

Southern Water

## WaterWise Teaching Resource



A drip in time

Fact sheets

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## A drip in time

fact sheets

1

### Contents

The Fact Sheets give you some background information that you can use for your campaign to Save Water.

fact sheets

- Fact Sheet 1: *Background data - population and water consumption*
- Fact Sheet 2: *Water Data - Average user statistics*
- Fact Sheet 3: *Water Data - Average water use for different household activities*
- Fact Sheet 4: *Water Data - Water use in commercial production processes*
- Fact Sheet 5: *Successful ways to save water*



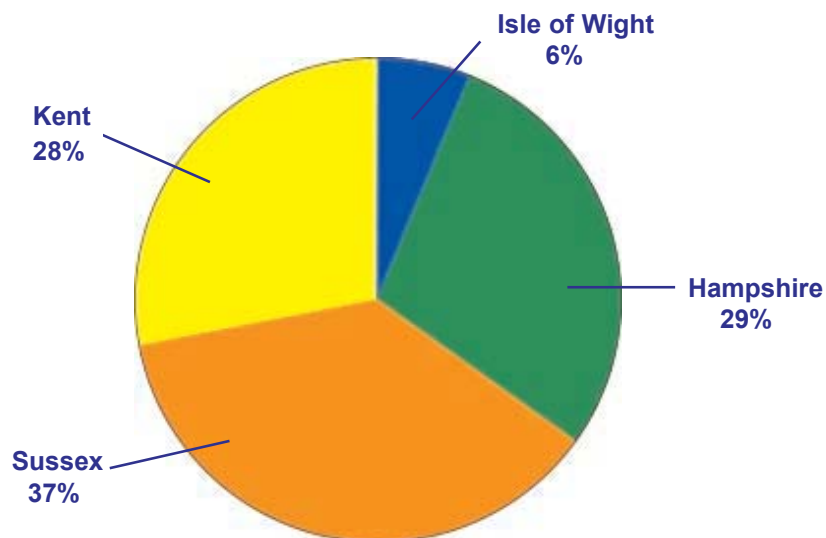
### Background data: population and water consumption

About 1 million homes receive their water from Southern Water. Other Water Companies supply the rest. Southern Water deals with the wastewater from all the homes in the area.

Population and Properties connected to Southern Water's Water Supply 2000/01					
	Isle of Wight	Hampshire	Sussex	Kent	Total
<b>Resident population</b>	125,354	648,822	835,118	613,989	2,223,283
<b>Average number of properties connected</b>	62,717	275,111	386,503	270,761	995, 092

### Water supplied to connected properties, including businesses, per day

Area	Amount in litres
Isle of Wight	32,722,600
Hampshire	169,106,600
Sussex	216,248,000
Kent	159,835,300
<b>TOTAL</b>	<b>577,912,500</b>





### Predictions for daily consumption excluding businesses

The table compares the average water consumption used per household per day with the predicted consumption in 5 and 10 years time.

(Note: the figures do not include supply to businesses).

The figures\* are based on:

Population growth	0.4% per year
Consumption in 2001 in the South East	160 litres per person per day
Estimated consumption in 2006	165 litres per person per day
Estimated consumption in 2011	175 litres per person per day

\*Taken from local census predictions (District Council) and Water Industry Report (Government) 2001

#### Amount needed in litres for household use

Local area	Isle of Wight	Hampshire	Sussex	Kent	Total
2001	16,285,100	111,604,800	145,268,500	105,260,500	378,418,900
2006	16,597,300	116,258,600	150,325,800	108,469,000	391,650,700
2011	17,020,400	120,224,600	155,593,800	112,489,000	405,327,800

### Did you know?

**Every day in the UK, 58 million people use 19,067 million litres of water.**

At the current rate of use, Hampshire, the Isle of Wight, Kent and Sussex will need at least 33,461,960 more litres of water per day by 2011. During holiday periods that amount will go up to 44,170,580 litres per day.

#### Where will they get all that extra water?

Only 3% of our drinking water is used for drinking and cooking. Washing and toilet flushing use large amounts.



### Water data: average user statistics

There are about 58 million people in the UK (England, Scotland, Wales and Northern Ireland). Between us we use 19,067 million litres of water every day, including industrial use.

Today, in the South East, people use an average of 160 litres per day. The UK average is 149 litres per day.

### Domestic demand per person per day in the UK

1961	85 litres
1994	128 litres
1998	146 litres
2001	149 litres
2021	170 - 200 litres (may be more!)

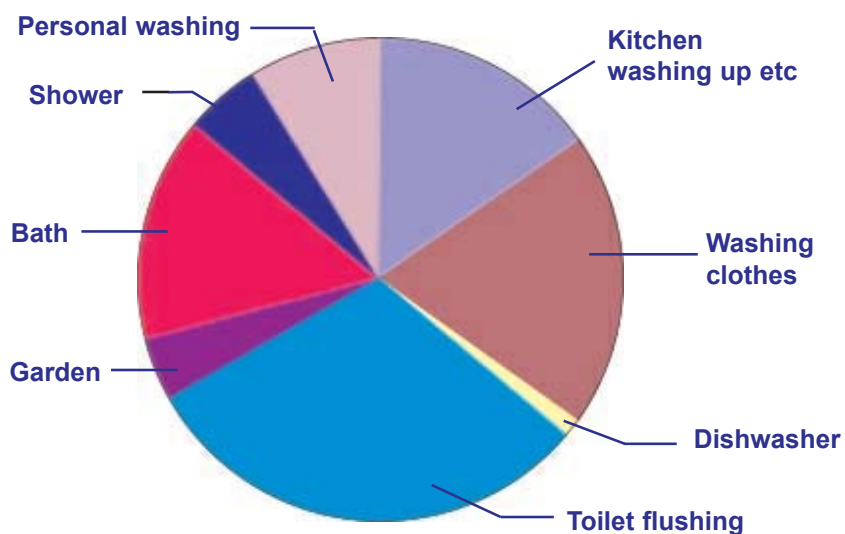
This increase is mainly due to the increasing number of domestic appliances in the home, such as dishwashers and washing machines. In recent years gardening as a hobby or leisure activity has increased and this has led to a seasonal increase in demand for water.

### Average use per person per day

Figures\* used are based on water use of 160 litres per person per day.

Water use	% of daily	Daily amount used in litres	Weekly amount used in litres	Annual amount used in litres
Kitchen	15	24	168	8,760
Washing Clothes	20	32	224	11,680
Dishwasher	1	1.6	11.2	584
Toilet Flushing	31	49.6	347.2	18,104
Garden	4	6.4	44.8	2,336
Bath	15	24	168	8,760
Shower	5	8	56	2,920
Personal washing	9	14.4	100.8	4,256
<b>Total</b>	<b>100</b>	<b>160</b>	<b>1120</b>	<b>58,400</b>

\* Government figures: estimate of water use





**Fast facts**

- There is an area of Canada where the average daily use of water is between 300 and 400 litres per day!
- About two-thirds of our body (45 litres in the average adult) is made up of water. The brain is 85% water, the muscles 77% and the bones 33%.
- We can survive for several weeks without food but only a few days without water.
- We need to drink about two litres of water a day to stay healthy.



### Water data: average water use for different household activities

Changes in lifestyle mean we use 55% more water now than 25 years ago. Today most people in the South East use, on average, 160 litres of water per day.

This increase is mainly due to the increasing number of domestic appliances, such as dishwashers and washing machines, in our homes. How much water do our kitchen appliances use? How much water do we use for our gardens or to wash our car? You may be surprised to find out.

#### Average water use around the home

Household Activities	Water use in litres
<b>In the kitchen</b>	
Washing machine	80 litres per wash
Dishwasher	35 litres per wash
Drinking	1.5 litres per day
Cooking	8 litres per day
Washing clothes hand	25 litres per wash
Washing up	6 litres per wash
New dishwashers and washing machines have been designed to use less water	
<b>In the bathroom</b>	
Taking a bath	80 litres per bath
Taking a shower	30 litres per 5 minutes
Flushing the toilet	8 litres per flush
Personal washing	10 litres per day
Cleaning teeth (tap off)	1 litre per brush
Cleaning teeth (tap on)	10 litres per brush
Modern toilets have smaller cisterns so they use less water. Baths vary in size so some can use up to 130 litres. New low-flow, water-saving showerheads use 9.5 litres per minute or less. Older showerheads use 19 - 26.5 litres per minute. Power showers use a lot more water than ordinary showers.	
<b>Outside</b>	
Watering the garden (sprinkler/hosepipe)	650 litres per hour
Washing the car (hosepipe without nozzle)	650 litres per hour
Washing the car (hosepipe with nozzle)	275 litres per hour
Washing the car (bucket)	10 litres per bucket
If you use a sprinkler, or any other unattended watering device, you have to register with the Water Company and have a water meter fitted.	
<b>General</b>	
Running water from a tap	10 litres per minute
Faulty ball valve in water tank	6.5 litres a day
Dripping tap	10 litres per day per tap



## Water data: water use in commercial processes

### Water use in commercial processes

Product	Amount of water needed (litres)
1 tonne of ready mixed concrete	3,800
1 tonne of steel	2,800 - 62,000
1 tonne of paper	54,000
To brew a pint of beer	4
A daily newspaper	9
1 kg of powdered coffee	55
A small bar of chocolate	1
A bicycle	130
A woollen jumper	100
1 litre of petrol	70
A pair of leather shoes	50

### What is water used for in industry?

- Cooling
- Washing
- In solutions
- As a component or ingredient (e.g. in soft drinks, sauces, etc.)

### Major industrial users

- Thermal and atomic power stations
- Chemical and petroleum plants
- Metal industries
- Wood pulp and paper industries
- Machinery manufacture

Since the 1970-80s, industries have looked at ways to reduce water use. Companies are starting to make more use of circulating water supply systems and water-free or dry technologies.

### What is water used for in agriculture?

- Land Irrigation
- Animals

An enormous amount of water is used to produce the food we eat. Farm animals need water to drink, and crops need water to grow. The agricultural industry is one of the largest consumers of water but it is looking at ways to reduce its water use.



## A drip in time

## Fact sheet 4

fact sheets

8

In this country because of our climate, farmers don't need to water our crops a great deal. In other countries of the world, farmers are starting to make more use of the best and up-to-date engineering methods and watering techniques such as sprinklers, drip irrigation, etc. This will help to increase the amount of crops they grow but decrease the amount of irrigation water they need.

### Something to think about!

**Farmers and businesses know how important it is to save water. They are looking at new ways to save water all the time. What are we doing in our homes to save water?**

fact sheets



## Ways to save water

Water is valuable. It shouldn't be wasted. Just 1% of all water in the world is available for us to use. We need that 1% for our farms, our factories, our offices, our shops, cinemas and eating places - and our homes. We need to use it wisely.

### What can you do?

There are lots of simple ways to save water without really altering your lifestyle. Mostly it's a matter of using common sense.

### Around the home

#### Kitchen

##### Washing machines

- Only use washing machines when fully loaded.
- New models are better as they use as little as 45 litres per wash cycle.

##### Dishwashers

- Only use dishwashing machines when fully loaded.
- New models are better as they use as little as 12 litres per wash cycle.

##### Hand Washing

- Use a bowl of water to wash vegetables, to wash and rinse dishes or to hand wash clothes.

##### Leaky taps

- Replace worn washers on leaky taps straight away.

##### Drinks

- Fill the kettle with only as much water as you need.
- Don't let the tap run until the water is cold.

#### Rules of the kitchen

- Never leave taps running.
- Only use as much water as you need.
- Cut out 1 family clothes wash per week to save 5,000 litres a year.
- Always have full loads in the washing machine or dishwasher.

#### Fast fact

For cold drinks keep a container of drinking water in the fridge instead of letting the tap run until the water is cold.



**Bathroom**

**Cleaning teeth**

- Turn off the taps when cleaning your teeth. Fill a mug with water to rinse your mouth.

**Washing**

- Put a plug in the basin when washing.

**Showers**

- Take shorter showers instead of a bath to save water. But, remember that a power shower can use more water than a shallow bath. New low-flow, water-saving showerheads use 9.5 litres per minute or less. Older showerheads use 19 - 26.5 litres per minute.

**Baths**

- When having a bath, only partially fill the bath to use less water.

**Leaky taps**

- Replace worn washers on leaky taps straight away.

**Flushing the toilet**

- Put a 'Save-a-flush bag' in your toilet cistern (usually free from water companies) to save 1 litre every flush. Older toilets use at least nine litres a flush - new toilets use just six litres.

**Overflow pipes**

- Check that there are no drips from toilet overflow pipes.

**Rules of the bathroom**

- Never leave taps running.
- Use only as much water as you need.
- Have a short shower rather than a bath.
- Use a 'Save-a-flush bag' in your toilet cistern.
- Don't use the toilet as a wastebasket for tissues.

**Fast fact**

Try a navy shower: Due to a lack of fresh water aboard ship, sailors in the past were taught to get wet, turn off the water, soap and scrub, then briefly turn the water on to rinse.

**Outside your home**

**Garden**

- Collect rainwater in a water butt and use for plants or washing the car. Many plants prefer rainwater to tap water so they'll thank you for it. Use a watering can rather than a garden sprinkler. Sprinklers use as much water in 1 hour as a family of four does in one day. If you do use a sprinkler, always time how long you use them for or use an automatic sprinkler or 'drip' system to do it for you. Drip systems use much less water. But, remember, if you use a sprinkler or any unattended watering device you must be metered.

**Plants**

- Use compost or mulch around plants so they don't need as much water. This also keeps weeds at bay.



**Car Washing**

- Use a bucket for washing the car. To stop the water running from a hose-pipe, fit a trigger nozzle on the end.

**Check for leaks**

- Check for leaks in pipes, hoses, and taps and have them repaired quickly.

**Rules for outside**

- Use a water butt and a watering can.
- Avoid using a sprinkler.
- Never leave hose-pipes running.
- Check for leaky pipes, hoses and taps.

**Fast facts**

- Reuse your fish tank water on your garden and house plants. Besides saving water, it's a good fertiliser as well.
- Less water in the kettle means - less water to boil and that means - lower fuel bills!
- Less time in the shower means - less hot water needed and that means - lower fuel bills!
- Fewer baths means - less hot water needed and that means - lower fuel bills!
- Energy saving programmes on new dishwashers and washing machines means - less hot water used and that means - lower fuel bills!
- By saving water, you can save energy and that means - saving money with lower fuel bills!