for either supply-side or demand-side interventions. As a result there will be no significant environmental effects arising from the implementation of the FWRMP.

## **The Balance Between Supply and Demand (Final)**

Given that there is no requirement for either supply-side or demand-side interventions the baseline and final supply demand planning scenarios are very similar. However there are two important differences between the baseline and the final planning scenarios. These are:-

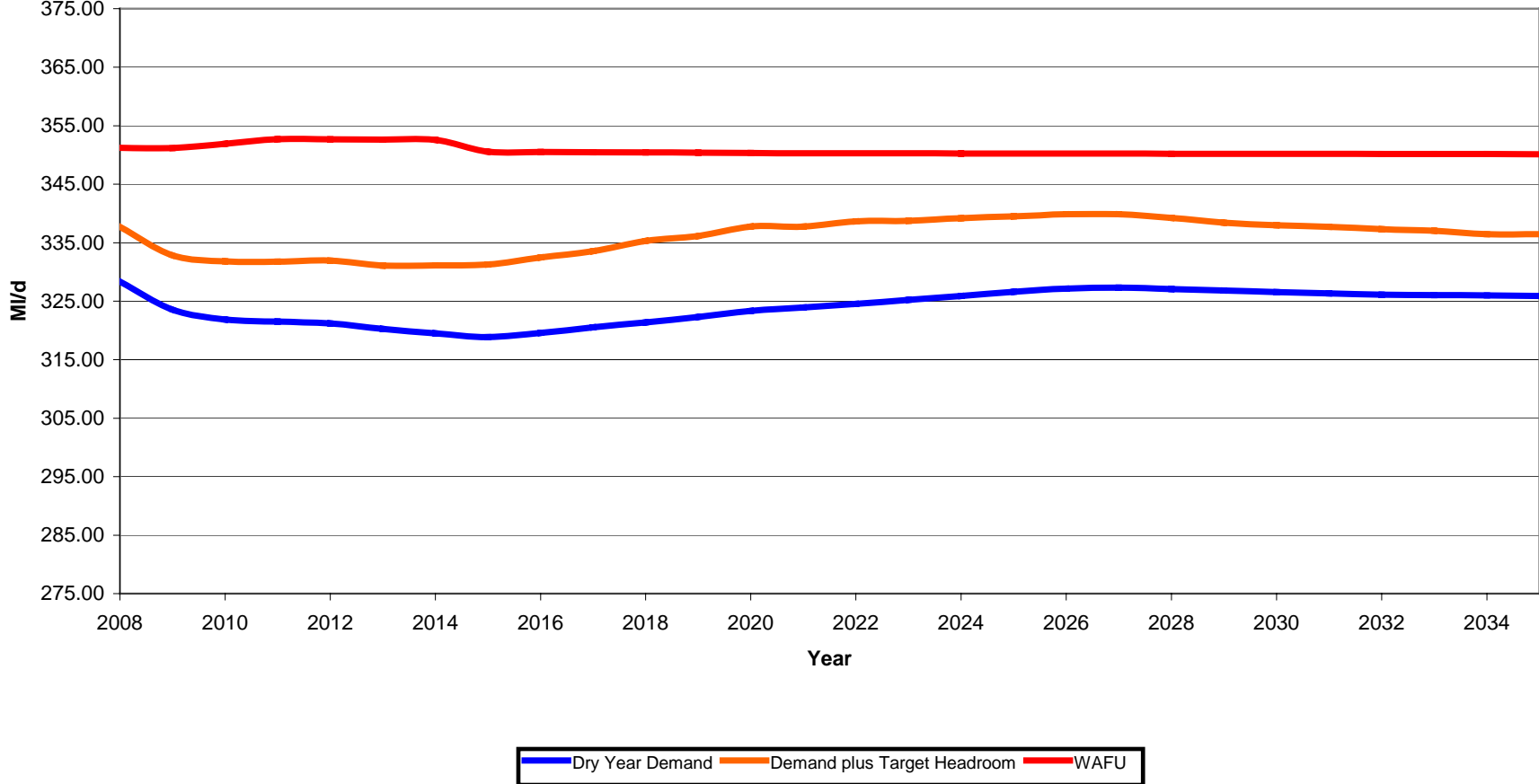
- Change of occupier metering is not included in the baseline forecast, in line with Environment Agency planning guidelines. The impact of introducing change of occupier metering is to increase meter penetration at the end of the planning period from 60% in the baseline forecasts to 77% in the final scenario.
- The OFWAT leakage target for 2009/10 of 75.0MI/d has been included in the baseline forecasts, in line with Environment Agency planning guidelines. The SELL of 74.4MI/d has been used in the final demand forecast.

The final supply demand balance reflects this reduction in demand and continues to demonstrate that the Company has sufficient resources to meet dry year annual average demand and critical period peak week demand throughout the plan period as illustrated in the following graphs.

### **Future Updates**

We will be reviewing our water resources management plan every year, and we will publish a revised plan if there has been a material change. A new plan will be prepared within 5 years.

Dry Year Annual Average Supply Demand Balance (Final)



### Peak Week Critical Period Supply Demand Balance (Final)

