

14 Our Plan - An Overview

Future Growth

Increasing demand from a growing population requires, the lowest cost, the development of new sources, leakage reductions and additional storage and network capacity improvements.

Additional supplies for customers will be delivered by renovating existing licensed sources with enhanced water quality treatment and through a significant reduction in leakage levels. We will also start preparatory work for a new reservoir to meet longer-term demand growth. Continuing population growth is straining the capacity of our trunk mains and leading to inadequate storage in some areas.

Our plan is integrated to achieve the lowest impact on prices. The contributions for example from doing work in the water quality or maintenance areas are vital to the outputs required in this area. Scheme costs have been allocated across more than one heading where relevant.

This table shows the planned capital expenditure by area. It clearly demonstrates the recent absence of investment in these areas. This was due to planned deferment based on risk assessments and being able to utilise the reducing commercial demand to maintain headroom. Our work on the Water Resource Plan demonstrates the need for substantial investment in the coming years. Much of the expenditure is for increasing capacity in existing mains and service reservoirs with new development being largely self-financing.

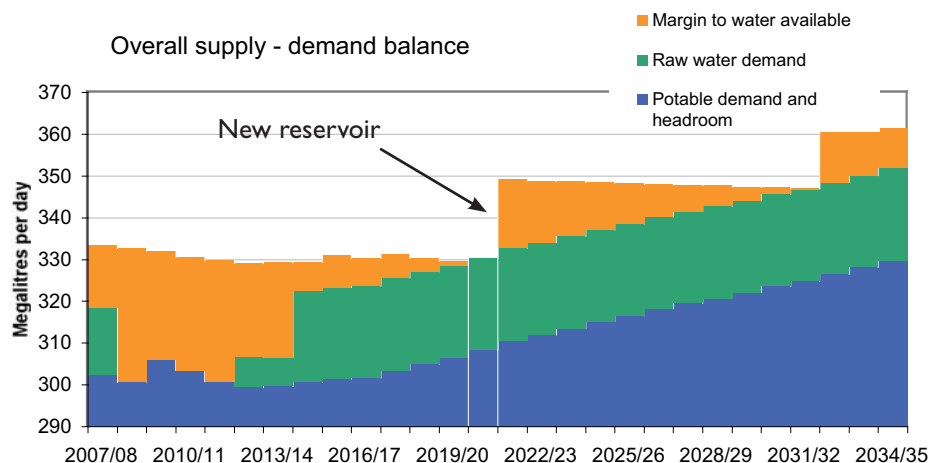
Investment needs	2005 - 2010	2010 - 2015
“New water”		
Source renovation	-	£8m
New raw water reservoir preparations	-	£10m
Reducing leakage through mains and communication pipe replacement	-	£29m
Increased Active Leakage Control	-	£2m
Smart metering trial	-	£2m
Increased capacity		
Increased treated water storage	-	£8m
Increased trunk main capacity	-	£15m
Localised growth		
New mains (less developer contributions)	-	£2m
Total (in 2007/8 values)	-	£75m

To meet our supply/demand balance needs at the lowest possible cost by allowing deferment of other investment, we have set an ambitious target to reduce leakage by 10% (equivalent to the needs of 33,000 people) by 2015, an aspect of our plan strongly supported by customers. This will be delivered by:

- Increased Active Leakage Control
- Our plans to replace mains and communication pipes

The proposed reduction in leakage will not be possible without the proposed programme of replacement of mains and communication pipes. £29m of this project cost has been allocated to Supply/Demand in this plan as this is the optimum option for meeting our planned short and medium term needs in this area.

Additionally we must plan for the projected longer-term demand growth. Of a large number of potential scenarios, the one with the optimal net present value is to build an additional reservoir at Cheddar to store winter run-off. This would complete the original plan envisaged when it was first built in the 1930's. Given the long lead time for building a reservoir we plan to initiate all necessary preliminary work such as ground surveys, environmental studies, obtaining planning permission and purchase of land in the coming period at an estimated cost of £10 million. Physical reservoir construction would not be carried out before 2015 but potentially will need to start in the next period so it is ready for use in 2022.



Scheme details

The key elements of our plan for the period between 2010 and 2015 are:

- Increase the yield from two Mendip sources, by expanding water quality schemes to provide 1.3 MI/d of extra water by 2015 at a cost of £5m
- Return our Honeyhurst source to use to provide 2.4 MI/d by 2016 at a cost of £3m
- Cut leakage from 54 MI/d to 49MI/d in 2015 at a total cost of £31m by:
 - Increasing Active Leakage Control
 - Replacing lead communication pipes alongside mains replacement
 - Targeted replacement of mains and communication pipes in zones with high leakage in combination as an element of the total replacement programme linked with improved maintenance and water quality outputs
 - Implementing pressure reduction schemes
 - Improving surveillance of district monitoring areas
- Prepare for a new reservoir at Cheddar that will provide a yield of 20 MI/d when complete - £10m expenditure in the period
- Provide new or enlarged service reservoirs at Worthywood, Frome and Brent Knoll – providing 10.3 MI/d of extra storage at a cost of £8m
- Make significant network improvement in some areas to maintain the capacity to meet demand caused by rapid development. Key requirements include new trunk mains in the north of Bristol, Wells and Weston-super-Mare at a total cost of £15m
- Increase activity on water efficiency promotion to meet the recently announced OFWAT mandatory target - £0.3m per annum.

In addition we forecast capital expenditure of £14m relating to the site specific costs of installing new mains for new developments. We anticipate receiving contributions from developers of £12m towards these costs through mains requisition fees and infrastructure charges.

Smart metering

We have started a trial of smart meter technology and wish to expand this in the coming years in a £2m programme. Our purpose is to identify (or have developed) the best technologies and test their reliability so that in due course we can, assuming it is appropriate, roll out smart meters on a wider basis. Potential benefits from “smart” metering in the longer term include:

- Lower meter reading costs
- Lower supply pipe leakage through early identification
- Potential for new tariffs to help reduce demand

Our initial analysis shows that smart metering with a fixed network allowing daily downloads of data may be cost-beneficial due to the possibility of reducing supply pipe leakage. Thus we consider the time is now right to trial the physical aspects of smart metering ie the reliability of remote reading systems and data collection. This will inform our strategy for the next price review and has only a minor impact on prices. We intend to make our research results freely available.

Except for this trial, we plan to install the much cheaper “dumb” meters during the next five years. We will monitor the data from our trial and elsewhere and periodically re-appraise this policy.

Summary

In addition to the effects of additional metering described in the previous section, schemes to ensure we maintain a modest excess of available supply over expected demand will have the following relatively modest effect of 4% on charges by 2015 given the scale of investment.

Multiple benefits of lead pipe replacement when renovating mains

Replacing lead communication pipes offers a number of benefits:

- Reduces leakage *
- Improves water quality
- Meets customer preference
- Keeps meter installation costs low by combining work*
- Reduces traffic consumption
- Reduces costs
- Reduces unplanned interruptions.

We have taken all of these benefits into account in developing our plan.

* Nearly half our leakage is from communication pipes. Without a programme of replacement this leakage would increase as pipes age. The programme of lead pipe replacement we propose will allow leakage levels to be steadily reduced during the period.

Supply Demand	2010/11	2011/12	2012/13	2013/14	2014/15	5 years
Capex	£8m	£18m	£16m	£16m	£18m	£75m
Opex less revenue change	£0.5m	£0.6m	(£0.1m)	(£0.3m)	(£1.2m)	(£0.5m)
K factor needed	1%	1%	1%	1%	-	4%
Increase in average household bill	£1	£2	£1	£1	-	£6

All figures in 2007/8 values, rounded to nearest unit