

NRA Southern 159

# SUSTAINING OUR RESOURCES THE WAY FORWARD

Summary Document  
NRA Southern Region



**NRA**

*National Rivers Authority*

Guardians of  
the Water Environment

## INTRODUCTION

The National Rivers Authority is responsible for the long term planning and conservation of water resources in England and Wales, under the Water Resources Act 1991, and has set out a 30 year strategy to meet demand while at the same time protecting the environment.

One of the NRA's key policies is to achieve sustainable development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

In order to arrive at its strategy for the Southern Region, covering the counties of Kent, Sussex, Hampshire and the Isle of Wight, the NRA has taken into consideration comments made by water companies, local authorities, environmental interest groups and individuals in response to its consultation document "Sustaining Our Resources", published in November 1992. The NRA has also produced revised forecasts of demand for water. Recent developments in the region, such as the construction of a new intake for Bewl Water on the River Medway, have been taken into account.

The strategy comprises four main elements:

- promotion of demand management
- protection of existing resources

- transfers of supplies from areas with surplus to those with deficits
- assessing the environmental impact of new resource schemes that might be needed over the next 30 years.

Taken together these will produce a sustainable water environment in which expected needs for home, industry and agriculture can be met at the least cost to the environment, without degrading rivers, springs or the countryside.

## RESOURCE AVAILABILITY

At present the resources available to the water companies in the region amount to 1470 Ml/d (megalitres per day), compared to an average demand of about 1180 Ml/d.

Although within the region as a whole there is a resource surplus of 20%, it is not evenly distributed and some areas have large surpluses while others are in deficit. This is shown in figure 1. Generally, resources are more plentiful in the west and decline towards the east.

Future demands have been forecast under a range of likely scenarios to predict the future need for resources. Scenarios for low and high demand are derived from assumptions about growth in domestic and industrial demand as well as different combinations of demand management measures such as domestic metering and leakage control

to limit demand.

Figure 2 shows how the demand forecasts compare with available resources in the region as a whole.

With low growth rates and measures to manage demand the region presently has sufficient resources to meet demand for the next 30 years. Even with higher demands, which are thought unlikely to occur, there is no need to develop major new resources until beyond 2016, provided those resources that are currently available are properly distributed around the region.

## PROTECTING OUR RESOURCES

The NRA has developed a number of key policies to protect water resources and the environment. These cover resource quantity and quality and govern water environmental management, protecting existing resources from pollution and ensuring that sufficient water is available for all uses: human, fauna and flora.

- The groundwater protection policy has been developed to protect major groundwater sources from pollution from contaminated land, waste disposal including slurries and sludges, unsuitable development and other general threats to groundwater quality.

Fig. 1 Current Resource Balance for Water Companies

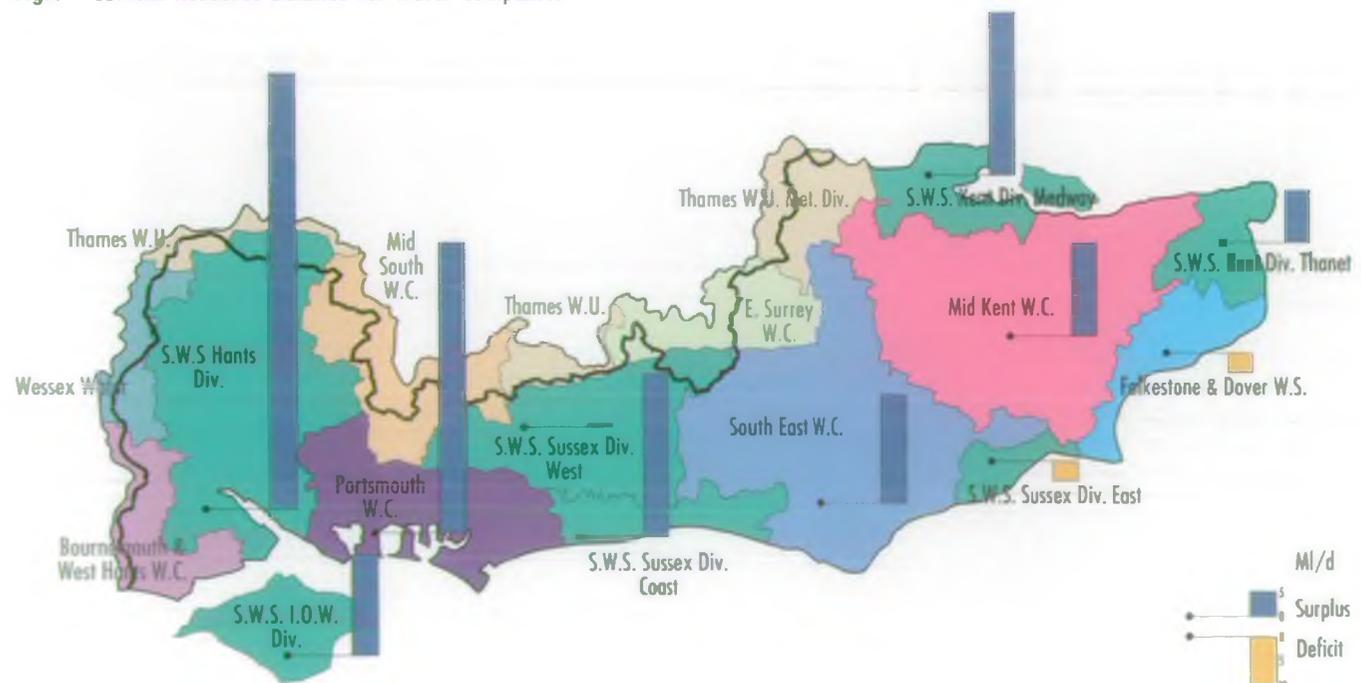
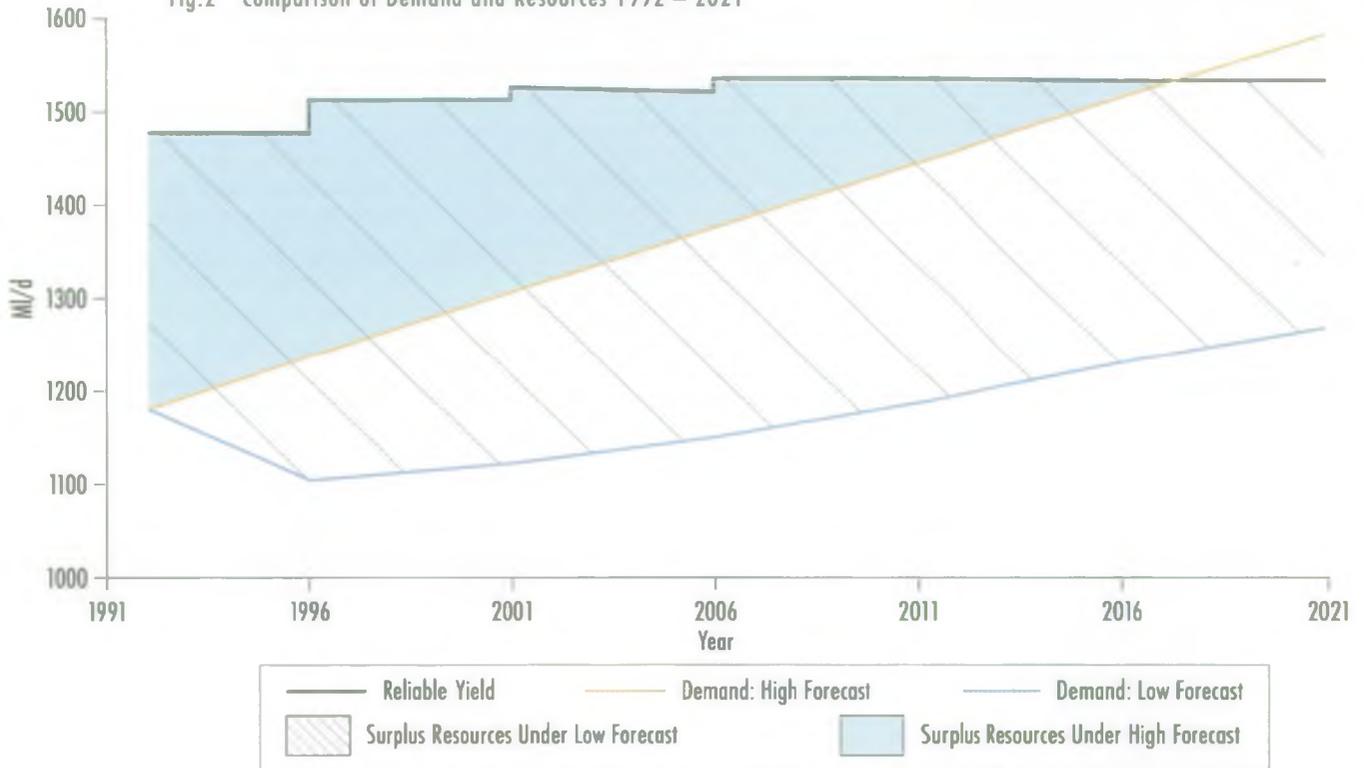
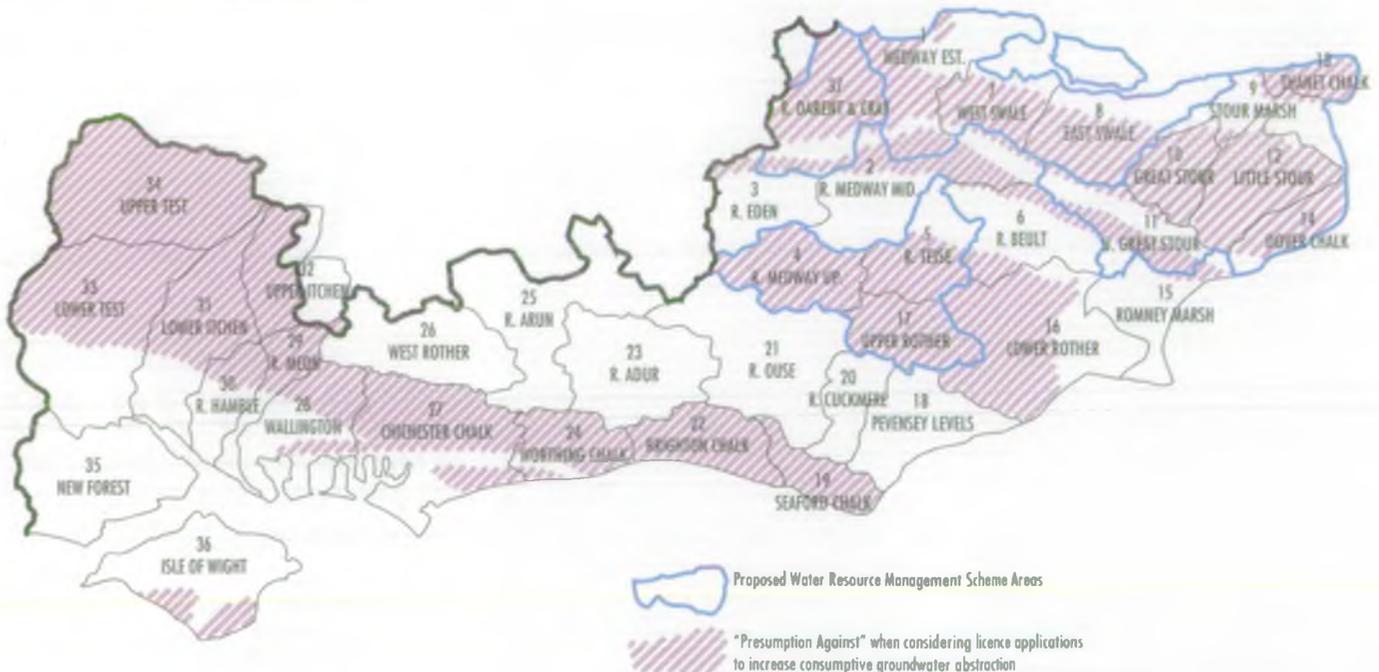


Fig.2 Comparison of Demand and Resources 1992 – 2021



- The NRA has a duty to protect river flows to safeguard existing abstractions and fisheries, land drainage, water quality and navigation. This is achieved by setting prescribed flow conditions on abstraction licences, specifying the flow at which abstractions must cease to avoid jeopardising downstream interests and the environment.
- The NRA Southern Region has established a groundwater management policy with “presumption against” further increases in consumptive abstraction from most of the chalk aquifers throughout the region. Consumptive abstraction is where water is used up and lost to the environment. In Kent other aquifers are also covered by the policy, which is illustrated in figure 3. Within the shaded areas, the NRA is very unlikely to grant licences to take more water from the aquifers.
- In order to manage groundwater more effectively, the NRA intends to develop operating agreements with water companies. These agreements, known as Water Resource Management Schemes, have statutory status under the 1991 Water Resources Act.

Fig.3 Groundwater Management by Resource Area



## ASSESSING ENVIRONMENTAL IMPACT

The NRA has a duty to have regard to the environmental impacts of water related developments. Where it can be shown that there is a need for new resources, the impact of any proposed scheme on:

- landscape/general character
- terrestrial ecology
- water quality
- agricultural land
- fisheries
- archaeology and cultural heritage
- aquatic ecology
- recreation, amenity and navigation

has to be assessed in detail to decide on its acceptability and the most appropriate option.

The studies required to make such assessments are likely to include monitoring of the environment and the predictive modelling of likely impacts. Monitoring, after the development has taken place, may also be required.

## DEMAND MANAGEMENT

The NRA regards demand management as an essential feature of any future strategy.

Demand management is the use of measures to manage consumption and minimise waste and loss of water. It

includes leakage control, domestic metering, education and water conservation.

Leakage is the loss of water through burst and corroded pipes, dripping taps and other fittings. A significant amount occurs on consumers' premises, as well as from the water company distribution systems.

Currently some 300 Ml/d are lost through leakage in the Southern Region. By reducing leakage to levels thought to be easily achievable, around 135 Ml/d could be saved by the year 2021.

The NRA expects water companies to adopt leakage targets that are economic compared to the costs of other options such as reservoir developments, with environmental costs also taken into consideration.

Education can play an important role in preventing water being wasted. By making the public aware of how to prevent wastage; for example through water efficient gardening, and reporting leaks, unnecessary consumption can be reduced. In the garden the use of sprinklers and hosepipes can consume up to 1000 litres per hour.

Conservation and recycling can be achieved by industry and agriculture as well as the public. Industry can save water by recycling and reducing waste. Agriculture can save water by such measures as irrigating crops in the evening when there is less loss through evaporation.

Domestic metering has two benefits. It reduces average consumption by as much as 10%, and peak consumption (when resources are often most stretched) by up to 30%. Metering also benefits leakage detection by making customers more aware of leaks on their property where they are notoriously difficult to detect. The actual process of installing meters also uncovers leaks in pipework leading to customers premises. The NRA supports selective metering in areas where resources are under stress particularly where there are the greatest peak demand problems.

## TRANSFERS

Transfers of water are the means of reallocating resources between areas that have a surplus and those that are in deficit. They can be made by pipelines or by using existing rivers.

The NRA is strongly in favour of transfers of water within the Southern Region to reallocate resources both within and between companies. Transfers allow the most efficient use of existing resources without the need for additional abstractions to be authorised. Full use of existing regional resources requires supplies to be shared between water companies to a greater extent than at present. The NRA believes that most alternatives are likely to be both more expensive to consumers and

Copies of the full report are available from NRA Southern Region.

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*The NRA is committed to the principles of stewardship and sustainability. In addition to pursuing its statutory responsibilities as Guardians of the Water Environment, the NRA will aim to establish and demonstrate wise environmental practice throughout all its functions.*



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