

National Tap Water
Consumption Study
DWI 70/2/217
Phase Two
Final Report

Prepared by:

Accent
Chiswick Gate
598-608 Chiswick High Road
London
W4 5RT

Prepared for:

Drinking Water Inspectorate
G03 55 Whitehall
London
SW1A 2EY

Contact: Jo East
E-mail: jo.east@accent-mr.com
Tel: 020 8742 2211
Fax: 020 8742 1991

Contact: Peter Marsden/Judith Bibaud

File name: 1763phase2rep

CONTENTS

Executive Summary	i
1. INTRODUCTION	1
1.1 Background.....	1
1.2 Objectives	1
1.3 Report Structure.....	2
2. METHODOLOGY	3
2.1 Introduction	3
2.2 Survey Instruments	3
2.3 Sample Strategy.....	4
3. TOTAL LIQUID CONSUMPTION	8
3.1 Introduction	8
3.2 Social Profile of Drinks Consumption	10
3.3 Liquid Measure Consumption	11
3.4 Where Drinks Were Consumed.....	13
3.5 When Drinks Were Consumed.....	14
3.6 Other Tap Water Exposure	15
4. BEHAVIOURAL ANALYSIS OF TAP WATER DRINKERS.....	16
4.1 Introduction	16
4.2 Quality of Tap Water.....	16
4.3 Tap Water Usage	20
4.4 Use of Sports Bottles	20
4.5 Ownership and Use of Appliances	21
4.6 Treating Tap Water.....	22
4.7 First Use of Water in the Day.....	22
4.8 Temperature.....	22
5. BOTTLED WATER CONSUMPTION	24
5.1 Introduction	24
5.2 Brands of Bottled Water Consumed.....	24
5.3 Social Profile of Bottled Water Drinkers	26
6. SEASONAL AND TEMPORAL CHANGES IN WATER CONSUMPTION.....	27
6.1 Introduction	27
6.2 Seasonal Changes	27
6.3 Temporal Variations	30
7. CONCLUSIONS	31
Appendix A: Face to face questionnaire	
Appendix B: Self completion individual questionnaire	
Appendix C: Self completion diary	

Executive Summary

- Accent was commissioned by Defra to undertake the National Tap Water Consumption Survey in order to update the 1995 survey. The overarching objective of the survey was to provide a robust estimate of the average total daily tap water consumption in England and Wales and the proportion of total daily liquid consumption that this represents, and to detect whether there had been a change in average consumption of tap-water based drinks since the previous survey in 1995.
- As well as providing the latest picture on drinking water habits, the survey asked other exposure related questions at the same time, including questions about showering and bathing, whether consumers would reject water based on aesthetic considerations and whether they would follow “do not drink” or “boil” advice.
- The whole study took place over two phases: the first was undertaken in Spring 2008 and the second phase in summer 2008. The purpose of the second phase was to determine whether consumption of tap water was greater during the summer than the spring. This report details the findings of the second wave and compares the results with the first wave and with earlier surveys. Each wave comprises interviews with a target of 1000 households, where possible, the same households were used in both waves. The surveys used three different survey instruments as follows:
 - initial Head of Household/Chief Organiser interview
 - individual competent Household members’ interviews
 - all competent Household members to complete seven-day diary.
- In order to maintain consistency with the previous survey, a two-stage sampling strategy was adopted to select and recruit households. The first involved selecting the same ten planning regions as those used in the 1995 survey, across England and Wales. The second element was to identify, as near as possible, the same local authority districts used previously.
- When assessing the comparative **consumption** data (in terms of drinks’ consumption and water used for baths and showers) the following differences between the survey profiles should be noted:
 - 1978 survey: the consumption of children was included in the overall sample, with children being classified as aged 0-17 and adults as aged 18+
 - 1995 survey: the consumption of children was included in the overall sample, with children being classified as aged 0-15 and adults as aged 16+
 - 2008 survey: the consumption of children was not included in the overall sample, with adults being classified as aged 16+.

Direct comparisons are possible, therefore, in the **consumption** data between the adult data for the 1995 and 2008 surveys. Other **consumption** comparisons between phases have been presented, but the different profiles of the sample need to be borne in mind.

Valid comparisons can be made between the two phases of the 2008 study and on the majority of the other data presented within the report however, ie for all general

household behaviour and trends, as the targets for this element of the study were consistent across all phases (ie the Head of Household).

Key Intake and Exposure Findings

- Across the whole sample there was a total of 79,117 drinks consumed in the summer months compared to 76,621 in phase one, an increase of 3.3%. The 1995 report did not report the total number of drinks consumed across the adult population, so it is not possible to make any comparisons between the two surveys.
- The arithmetic mean of the total daily liquid consumption, using weighted data from phase two, is 2.003 litres per day (lpd) compared to 1.931 lpd in phase one. This represents a marginal and insignificant increase 0.072 lpd (3.7%) from phase one and compares to the 1995 and 1978 estimates of 1.713 lpd and 2.042 lpd respectively¹. As the 1995 survey was only carried out in late winter/early spring it is only possible to make valid comparisons with phase one of the 2008 survey, which was carried out at a similar time of year. There is an observed difference of 0.218 (11.29%) between phase one of the 2008 study and the 1995 survey which, when subjected to statistical analysis, is a significant difference.
- The arithmetic mean of tap water consumption in phase two was 1.314 lpd compared to 1.275 lpd in phase one. This represents a small and insignificant increase of 0.039 lpd (3.5%). The adult consumption of tap water in 1995 was 1.275 lpd and 1.113 lpd in 1978². As stated above, valid comparisons are not possible between the second phase of the 2008 survey, carried out in the summer, and the 1995 survey. However, there is no observed difference between phase one of the 2008 survey and the 1995 survey.
- The proportion of tap water in drinks increases with age, such that those 40 or over consume the most tap water, while the youngest age group consumes the least. As with both the previous studies of 1978 and 1995, the survey has shown that men drink more liquid overall, but women drink more tap water.
- Analysing water consumption by people's weight is a new feature in this study and is the first time such data has been collected. The data is taken from the consumer diaries and the results show that in terms of overall liquid consumption, the results are consistent with phase one in that those who weigh less consume less.
- The mean tap water consumption of boiled water drinks eg tea, coffee and HMD, was 0.827 lpd in the spring survey and 0.552 lpd on the summer survey. This represents a significant reduction of 33% in the mean tap water consumption of boiled water drinks and reflects the fact that considerably less hot drinks were consumed in the summer.
- For the first time, this study has captured the liquid intake from sports bottles. While still a small proportion compared to some of the other containers used for consuming drinks, respondents consumed 0.025 lpd from sports bottles.

¹ The latter does not include data for 16-17 year olds who were considered children in the 1978 survey

² As above.

- Across the sample the number of baths taken by respondents in phase two (summer) showed a marginal decrease (1%) compared to phase one (3181 cf 3221). Whereas the number of showers recorded showed a 6% increase in phase two compared to phase one (7576 cf 7143). These are the first data gathered in this respect.

Key Conclusions on Consumer Behaviour, Perceptions and Observations

- In terms of the quality of tap water, the vast majority of households in phase two have not had any problems with the quality or appearance of tap water in the last 12 to 18 months. In fact, there were even fewer people in phase two, compared to phase one, who had had water quality problems. Both phases showed a smaller percentage of households who had had water quality problems than in 1995.
- Where there were water quality issues, people were more cautious in phase two about using tap water for making drinks and brushing teeth. The increased caution in peoples' behaviour is thought to be mainly driven by an incident involving the issue of advice to boil water in Northampton. The vast majority in phase two, as with phase one, (89% cf 93%) said they would follow the advice completely when they received 'boil advice' or 'do not drink' notices.
- Exactly the same proportion (97%) in phase two reported using tap water for making drinks as in phase one; this compares to 99% in the 1995 survey. The same is true of those households that use the kitchen cold tap for making drinks or drinking water, where 97% in both phases reported doing this, whilst 11% in phase two (cf 12% in phase one), said they used the kitchen hot tap to make drinks. This compares with 95% and 3% respectively in the 1995 study, and 95% and 8% in the 1978 study who used the cold and hot water taps to make drinks.
- There has been a reduction in the number of households, 49% in phase one to 41% in phase two, reporting that someone within their household filled sports bottles with tap water to drink when they were not at home. As with phase one, the vast majority reported that it was one or two people who consumed tap water in this way, 88% in phase two compared to 85% in phase one.
- There was a slight reduction from phase one to phase two in the number of people who reported owning various appliances like water filtering jugs and cold water dispensers in fridges. This is possibly due to the 'top up' sample added to phase 2 owning fewer of the listed appliances. Notwithstanding this, phase two shows a consistent pattern to phase one compared to 1995, where there has been a significant increase since 1995 in the proportion of people who own water filtering jugs, as well as a significant decrease in those who own soda stream type appliances and teas made machines.
- There was little difference between the two phases in terms of those who used any extra form of water treatment. Around three quarters, (76% in phase two cf 74% cf in phase one), did not use any extra water treatment process. The proportions of people who used different water treatment processes were virtually the same between the two phases where nearly one fifth (18% in both phases) filtered the water and one eighth (13% phase 1 and 12% phase 2) boiled the tap water (allowing

it to cool before using it). In 1995 only 9% filtered their tap water, so the 2008 proportion represents a significant increase from the last survey.

- Again, there is little difference between the two phases in the first use of tap water in the day, where around three quarters (73% in phase one and 74% in phase two) washed and/or used the toilet before using tap water to prepare a drink.
- The face to face surveys showed that, in phase two, a total of 46% of households used bottled water for drinking; this compares with 44% in phase one and 30% in 1995. There is therefore no real difference between the two 2008 phases, but they do represent a big increase since 1995. The second phase is also consistent with the first phase in that many more households drink still bottled water than its sparkling counterpart. Around a third of households (33% in phase one and 35% in phase two), a significant increase from a quarter of households in 1995, consumed still bottled water and fewer than one in ten (8% in phase one and 7% in phase two) consumed sparkling water, which is half the number of households than in 1995.
- Although the number of households drinking bottled water has increased, the actual number of people drinking bottled water, as indicated by the self completion surveys, has remained fairly static between the two phases. If anything, there are slightly fewer consumers of bottled water in 2008 compared to 1995. However, the 2008 study does show that more people say they drink more bottled water in the summer now than said they did in 1995.
- There were a variety of different bottled water brands mentioned, with two imported brands being reported as being most frequently consumed. Supermarkets' own brands were also reported as being quite frequently consumed, particularly where sparkling water is concerned. It is unclear to what extent bottled water acts as a substitute for drinking tap water.
- Although the number of cups of tea and also coffee has dropped between the Spring and Summer waves of research, the proportions stating that they consume tea and coffee has largely remained the same between the two phases, which means between two thirds and three quarters say they drink about the same as they did five years ago. These proportions are not dissimilar to the 1995 study.
- Again, although the diary data showed that there were changes in the actual number of showers and baths taken between the Spring and Summer waves of research (with the number of baths down and the number of showers up), the actual proportions of people taking showers and baths remain similar, with the majority of respondents reporting using both. In both phases, over four fifths (82%) said they used showers and just under three quarters said they used baths (74% and 72%).

1. INTRODUCTION

1.1 Background

The setting of standards and guideline values for drinking water rests on knowledge of the quantities of tap-water that people actually drink. A survey was last conducted in 1995 (“Tap Water Consumption in England and Wales: Findings from the 1995 National Survey” by MEL Research) which provided up to date estimates on the consumption of drinking water and the form in which it is consumed. Before that, the principal source of information about the consumption of tap-water-based drinks in Great Britain was WRc Report TR 137 (Hopkin and Ellis, 1980) which describes a survey carried out in 1978. The report covered quantities of different types of drinks (eg tea, coffee, water, squash) and quantified the variations in consumption between individuals, age-bands, socio-economic groups and regions. Habits of water usage were also studied.

Since then, habits have probably changed, which is evident from the amount of bottled water being purchased and the apparent trend to drink tap water from “sports” bottles. The purpose of this research project, that Defra has commissioned Accent to undertake, is to update the 1995 survey, and to ask a number of other exposure related questions at the same time, including questions about showering and bathing, whether consumers would reject water based on aesthetic considerations and whether they would follow “do not drink” or “boil” advice.

This report presents and compares the findings of two waves of research, one undertaken between March and April 2008 and the other from June to July 2008.

1.2 Objectives

The objectives of this study were as follows:

- To provide a robust estimate of the average total daily tap water consumption in England and Wales and the proportion of total daily liquid consumption that this represents, and to detect whether there has been a change in average consumption of tap-water based drinks since the previous survey in 1995
- To provide robust estimates of intake for each different form of tap water eg boiled drinks vs unboiled, squash vs neat, direct from the tap vs filled bottles, consumption use of flushed water vs first draw
- To provide reliable information on differences in consumption patterns across age, gender, region and socio economic groups
- To estimate the relative significance of tap water substitutes consumed, with particular attention to bottled water
- To report on consumers’ reactions to taste and odour and discolouration problems of drinking water, and whether they are influenced by the advice received such as to “boil” and “do not drink” notices

- To assess current water usage habits regarding showering and bathing to start to gain an understanding of route of exposures other than drinking
- To summarise the changes in consumption that have happened since the first survey in 1978 and advise on the frequency and design of any future possible surveys.

1.3 Report Structure

Following this section the report is split into the following sections:

- Section 2: details the methodology utilised, an explanation of the survey instruments and the sampling strategy
- Section 3: reports on the total liquid consumption for the adult population of England and Wales, that is 16 years old or over, and analyses this by various social profiling. It also details where people consume their drinks, the time of day they drink and the size of containers drunk from
- Section 4: provides an analysis of individuals' and households' behaviour in relation to tap water consumption
- Section 5: examines the brands of bottled water consumed, whether still or sparkling, together with the social profile of these consumers
- Section 6: analyses the seasonal and temporal trends in water consumption over the past five years
- Section 7: reports on the conclusions of the survey.

Accent wishes to acknowledge the funding of the study (DWI project reference DWI 70/2/217) by Defra, and to point out that any views expressed are not necessarily those of Defra.

2. METHODOLOGY

2.1 Introduction

Defra's specification required that two core requirements should be achieved from this research: (a) to provide robust answers for the objectives outlined in Section 1.2 and (b) to ensure consistency with the previous study/studies in order to minimise methodology-related effects on the findings. In turn this maximises the confidence with which apparent changes in the data can be explained by 'real' changes in respondent behaviour and attitudes.

Accent originally considered two alternatives for meeting the objectives: an extremely cost effective sample, achieved using the same method of household interviews and 7-day diaries, but using online research; and an offline methodology which matches the previously used methodology.

After considering both approaches it became evident that, whilst an online methodology would have dramatically reduced the project costs, it would not be possible to ensure that all members of the household completed the diaries, which would result in incomplete data. We therefore decided upon the same methodology to that previously used, as described below.

The whole study took place over two waves, the first wave having been conducted in March to April 2008 and the second wave from June to July 2008.

2.2 Survey Instruments

Each wave comprises interviews with 1000 households using three different survey instruments as follows:

- initial Head of Household/ Chief Organiser interview
- individual competent Household members' interviews
- all competent Household members to complete seven-day diary.

Initial Household Organiser interview – this was a face to face questionnaire conducted with the "household organiser". As with the 1995 study and the first phase of the 2008 study, eligibility was defined according to the criteria needed to ensure that the sample was representative of households across England and Wales. The questionnaire contained various questions about the water supply, the quality of tap water and any associated problems, various drinks making appliances, tap water versus bottled water drinking habits as well as the first use of water in any given day. A series of socio-demographic questions including social group, age and weight (new for this study) were also asked for analysis purposes.

Individual competent Household members' interviews – this was a self completion questionnaire designed to understand individuals' drinking water behaviour, including what types of drinks and water-based foods are consumed, and if there were any seasonal trends and trends over the past five years.

Individual competent Household members' seven day diary – again, this was a self completion instrument where each day allowed for up to 20 drinks to be consumed. For each drink consumed, respondents were asked to record what the drink was, the type of container, how full the container was and how much of the drink comprised tap water. The diary also elicited information as to the time of day the drink was taken and where it was taken.

In addition, respondents were also required to say how many baths and/or showers they had on a daily basis, how long each bath or shower took and how long they were in the bathroom afterwards. These questions were to gain an understanding of the route of exposures other than drinking.

Only the consumption of people who were 16 years of age or older was included in the study. The implication of excluding children under 16 years old is that the estimates of liquid and tap water consumption are based on the adult population of England and Wales only. **Consumption** comparisons with the previous surveys are consequently made between adult data only (in the case of the 1978 survey, adults were defined as aged 18+; for the 1995 and 2008 surveys they were defined as aged 16+).

All other data (ie those not drawn from the 7-day diaries of consumption, but rather based upon the Head of Household/Chief Organiser interviews and individual competent Household member interviews) are directly comparable between different years.

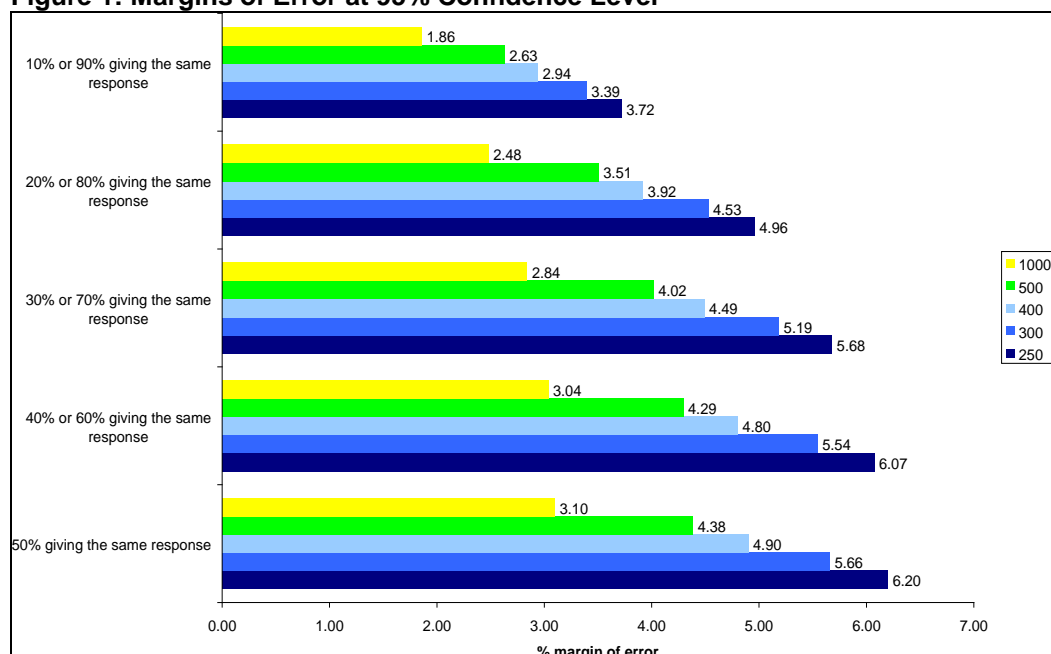
Copies of the three survey instruments can be found in the Appendices.

2.3 Sample Strategy

Accent recommended 1,000 households as it would ensure robust sub-samples. The sample size of 1,000 provides Defra with a 95% level of confidence that the results for the sample as a whole – at household level – are, at worst, +/- 3.1%; this is a high level of robustness overall and allows for very robust segmentation of the data by sub-samples such as age, gender or socio-economic group (SEG).

An example of the levels of robustness that would apply to the overall cell of 1,000, as well as to any segments of 250, 300, 400 or 500, is shown in Figure 1. This demonstrates that, for a segment of 400, where 20% were in agreement with a statement, the actual proportion in agreement with it could be said to be between 16.08% and 23.92% (ie +/- 3.92%). However, for a segment size of 250, where 20% were in agreement with a statement, the actual proportion in agreement with it could be said to be between 15.04% and 24.96% (ie +/- 4.96%).

Figure 1: Margins of Error at 95% Confidence Level



In order to maintain consistency with the previous survey, a two-stage sampling strategy was adopted to select and recruit households. The first involved selecting the same ten planning regions, as those used in the 1995 survey, across England and Wales. The second element was to identify, as near as possible, the same local authority districts used previously. It should be noted that these were not exactly the same due to changes in local authority boundaries since the last survey.

As the sample size has doubled from 1995, the number of households sampled within each region was 100, with 20 households in each local authority district being surveyed. The full breakdown of the regions and local authority districts selected are detailed below in Table 1.

Table 1 – Number of households surveyed and diaries returned

Region	Local Authority District	Households surveyed		Diaries returned	
		Wave 1	Wave 2	Wave 1	Wave 2
East Midlands	Derby, Derbyshire	20	20	33	30
	Charnwood, Leicestershire	20	20	27	31
	East Lindsay, Lincolnshire	20	20	28	30
	Northampton, Northants	19	20	25	24
	Mansfield, Notts	20	20	41	29
Eastern	Chiltern, Bucks	20	20	23	20
	South Cambridgeshire, Cambs	20	20	33	32
	Southend-on-Sea, Essex	20	20	30	28
	Three Rivers, Hertfordshire	20	20	22	21
	Ipswich, Suffolk	17	20	44	34
London	Brent	20	20	33	25
	Enfield	19	20	30	27
	Hillingdon	21	20	38	39
	Merton	21	20	35	26
	Waltham Forest	20	20	27	26

Region	Local Authority District	Households surveyed		Diaries returned	
		Wave 1	Wave 2	Wave 1	Wave 2
Merseyside and North West	Sefton, Merseyside	19	20	27	24
	Warrington, Cheshire	11	10	19	17
	Lancaster, Lancs	20	19	27	26
	Manchester, Greater Manchester	20	20	34	37
	Tameside, Greater Manchester	28	29	37	34
Northern	Langbaugh on Tees, Cleveland	20	20	30	30
	Darlington, Durham	20	20	37	33
	Derwentside, Durham	20	20	32	30
	Blyth Valley, Northumberland	20	20	32	31
	Newcastle, Tyne & Wear	23	20	35	33
South East	Bracknell Forest, Berkshire	15	20	15	24
	Wealden, East Sussex	13	20	32	30
	Southampton, Hampshire	20	20	26	26
	Shepway, Kent	7	20	33	28
	Mole Valley, Surrey	17	20	25	24
	Richmond, Surrey	7	4	6	4
South West	Northavon, Somerset	20	20	37	37
	Exeter, Devon	6	20	30	25
	Bournemouth, Dorset	26	20	30	30
	Stroud, Gloucestershire	20	20	27	23
	Salisbury, Wiltshire	34	20	34	32
West Midlands	South Shropshire, Shropshire	20	20	25	25
	Staffordshire Moorlands, Staffs	20	20	35	35
	Birmingham, West Mids	32	20	23	22
	Dudley26, West Mids	20	20	35	29
	Wolverhampton, West Mids	20	20	38	29
Yorkshire and Humberside	Scunthorpe, Humberside	20	20	28	26
	Doncaster, South Yorks	20	20	35	35
	Hull, East Yorks	20	20	29	30
	Wakefield, West Yorks	20	20	14	31
	Northallerton, North Yorks	20	20	25	29
Wales	Conwy	20	20	35	28
	Dyfed	17	20	25	32
	Gwent	20	20	34	30
	Mid Glamorgan	20	20	30	29
	South Glamorgan	20	20	30	25
TOTALS		992	1002	1515	1446

Recruitment

Recruitment was dealt with by close supervision and liaison between interviewers, supervisors and Accent field management. Quotas were checked on a weekly basis, providing the opportunity to address any gaps or areas of over-sampling.

On recruitment, household organisers were immediately interviewed, and paper questionnaires and seven day diaries were left behind for competent household members to complete (ie those aged 16 or over). Interviewers went back at the end of the seven-day period and collected all completed questionnaires.

In order to enhance the survey hit rate, and to stress to panel members the importance of the survey and the value of their views, incentives of £10 per household were given where all interviews and seven day diaries were successfully completed.

In the first phase a total of 992 households took part in the study and a further eight were excluded as part of the quality control process. The shortfall was very small, so made no difference to the robustness and accuracy of the findings. Phase two comprised a total of 1,002 and households.

A comparison of the demographic profiles between phase 1 and phase two of the household organiser respondents is shown in Table 2 below. For the most part the profiles are very similar. However, it is interesting to note that the data suggests that a higher proportion of females stated that they were the household organiser in phase 2 than in phase 1.

Table 2: Breakdown of householder organisers according to gender, age and SEG

	Wave 1		Wave 2	
	%	Number	%	Number
Gender				
Female	44	434	58	579
Male	56	558	42	420
Not stated			*	3
Age				
16-34	29	289	32	320
35-54	41	409	39	390
55+	30	293	29	289
Not stated		1	*	3
SEG				
AB - Professional /managerial	15	152	17	166
C1 – Clerical	31	308	30	297
C2 – Skilled manual	20	199	21	213
DE – Semi-skilled and unskilled	32	317	30	297
Not stated	2	16	3	29

* = less than 1%

A comparison of the gender and age breakdown for people who completed diaries is shown in Table 2a. As the diaries did not ask for peoples' socio economic group status, this data is not available.

Table 2a: Breakdown of diary respondents according to gender and age

	Wave 1		Wave 2	
	%	Number	%	Number
Gender				
Female	54	824	56	815
Male	45	690	43	616
Not stated	1	13	1	15
Age				
16-24	11	174	9	132
25-39	34	516	33	473
40-54	26	394	26	378
55+	28	422	28	402
Not stated	1	21	4	61

3. TOTAL LIQUID CONSUMPTION

3.1 Introduction

This section takes a detailed look at adults' total liquid consumption over a seven day period, as well as their exposure to tap water through taking showers and baths. It also details where adults consume their drinks, the time of day they drink and the size of containers drunk from. The results in this section compare and contrast findings between the 1995 study and both phases of the 2008 study.

In compiling the data, Accent has used the same liquid measures as those in the 1995 study, which were as follows:

- Cup = 200ml
- Mug = 275ml
- Small glass = 140ml
- Large glass = 350ml
- Pint Mug = 550ml
- Bottle = 450ml

In addition the following estimate was used was used for sports bottle which was not included in the 1995 survey:

- Sports bottle = 550ml

The analysis in the table below shows a comparison between phase one and phase two of how many different drinks were consumed in a seven day period by household members who were 16 or over. It should be noted that because this data is achieved by summing the total number of drinks recorded in the diaries, and because the number of diaries completed in Phase 2 was fewer than in Phase 1³, the Phase 2 data for this question has been weighted to match the number of diaries completed in Phase 1. It was not felt necessary to also weight by age, gender and profiles, and enables direct comparisons to be made between the two phases.

Having undertaken this weighting, Table 3 demonstrates that in phase two a total of 79,117 drinks were consumed compared to 76,621 drinks in phase one. The totals shown in the table are less than this as 77 respondents in phase one and 152 in phase two stated that they had had a drink but did not state what it was.

By learning how many drinks are consumed by each adult member of the household in a week, it is then possible to determine the average number of drinks consumed by adults per household (by dividing the total number consumed by the total phase two sample of 1002). When this is multiplied by the total number of households in England and Wales, this provides a robust estimate of how many of each different type of drinks are consumed by adults every week across both countries. To make this calculation 2001 census data has been used, which reports a total of 21,660,475 households in England and Wales. *So, for example, the average cups of tea drunk per household was 24.45 (24,497/1002); $24.45 * 21,660,475 = 529,598,614$.*

³ Some lethargy being inevitable in a second Phase panel study

Table 3 also shows a marked reduction in the reported consumption of hot drinks from phase one to phase two (phase 2 having been undertaken in the summer months), as follows:

- Coffee: 31%
- Tea: 1.5%
- Hot milky drinks: 19%

However, as one might expect, the reported consumption of cold drinks increased between the two phases, but not as dramatically as the reduction of coffee in particular. The reported increases are:

- Soft drinks: 18%
- Fizzy drinks: 10%
- Fruit juice: 9%
- Alcohol: 8%

Table 3: Estimate of total number of drinks consumed per week in England and Wales

	No. consumed in week		Proportion of total drinks %		No. per hh in sample		Total household Consumption in E & W	
	W1	W2*	W1	W2*	W1	W2*	W1	W2*
Coffee	16,544	11,365	22	14	16.68	11.34	361,296,723	245,629,787
Tea	24,869	24,497	33	31	25.07	24.45	543,028,108	529,598,614
Hot milky drinks	1,947	1,571	3	2	1.96	1.57	42,454,531	34,006,946
Fruit juice	3,743	4,066	5	5	3.77	4.06	81,659,991	87,941,529
Soft drink	15,455	18,200	20	23	15.58	18.20	337,470,201	394,220,645
Fizzy drink	4,226	4,652	6	6	4.26	4.65	92,273,624	100,721,209
Alcohol	7,018	7,578	9	10	7.07	7.58	153,139,558	164,186,401
Water based food	1,006	907	1	1	1.01	0.91	21,877,080	19,711,032
Other	1,376	6,119	1	8	1.39	6.12	30,108,060	132,562,107
TOTAL	76,184	79,117	100	100			1,663,307,876	1,708,578,268

*Weighted data

W1: A further 77 stated that they had had a drink but not what it was

W2: A further 152 stated that they had had a drink but not what it was

In addition to the number of drinks consumed in a week, information was also gathered about the number of baths and showers taken, in order to understand peoples' exposure to tap water through these means. Table 4 shows a marginal decrease (1%) in phase two in those recording they had taken baths compared to a 6% increase recording they had taken showers. This suggests considerably more exposure to tap water than in phase one and one possible reason for this increase is the warmer temperatures that occurred during phase two.

Table 4: Estimate of total number of baths and showers taken per week in England and Wales

	No. taken in week		No. per hh in sample		Total household usage in E & W	
	W1	W2*	W1	W2*	W1	W2*
Baths	3,221	3181	3.25	3.18	70,396,544	68,880,310
Showers	7,143	7576	7.2	7.56	155,955,420	163,753,191

*Weighted data

Although we have had to use the most recent Census data available (ie from 2001) to aggregate the number of households, it should be noted (as stated on the ONS website) that household numbers have been rising since 2001 and that household structures have also changed, with a marked increase in one person households.

3.2 Social Profile of Drinks Consumption

In conducting analysis of the social profile of the consumption of drinks, Table 5 shows there are some noteworthy differences that stand out. In terms of age, there is considerably more consumption of fruit juice, soft and fizzy drinks in the 16 to 24 age group compared to the other age groups, but fewer coffee and tea drinkers. Respondents over 55 tend to consume more tea than those in the other age groups. Tea is the most commonly consumed drink amongst all the age groups except for the 16 to 24 age group, where soft drinks are consumed most frequently.

There are no noticeable differences according to weight; suffice to say that across all the weight ranges tea was the most frequently consumed drink.

Looking at comparisons between the two phases, the key thing to note is that the general decline in consumption of tea between the Spring phase and the Summer phase of research is not seen for those aged 55+.

Table 5: Social profile of the proportion of different drinks consumed

Table of Social Profile and the proportion of different drinks consumed										
Profile Characteristics		Coffee %	Tea %	HMD* %	Fruit juice %	Soft drink %	Fizzy drink %	Alcohol %	Water based food %	Other %
Gender										
W1	Male	45	44	36	41	41	46	57	43	42
W2		45	42	33	36	41	44	57	40	37
W1	Female	55	56	64	59	59	54	43	57	58
W2		55	58	67	64	59	56	43	60	63
Age										
W1	16-24	15	21	3	8	27	12	9	2	3
W2		12	19	2	8	24	13	12	1	8
W1	25-39	21	28	2	5	23	7	10	2	2
W2		16	26	2	6	25	8	9	1	7
W1	40 - 54	24	35	3	4	19	4	9	1	2
W2		16	31	2	4	23	5	10	1	7
W1	55+	23	40	3	4	16	3	8	1	2
W2		12	40	2	5	20	2	9	1	9
Weight										
W1	Up to 9 st	20	31	4	7	20	6	7	2	3
W2		20	32	2	6	23	6	7	2	10
W1	9 to 11 st	21	34	3	5	21	4	8	2	2
W2		15	32	2	5	21	5	9	1	8
W1	11 to 13 st	22	33	2	4	21	6	10	1	1
W2		15	32	2	5	22	6	10	1	7
W1	13 to 15 st	22	33	2	4	19	6	11	1	1
W2		14	30	1	4	24	6	13	1	7
W1	> 15 st	24	30	2	4	21	7	10	1	1
W2		16	28	2	3	27	9	9	1	6

*HMD - hot milky drink

3.3 Liquid Measure Consumption

The arithmetic mean of the total daily liquid consumption, using weighted data from phase two, is 2.003 litres per day (lpd) compared to 1.931 lpd in phase one. This represents a marginal increase 0.072 lpd (3.7%) from phase one and compares to the 1995 and 1978 estimates of 1.713 lpd and 2.042 lpd respectively⁴. The increased consumption per day between phase one and two does not represent a statistical difference.

The arithmetic mean of tap water consumption in phase two was 1.314 lpd compared to 1.275 lpd in phase one. This represents a small increase of 0.039 lpd (3.5%) which again is not statistically significant. The adult consumption of tap water in 1995 was 1.275 lpd and 1.113 lpd in 1978⁵. In seeking to explain the increase between phase one and two, it is worth noting the temperature data at section 4.8 which shows an average increase of about 10°C between the two phases.

A demographic analysis of liquid and tap water consumption is provided below.

Age Analysis

Total liquid and tap water consumption has increased in phase two of the study as shown in Table 6. However, the amount of tap water as a proportion of total liquid consumed was virtually the same as phase one. The adult intake of tap water in this study was 66% of total liquid intake, this falls within the range found by previous studies which were of 74% for 1995 and 54% for 1978.

Whilst the age bands are not an exact match compared to 1995, there are some reasonable comparisons that can be drawn, although due to the different age categories, care should be taken in making these comparisons⁶. Further consistency with phase one is evident with the pattern of tap water in drinks increasing with age, such that those 40 or over consume the most tap water, while the youngest age group consumes the least..

The finding from the first phase that tap water consumption, as a proportion of drinks consumed, is significantly less across all the age group than in 1995, is also supported by the results from the second phase; though it should also be noted that the 2008 proportions are less than the 1978 figures.

Table 6: Liquid consumption per day according to age

		Total liquid lpd		Tap Water lpd		% Tap Water		Total Population 2007 (m)
		1995	2008	1995	2008	1995	2008	
W1	16-24	1.58	1.90	0.974	1.034	62	54	5.678
W2			2.11		1.12		53	
W1	25-39	1.709	2.021	1.238	1.256	73	62	15.168
W2			2.079		1.315		63	
W1	40-54	1.802	2.042	1.385	1.411	77	69	9.850
W2			1.955		1.441		72	
W1	55+	1.698	1.819	1.353	1.322	80	73	10.858
W2			1.965		1.447		74	

⁴ The latter does not include data for 16-17 year olds who were considered children in the 1978 survey

⁵ As above.

⁶ 16-25; 26-35; 36-45; 46-55; 56-64 and 65+

It is unclear what is driving these patterns of water consumption, but the proportions will vary according to consumer preferences of different types of drink, as well as lifestyle differences and the amount of time people spend at home.

Social Group Analysis

The socio-economic analyses in Table 7, which are more or less comparable on a like for like basis⁷, show that from 1978 total liquid and tap water consumption has increased across all of the SEG groups, the one exception being the decrease for the DE group between 1978 and 1995.

Although the DE groups consumed the most liquid and tap water per day in phase one, phase two suggests that the AB groups have a higher liquid and tap water intake in the Summer months.

It is also worth noting that – in line with the overall findings – liquid consumption increased between spring and summer 2008 across all the SEG groups. Similarly, tap water consumption has also increased between the two waves in 2008 across the SEG groups, with the exception of the DE group

Between the two phases of this study, there is little difference across the SEG groups in terms of the proportion of drinks containing tap water, so the pattern is the same as phase one where the proportion of drinks with tap water content was significantly less amongst the lower SEGs than in 1995.

When comparing the 1978 data to the 1995 and 2008 data sets two things stand out. The first is that, in 1978, the proportion of drinks containing tap water was considerably lower than the 1995 survey and lower than the 2008 survey, though not as dramatically so compared to 1995. The other point worth noting is that tap water consumption as a percentage of drinks consumed did not vary across any of the SEGs. This is out of kilter compared to the 1995 and 2008 surveys where drinks with tap water varied across the different SEGs.

Table 7: Liquid consumption per day according to SEG

		Total liquid Lpd			Tap Water lpd			% Tap Water		
		1978	1995	2008	1978	1995	2008	1978	1995	2008
W1	AB	1.463	1.539	1.869	0.881	1.104	1.306	60	72	70
W2				2.025			1.371			68
W1	C1	1.542	1.695	1.935	0.932	1.154	1.243	60	68	64
W2				1.955			1.327			68
W1	C2	1.589	1.595	1.928	0.957	1.171	1.238	60	73	64
W2				1.984			1.313			66
W1	DE	1.693	1.454	1.984	1.013	1.066	1.354	60	79	68
W2				2.010			1.329			66

⁷ It should be noted that the different age groups covered in the 2008 survey may have a subtle impact on the ability to directly compare SEG findings eg different SEGs may have different numbers of children

Gender Analysis

The pattern of men having a higher liquid intake is further endorsed in phase two, although total liquid consumption has increased amongst females as well. The phase two results again show women drink more tap water. Both of these findings are consistent across all three surveys, but it is particularly interesting to note the stark contrast between male and female tap water consumption in 1978 compared to the 1995 and 2008 surveys, 28% difference in 1978 compared to 6% in 1995 and around 10% in 2008. Unfortunately there is no supporting evidence within the study as to why females consume more tap water than males.

Table 8: Liquid consumption per day according to gender

		Total liquid lpd			Tap Water lpd			% Tap Water		
		1978	1995	2008	1978	1995	2008	1978	1995	2008
W1	Male	2.045	1.617	1.946	1.115	1.127	1.207	55	70	62
W2				2.097			1.303			62
W1	Female	1.544	1.515	1.767	1.288	1.149	1.282	83	76	73
W2				1.892			1.322			70

NB. 2008 figure refers to adults only

Weight Analysis

As reported in the first phase, analysing water consumption by people's weight is a new feature in this study. The data is taken from the consumer diaries and Table 9 below shows that, in terms of overall liquid consumption, the results are consistent with phase one in that those who weigh less consume less. There were two weight groups, 11 to 13 stone and more than 15 stone, where total liquid consumption was less than in phase one. As with phase one, tap water as a proportion of the drinks consumed, is equal regardless of peoples' weight. It is interesting to note, however, that while there is a clear trend, that in phase two the people in the under 9 stone category do not follow the liquid per day trend in that they consume more liquid and tap water per day than some other weight categories; although the portion of tap water was slightly less overall. One possible reason for this is that as the under 9 stone category is likely to be dominated by females and there were more females in each phase of the survey, 54% in phase one and 57% in phase two, who completed diaries.

Table 9: Liquid consumption per day according to weight

	Total liquid lpd		Tap Water lpd		% Tap Water	
	W1	W2	W1	W2	W1	W2
Up to 9 st	1.803	1.890	1.200	1.302	67	63
9 to 11 st	1.790	1.885	1.221	1.269	68	67
11 to 13 st	2.011	1.964	1.293	1.273	64	65
13 to 15 st	2.097	2.188	1.355	1.426	64	65
> 15 st	2.132	2.123	1.422	1.403	67	66

3.4 Where Drinks Were Consumed

Phase two of the survey reveals a strong degree of consistency of where drinks were consumed. As with the first phase, the majority of drinks were consumed at home, with some two thirds or more of the specified drink categories being drunk at home. The exceptions are again fizzy drinks and alcohol. The other main location where drinks were consumed was work, with some 10% to 20% of drinks being consumed there,

again with the exception of alcohol. It is interesting to note that less alcohol was consumed in pubs in the phase two Summer months, with slightly more being drunk at home, or with friends and relatives.

Table 10: Where drinks were consumed

		Coffee %	Tea %	HMD %	Fruit juice %	Soft drink %	Fizzy drink %	Alcohol %	Water based food %	Other %
Home	W1	68	77	77	74	70	52	48	69	63
	W2	67	77	79	73	68	52	50	70	68
Work	W1	19	14	10	10	16	18	0	17	15
	W2	20	14	8	13	19	20	1	19	20
Friends/ Relatives	W1	7	6	3	5	4	6	8	6	2
	W2	7	5	4	5	5	7	10	4	3
Shop/Cafe	W1	3	1	6	4	1	7	1	3	4
	W2	3	1	5	2	2	6	0	2	1
Bar/Pub	W1	0	0	1	2	1	7	41	1	1
	W2	0	0	0	1	1	5	36	1	0
On journey	W1	0	0	1	2	3	6	0	2	8
	W2	0	0	1	3	2	7	0	1	3
Other	W1	1	1	1	2	2	3	1	2	5
	W2	1	1	2	1	2	3	2	2	3
Base	W1	16,544	24,869	1,947	3,743	15,455	4,226	7,018	1,006	1,376
	W2	10,637	22,928	1,470	3,806	16,995	4,354	7,093	849	5,767

3.5 When Drinks Were Consumed

Further consistency between the two phases is shown in Table 11, where there is little difference between phase one and phase two in terms of when drinks were consumed. Indeed, as with the first phase, the majority of drinks were consumed between 7am and 4pm, with the exception of hot milky drinks and alcohol.

Table 11: When drinks were consumed

		Coffee %	Tea %	HMD %	Fruit juice %	Soft drink %	Fizzy drink %	Alcohol %	Water based food %	Other %
Early morning 1 – 6 am	W1	3	4	2	2	2	0	0	3	2
	W2	4	3	1	1	2	0	0	1	1
Morning 7 – 11 am	W1	44	38	18	39	23	12	0	21	22
	W2	44	38	22	37	27	13	0	19	24
Afternoon 12- 4 pm	W1	29	27	16	31	32	41	13	46	29
	W2	29	28	13	31	35	44	12	43	31
Evening 5 – 8 pm	W1	15	20	19	19	26	32	45	22	25
	W2	17	19	18	21	22	31	47	26	21
Night 9pm– 12am	W1	7	8	47	8	18	14	40	9	21
	W2	7	8	44	9	13	12	40	10	20
Base	W1	16,544	24,869	1,947	3,743	15,455	4,226	7,018	1,006	1,376
	W2	10,637	22,928	1,470	3,806	16,995	4,354	7,093	849	5,767

3.6 Other Tap Water Exposure

In terms of exposure to tap water through bathing and showering, the results show that the vast majority of respondents who took showers for ten minutes or less in phase two was comparable with those in phase one, 82% and 84% respectively. Of those who took baths, similar proportions (more than two thirds) of people between the two phases, said their baths lasted between 11 and 30 minutes.

Table 12: How long did your shower or bath take?

	Wave 1		Wave 2	
	Bath %	Shower %	Bath %	Shower %
Less than 2 minutes	0	3	0	3
2-5 minutes	7	38	7	39
6-10 minutes	24	43	24	40
11-15 minutes	32	12	33	14
16-30 minutes	28	3	28	3
over 30 minutes	8	1	8	1

Those who tended to spend the most time either showering or bathing were those in the younger age groups of 16- 24 and 25-39, which is consistent with phase one as is the fact that there were no apparent differences according to peoples' weight.

Respondents were also asked how long they stayed in the bathroom after their shower or bath. The findings in Table 13 below show that 60% in phase two , (cf 64% in phase one) stayed in the bathroom for up to five minutes after their shower while 49% (cf 51% in phase one) remained there for up to five minutes after taking a bath.

Table 13: How long did you stay in the bathroom after your shower or bath?

	Wave 1		Wave 2	
	Bath %	Shower %	Bath %	Shower %
Less than 2 minutes	9	16	11	15
2-5 minutes	43	48	38	45
6-10 minutes	29	24	28	26
11-15 minutes	12	7	11	8
16-30 minutes	5	2	4	2
over 30 minutes	1	0	3	1

Base – W1: 3,221 baths; 7,143 showers: W2: 3,181 baths; 7,576 showers

4. BEHAVIOURAL ANALYSIS OF TAP WATER DRINKERS

4.1 Introduction

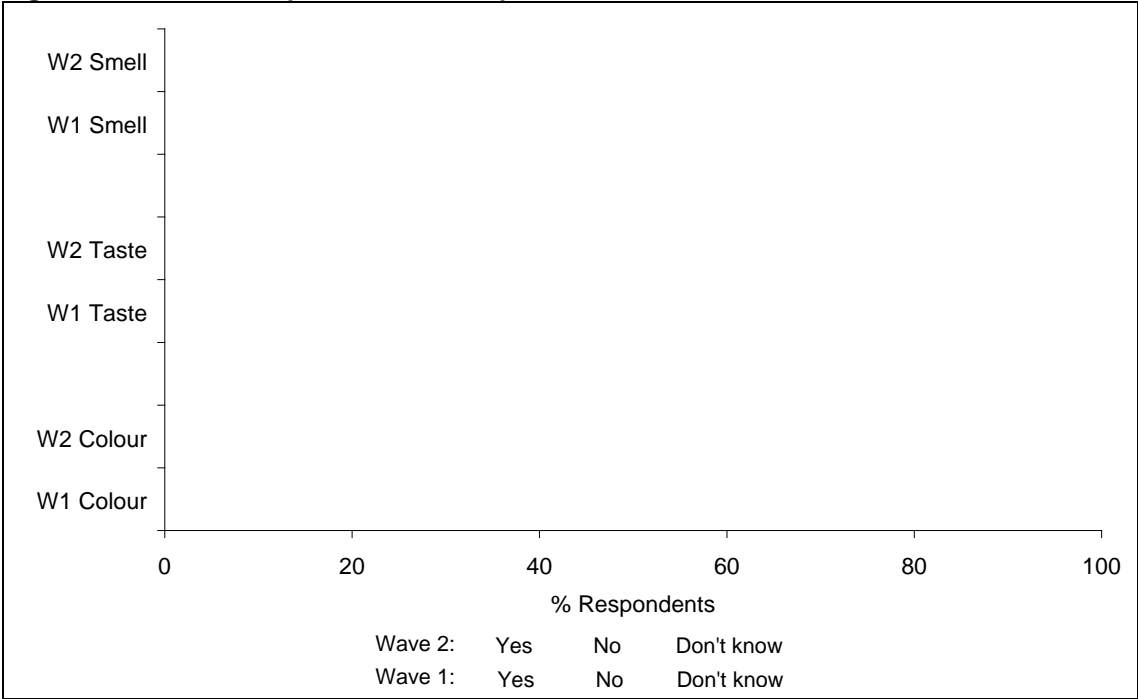
This section provides an analysis of individuals’ and households’ behaviour in relation to tap water consumption. All data in this section is directly comparable with the previous phases of research in 1995, 1978 and the first phase of the 2008 study.

In order to obtain the best possible comparison between spring and summer intakes, where possible the same households were used in the two waves. In total, 555 respondents who took part in phase one also took part in phase two, meaning that 56% of the original sample took part in both waves. The remaining 44% of the sample, 447 respondents, in phase two were top ups to the original sample. Given the reasonably high degree of overlap in the respondent base, and that methods were used in both phases to ensure – as far as possible – that a representative sample was recruited for interview, the similarities in the responses in this section are not surprising.

4.2 Quality of Tap Water

Concerns or problems with tap water were even less in phase two compared to the first phase. Figure 2 below shows that the vast majority of households have not had any problems with the quality or appearance of tap water in the last 12 to 18 months.

Figure 2: Concerns or problems with tap water



There were 124 households who reported having problems with their tap water, compared to 177 in the first phase. While three quarters reported the problem in phase one, just under a quarter reported the problem in phase two. However, as with the first phase, virtually every case was reported to the appropriate water company. Households which had not experienced problems with the quality of their water were again asked if they would report any problems they might have in the future. The phase two results are

almost identical to those in phase one where four fifths (80%) said they would report the problem and of these, 90% would report the problem to their water company.

Table 14: Comparison between 1995 and 2008 of those who had problems with drinking water (n= number of households)

	Had a problem					
	1995		2008			
			Wave 1		Wave 2	
	n	%	n	%	n	%
Smell	46	9	40	4	26	3
Taste	96	18	85	9	50	5
Colour	102	20	95	10	61	6

Table 14 above provides further evidence about how water quality seems to have improved since 1995, with the number of problems related to colour, taste and smell being very similar to phase one, but markedly reduced since 1995. The base sizes are too small to draw robust conclusions, but the evidence seems to support that the findings in the first phase where the East Midlands region reported the most problems with regard to the colour and taste of their tap water, where 11% of respondents compares with the averages of 6% and 5% respectively. This compares to 16% of respondents in the first phase against averages of 10% and 9% respectively. It is also worth noting that the North East had considerably higher problems with the colour of tap water in the second phase with 14% having problems compared to the average of 6%.

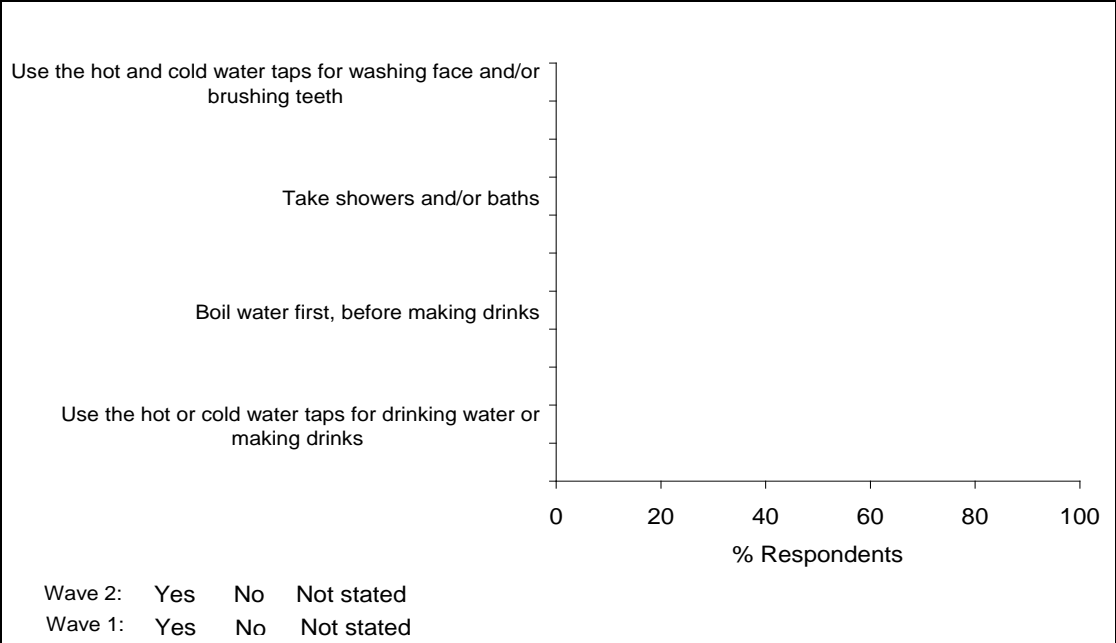
As a measure to understand people's behaviour with tap water use while problems with their water supply were ongoing, respondents were asked if they carried out the activities in Figure 3. People were even more cautious in phase two about using tap water for making drinks whilst they had water quality issues (39% would use it for drinks in phase 2 cf 47% in phase 1). Phase two also shows that significantly less people, 48% cf to 68% would use the hot and cold water taps for face washing and brushing teeth. There was also a significant increase in phase two in the number of people who would boil water first before making drinks.

The increased caution in peoples' behaviour is largely driven by the East Midlands region, which Northampton is part of for the purposes of this study. Northampton was subject to an incident involving the issue of a boil water advice at the time of carrying out the fieldwork for phase two and as people were provided with boil advice notices, these findings are perhaps not that surprising.

People were less worried continuing with baths whilst they had problems, with four fifths (cf 73% in phase 1) saying they continued to use water for these activities.

Of those who used tap water for the activities in Figure 3, between 70% and 90% continued with the same frequency of use, compared to around three quarters for phase one.

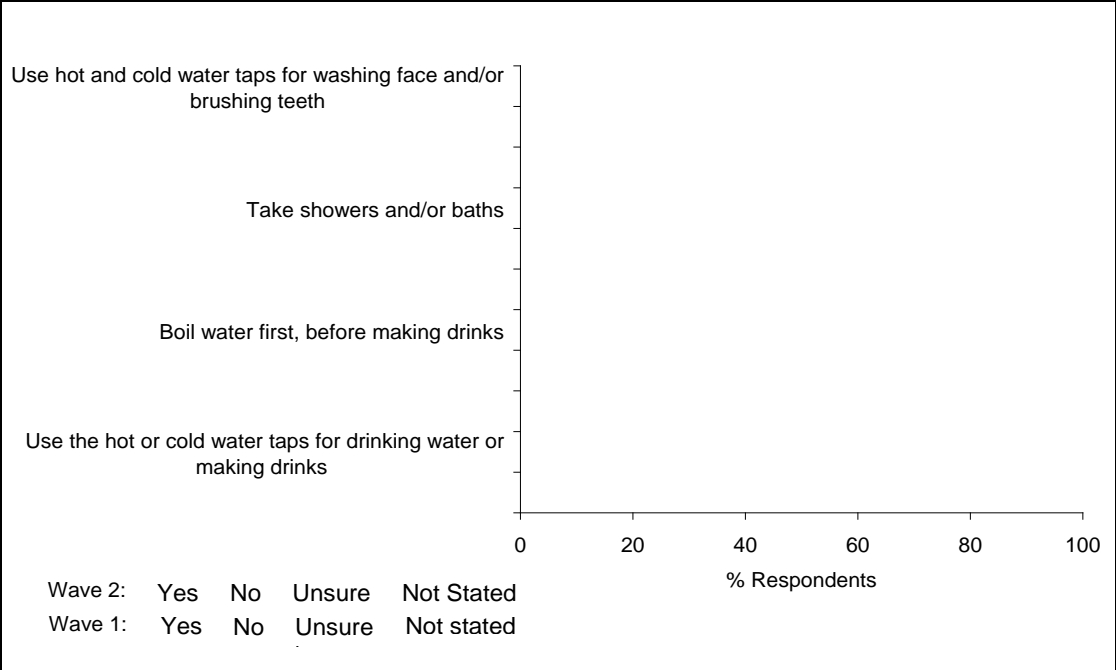
Figure 3: Respondent behaviour when household had experienced a problem



Base – Phase 1 - 168; Phase 2 - 124

The same set of questions was asked of those households that had not experienced any problems with the quality or appearance of their tap water to see what their behaviour would have been. The phase two results are comparable to those in the first phase, although there is slightly more caution towards each of the activities, with the exception of those who would use tap water for making drinks if they had water quality issues. Figure 4 supports the phase one findings where activities which involved drinking tap water directly, ie no boiling, respondents were much more cautious about continuing with those activities compared to those who had actually experienced problems with their water supply. In particular, fewer than one in ten said they would ‘use the hot or cold water taps for drinking water or making drinks’

Figure 4: Likely behaviour of household that had not experienced a problem with tap water



Base – Phase 1 - 824 ; Phase 2 - 878

A further question that was asked of all households in the main face-to-face survey related to people's behaviour on receiving 'boil notices' or 'do not drink notices'. Table 15 below shows the extent to which people followed the advice or not and it is evident that the vast majority, 89% compared to 93% in the first phase, reported they would follow the advice completely.

Table 15: To what extent would you follow boil notices?

Action taken	Wave 1	Wave 2
	%	%
Follow advice completely	93	89
Follow advice somewhat	6	9
Ignore advice	1	0

In the event of boil notices 69% (cf 75% in phase one) said they would continue to take showers and/or baths and just under a third (32% cf 41% in phase one) said they would carry on using hot and cold water taps for face washing and brushing teeth. There are some interesting regional differences in those likely to continue with the latter where those in the Eastern, Yorkshire and Humberside and the South West were least likely to use the hot and cold water taps for face washing and brushing teeth.

4.3 Tap Water Usage

Overall in phase two, a total of 97% of households reported using tap water for making drinks which is the same proportion as phase one and, as previously reported, compares to 99% in 1995, where the drop of 2% is actually significant when a statistical reliability z-test⁸ is run. This implies that the drop in complete coverage is statistically valid and not just a feature of random data collection.

As with phase one, almost all households (97%) use the kitchen cold tap for making drinks or drinking water, whilst 11% (cf 12% in phase one) said they used the kitchen hot tap to make drinks. This compares with 95% and 3% respectively in the 1995 study, and means that the increase in those using the kitchen hot tap to make drinks is statistically significant. It also compares to 95% and 8% in the 1978 study who used the cold and hot water taps to make drinks.

Respondents were asked how frequently they used the cold and hot water kitchen taps for making drinks. Table 16 shows that, across the two phases, the vast majority who used the kitchen cold tap for making drinks did so most days. There was a significant increase however in phase two, 70% compared to 45% in phase one, of those who reported using the kitchen hot tap for making drinks on a frequent basis..

Table 16: Frequency of using cold and hot kitchen taps for making drinks

		Often %	Sometimes %	Not stated %	Base
Kitchen Cold Tap	W1	95	4	1	967
	W2	96	3	1	975
Kitchen Hot Tap	W1	45	53	2	120
	W2	70	29	1	114

4.4 Use of Sports Bottles

As mentioned in the report from the first phase, this study asks a new question ‘So far as you know, does anyone in your household fill sports bottles with tap water to drink when they were not at home’. This question has been included to try and quantify an apparent emerging trend where consumers are thought to be practising this. There has been a reduction in the number of households, 49% in phase one to 41% in phase two reporting that said that someone within their household filled sports bottles with tap water to drink when they were not at home.

In the vast majority of cases, 88% in phase two compared to 85% in phase one, it was one or two people who consumed tap water in this way. Table 18 below shows little difference between the proportions of people in each household who filled sports bottles to drink away from home.

Table 18: Number of people in each household who fill sports bottles with tap water

	Wave 1 %	Wave 2 %
One person	53	56
Two people	32	32
Three people	10	8
Four people	4	3
Five people	1	0

⁸ A z-test is a means of comparing the difference between two percentages using a selected confidence interval, in this case 95%, to test if the difference is significant.

4.5 Ownership and Use of Appliances

Households were asked about appliances they own for preparing tap water prior to its consumption. Phase two in the table below indicates a slight reduction from phase one in the number of people across each of the various appliances. This is likely to be due to the 'top up' sample where they reported not owning as many of the listed appliances. Notwithstanding this, phase two shows a consistent pattern to phase one compared to 1995 where there has been a significant increase since 1995 in the proportion of people who own water filtering jugs, as well as a significant decrease in those who own soda stream type appliances and teas made machines.

Table 19: Ownership of tap water preparation devices

	1995 %	Wave 1 %	Wave 2 %
Water filtering jug	12	24	19
Cold water dispenser in fridge	9	7	4
Plumbed in special water filtering tap	2	3	2
'Teas-made' machine	8	2	1
Soda stream or other fizzy drinks maker	10	2	1
Water softening device eg a 'Permutit'	1	2	1
Bottled water cooler machine	1	1	1
Other	2	1	0
Base	476	992	1002

Table 20 below shows how frequently various appliances are used but, as with phase one, it is difficult to draw conclusions as the base sizes are so small. Where base sizes do allow (water filtering jugs), it is noticeable that two thirds are in frequent use. In terms of a regional analysis it is the East Midlands and Eastern regions where ownership of filtering jugs is most prevalent, which is consistent with phase one. Although ownership is less in some of the other regions, the use of water filtering jugs in phase two, is most common in London and Yorkshire.

Table 20: Use of tap water preparation devices

		Most or every day % (n)		Once a week % (n)		Rarely % (n)		Certain times of year % (n)		Never % (n)		Don't Know % (n)	
		%	(n)	%	(n)	%	(n)	%	(n)	%	(n)	(n)	
Water filtering jug	W1	63	151	6	14	10	24	8	18	4	10	9	22
	W2	60	116	6	12	4	8	4	7	7	13	19	37
Soda stream or other fizzy drinks maker	W1	17	4	13	3	25	6	25	6	13	13	8	2
	W2	-	-	-	-	36	4	18	2	45	5	-	-
Cold water dispenser in fridge	W1	51	36	7	5	7	5	14	10	4	3	16	11
	W2	64	27	2	1	5	2	10	4	5	2	14	6
'Teas-made' machine	W1	31	5	13	2	-	-	6	1	38	6	13	2
	W2	30	3	10	1	10	1	-	-	30	3	20	2
Plumbed in special water filtering tap	W1	84	21	2	8	-	-	-	-	4	1	4	1
	W2	67	12	6	1	-	-	-	-	6	1	21	4
Water softening device eg a 'Permutit'	W1	93	14	-	-	-	-	-	-	-	-	7	1
	W2	58	7	-	-	-	-	-	-	-	-	42	5
Bottled water cooler machine	W1	73	8	18	2	-	-	9	1	-	-	-	-
	W2	100	8	-	-	-	-	-	-	-	-	-	-

4.6 Treating Tap Water

Respondents were again asked if anyone in their household treated tap water before drinking it. As with phase one around three quarters (76% cf 74%) did not use any extra water treatment process. The proportions of people who used different water treatment processes were virtually the same between the two phases, despite the top up sample. As previously reported in the first phase the proportion who filtered their tap water in 2008 is significant increase from the last survey in 1995, 9% to 18%.

Table 21: Treating tap water

Treatment Process	Wave 1 %	Wave 2 %
Filter the water	18	18
Boil the tap water (allowing it to cool before using it)	13	12
Use sterilising tablets	8	8
Put it into a special fridge water dispenser	7	7
Any other treatment	3	5
None of the above	74	76

4.7 First Use of Water in the Day

The 2008 results in Table 22 show little difference between the two phases of the first use of tap water in the day and therefore a consistency from 1995 where more used tap water to prepare a drink compared to each of the 2008 phases, 25% and 23% respectively.

Table 22: First use of tap water in the day

	1995 %	2008	
		Wave 1 %	Wave 2 %
Wash and/or use the toilet first	69	73	74
Uses the tap to prepare a drink, before washing/ using the toilet	31	25	23
Don't know	-	2	3

4.8 Temperature

The average temperature⁹ throughout the phase two fieldwork period was 18.11° compared to 8.48° in phase one. As a comparison with the two previous studies, which were carried out in September 1978 and March 1995, the mean temperatures¹⁰ were 17.91° and 9.26° respectively.

The regional variations in phase two show that the Eastern and London regions were the hottest, while Yorkshire and Wales were the coolest as shown below:

⁹ The average temperature source information was obtained from www.weather.co.uk

¹⁰ Historic data from Met Office

Region	Wave 1	Wave 2
East Midlands	9.9°	16.58°
South East	9.3°	16.58°
London	8.96°	19.43°
West Midlands	8.78°	17.98°
Eastern	8.49°	20.7°
Merseyside and Northwest	8.38°	15.77°
South West	8.32°	18.42°
Yorkshire and Humberside	7.73°	16.69°
North East	7.72°	17.55°
Wales	7.25°	17.05°
Mean	8.48°	18.11°

5. BOTTLED WATER CONSUMPTION

5.1 Introduction

This section examines the brands of bottled water consumed, whether still or sparkling, together with the social profile of these consumers. Again, data in this section is directly comparable with previous wave and the 1995 survey, where shown.

A total of 46% of households surveyed in phase two (cf 44% in phase one) said that they used bottled water for drinking, which compares with 30% in 1995. Despite this apparent increase in the number of households consuming bottled water, it is unclear whether this is instead of drinking tap water or in addition to drinking it, thus making it difficult to determine to what extent the consumption of bottled water is a substitute for drinking tap water.

5.2 Brands of Bottled Water Consumed

The results in Table 23 show little difference to the first wave, where many more households drink still bottled water than its sparkling counterpart. The differences from the 1995 survey are therefore consistent with what emerged in the first phase, where the proportions of those consuming still bottled water have increased significantly from a quarter to a third of households, accompanied by a significant reduction in the number of households drinking sparkling water. Fewer than one in ten (8% phase 1 and 7% phase 2) consume sparkling water, which is half the number of households in 1995.

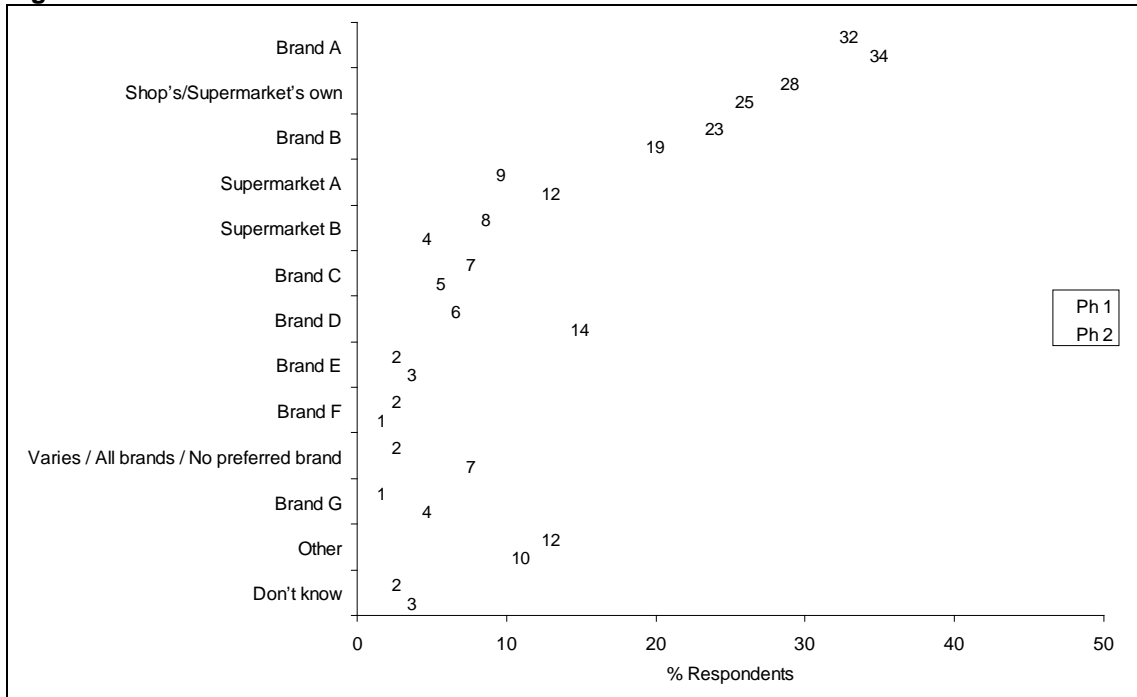
Table 23: Proportions of households consuming bottled water

	1995		2008			
			Wave 1		Wave 2	
	n	%	n	%	n	%
Still	121	25	333	33	354	35
Sparkling	79	17	82	8	69	7

Base: 1,002 households

In phase two there are again a variety of different bottled water brands consumed, with the same two imported brands reported as being most frequently consumed. Supermarkets' own brands were also reported as being quite frequently consumed, with supermarket A showing a slight increase in consumption. In the main however, there is no real pattern in the consumption of bottled still water as some brands have shown both increases and decreases in consumption between the two phases, as shown in Figure 5.

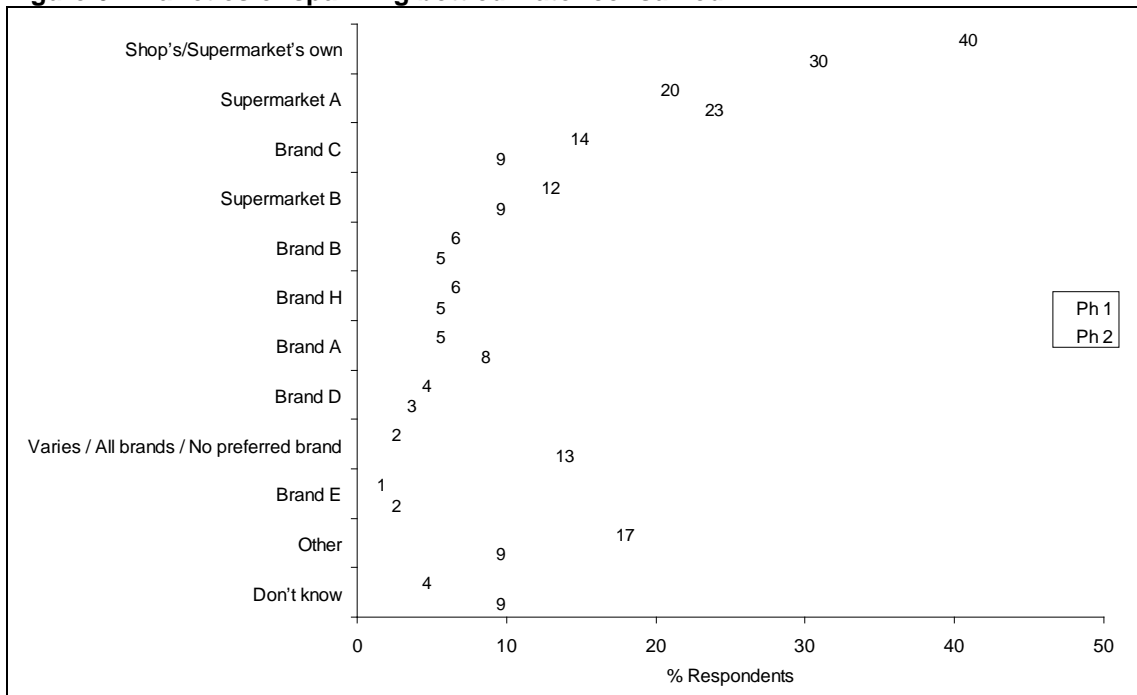
Figure 5 – Varieties of still bottled water consumed



Base: Ph 1 - 333 households who drink still bottled water; Ph 2 - 354 households who drink still bottled water;

Figure 6 shows a consistency from phase one where consumers of sparkling bottled water tend to purchase supermarket own brands, with two seeming to dominate the own brand market. However, the phase two results show a decline in consumption of most of the different brands, supermarket A and brand A being the exception, along with all brands.

Figure 6 – Varieties of sparkling bottled water consumed



Base: Ph 1 - 82 households who drink sparkling bottled water; Ph 2 - 69 households who drink sparkling bottled water

5.3 Social Profile of Bottled Water Drinkers

Given the potential for bottled water to act as a substitute for tap water, it is interesting to note the ‘typical’ bottled water drinker. In 1995 the typical bottled water drinker could be identified as younger females of professional and managerial status. Results in 2008 show it is much more difficult to identify the typical bottled water drinker, as there are fairly equal proportions across gender, age and social groups. The evidence in Table 24 would suggest that females in the 35-54 age category are the most likely bottled water drinkers. Again, because the age categories are different to the 1995 study¹¹, some caution should be given to the age comparisons.

Table 24: Social profile of householders consuming bottled water

Profile Characteristics		1995		2008			
		% of bottled sub-sample	% of total sample	Wave 1		Wave 2	
				% of bottled sub-sample	% of total sample	% of bottled sub-sample	% of total sample
Gender	Male	34	47	43	44	40	42
	Female	66	53	57	56	60	58
Age	16-34	42	32	34	29	36	32
	35-54	36	35	43	41	41	39
	55+	22	33	23	30	23	29
SEG	AB	29	19	18	15	19	17
	C1	18	16	33	31	30	30
	C2	17	16	21	20	21	21
	DE	36*	49	26	32	28	30
Region	North	18	32	28	12	27	12
	Midlands/Wales	41	39	41	18	43	20
	South**	41	29	31	14	30	14

* This includes those classified as retired

** South includes the South West region identified in Table 1 (Section 2.2)

NB: all demographic data is based on info provided in the household organiser questionnaire

As with phase one, there is also a fairly even spread across the regions of people who drink bottled water, except for Yorkshire where there was 26% (compared to the average of 46%) who consumed bottled water. In phase one, only 15% of Yorkshire households reported consuming bottled water compared to the average of 44%, so the proportion drinking bottled water in Yorkshire did increase markedly in the Summer months.

¹¹ 16-25; 26-35; 36-45; 46-55; 56-64 and 65+

6. SEASONAL AND TEMPORAL CHANGES IN WATER CONSUMPTION

6.1 Introduction

For each household participating in the survey, household members over 16 were asked to complete a series of basic questions asking whether they drank certain drinks and whether their drinking patterns had changed seasonally and over time. These findings are directly comparable with the 1995 data.

6.2 Seasonal Changes

In phase two there were 1,439 people who completed the self completion questionnaire, compared to 1,556 in phase one. As mentioned in section 4.1, the reasonably high degree of overlap in the respondent bases between the two phases of the 2008 survey, and the use of a sampling methodology designed to achieve as representative a sample as possible in each case, means that the similarities in the responses of this section are not surprising.

As with the first phase 86% said they drank tap water, over three quarters (78% cf 79%) said they drank tea and more than two thirds (69% cf 70%) said they also consumed coffee and squash. The proportions of respondents who consumed other drinks are shown in Table 25 below.

Over three quarters of the sample in the second phase, 79% (cf 77% in phase one) said their consumption of tea was the same all year round and did not vary with seasons. Whilst fewer people drank coffee overall, the pattern of consumption they reported throughout the year was very similar to those who drank tea and there was little difference between the two phases in terms of seasonal patterns.

Significantly more respondents in phase two (61% cf 53%) reported drinking bottled still water and the proportion of those reporting that they drink more still water in the summer remained the same between the two phases.

Similarly, those who drank bottled sparkling water also increased, from 19% to 24% in phase two. The seasonal patterns between the two phases are very similar to the 'still' drinkers, albeit with the proportions being different.

The proportions of those drinking squash has not really changed between the two phases of the 2008 study, such with around three fifths in both phases (60% and 61% respectively) saying that they drink more in the summer.

In terms of the other drinks that were asked about, there is little difference between the two phases in the proportions drunk in summer and winter. There is also the same pattern of which drinks were consumed more in summer or winter. Basically, those who drank other hot drinks such as hot chocolate, savoury drinks and soups, drank more in winter, whereas respondents consumed more cold drinks like beer/lager, fruit juice and fizzy drinks in the summer months.

With regard to the use of showers and baths, the majority of respondents reported using both. In both phases, over four fifths (82%) said they used showers and just under three quarters said they used baths (74% and 72%). The seasonal patterns show that although around two thirds use showers baths with the same frequency all year round, there are a third of respondents who shower more in the summer and a third of respondents who take baths more in the winter; the proportions are the same between the two phases.

Table 25: Seasonal and temporal trends in consumption of drinks (Numbers in brackets are 1995 figures)

Drink type	Do you drink				Trends over seasons									Trends in last 5 years								
	Yes %		No %		More in summer %			More in winter %			Same all year %			More nowadays %			Less nowadays %			About the same %		
	Ph1	Ph2	Ph1	Ph2	Ph1	Ph2	1995	Ph1	Ph2	1995	Ph1	Ph2	1995	Ph1	Ph2	1995	Ph1	Ph2	1995	Ph1	Ph2	1995
Plain tap water	86	86	13	13	49	50		1	0		49	49		30	33		5	5		62	61	
Bottled still water	53	61	44	37	57	56	50	1	0	1	40	43	49	36	39	40	9	5	8	52	54	51
Bottled sparkling water	19	24	77	72	47	45	41	1	0		52	54	59	38	32	36	11	9	5	51	57	59
Tea	79	78	18	19	3	4	5	19	16	18	77	79	77	15	13	17	7	8	8	76	77	75
Coffee	70	69	26	26	2	1	2	17	16	19	79	81	79	14	14	14	15	14	13	69	71	73
Instant Chocolate	38	35	59	61	1	2		63	63		35	33		10	10		23	21		65	67	
Cup-a-Soup	33	32	63	63	1	1		69	71		29	26		17	11		20	19		61	67	
Savoury (eg Bovril)	12	8	84	85	0	2		63	75		35	22		14	14		23	20		58	64	
Squash	70	69	28	28	60	61	67	0	0		38	38	33	20	23	16	11	8	11	67	67	73
Beer/lager/cider	58	59	39	36	34	35		1	1		65	61		12	10		26	26		60	61	
Wine	56	58	42	38	15	17		3	4		80	77		17	17		16	19		64	62	
Spirits	42	43	55	52	10	9		11	11		79	78		12	10		29	25		58	63	
Fruit Juice	79	77	19	19	34	31		1	1		65	67		17	20		7	6		74	71	
Fizzy drinks	63	62	34	31	36	34		1	0		63	64		8	13		22	16		68	69	
Milk	59	55	39	40	4	5		6	6		89	88		6	6		10	12		81	81	
Ready prepared soups	40	36	57	57	1	1		67	70		31	29		9	10		13	16		76	72	
Milkshake/yoghurt drinks	32	30	66	64	28	24		2	1		69	74		18	16		16	16		65	68	

Table 25:: Seasonal and temporal trends in bathing and washing

Exposure type	Do you use				Trends over seasons						Trends in last 5 years					
	Yes %		No %		More in summer %		More in winter %		Same all year %		More nowadays %		Less nowadays %		About the same %	
	Ph1	Ph2	Ph1	Ph2	Ph1	Ph2	Ph1	Ph2	Ph1	Ph2	Ph1	Ph2	Ph1	Ph2	Ph1	Ph2
Shower	82	82	15	14	32	32	0	0	67	67	19	21	3	1	77	77
Bath	74	72	23	23	7	9	29	30	63	61	6	9	18	17	74	73
Bathroom sink	88	87	9	9	7	9	1	1	92	89	4	5	2	3	92	90

NB. Where percentages add up to less than 100, respondents have not stated

6.3 Temporal Variations

There is a high level of consistency between the two phases in terms of the proportions of drink consumed nowadays compared to five years ago. Just over three fifths in both phases report that they drink about the same amount of tap water nowadays compared to five years ago, while around a third said that they drink more now than five years ago.

Although the number of “households” drinking bottled water has increased since 1995 (information taken from the main face-to-face interview), the self completion surveys indicate that the actual numbers of people reporting that they drink bottled water, of either variety, has remained fairly static compared to five years ago. Indeed, phase two shows an increase from the first phase in the proportion of those who say they consume the same amount of bottled sparkling water as they did five years ago.

There is no difference between the two phases in the reported consumption of tea and coffee, where between two thirds and three quarters say they drink about the same as they did five years ago.

The same is true for virtually all the other drink categories, with the exception of cup-a-soups, savoury drinks such as Bovril, and spirits, where a higher proportion of respondents in phase two (to the tune of 5% and 6%) said that their consumption of these drinks was the same as five years ago.

Peoples’ behaviour in regard to whether they take more showers and baths nowadays has remained the same between the two phases of this study, where around three quarters report that nothing has changed in their usage from five years ago. However, around a fifth said they have more showers nowadays, while a similar proportion report having less baths nowadays.

7. CONCLUSIONS

- Accent was commissioned by Defra to undertake the National Tap Water Consumption Survey in order to update the 1995 survey. The overarching objective of the survey was to provide a robust estimate of the average total daily tap water consumption in England and Wales and the proportion of total daily liquid consumption that this represents, and to detect whether there had been a change in average consumption of tap-water based drinks since the previous survey in 1995.
- As well as providing the latest picture on drinking water habits, the survey asked other exposure related questions at the same time, including questions about showering and bathing, whether consumers would reject water based on aesthetic considerations and whether they would follow “do not drink” or “boil” advice.
- The whole study took place over two phases: the first was undertaken in Spring 2008 and the second phase in summer 2008. The purpose of the second phase was to determine whether consumption of tap water was greater during the summer than the spring. This report details the findings of the second wave and compares the results with the first wave and with earlier surveys. Each wave comprises interviews with a target of 1000 households, where possible, the same households were used in both waves. The surveys used three different survey instruments as follows:
 - initial Head of Household/Chief Organiser interview
 - individual competent Household members’ interviews
 - all competent Household members to complete seven-day diary.
- In order to maintain consistency with the previous survey, a two-stage sampling strategy was adopted to select and recruit households. The first involved selecting the same ten planning regions as those used in the 1995 survey, across England and Wales. The second element was to identify, as near as possible, the same local authority districts used previously.
- When assessing the comparative **consumption** data (in terms of drinks’ consumption and water used for baths and showers) the following differences between the survey profiles should be noted:
 - 1978 survey: the consumption of children was included in the overall sample, with children being classified as aged 0-17 and adults as aged 18+
 - 1995 survey: the consumption of children was included in the overall sample, with children being classified as aged 0-15 and adults as aged 16+
 - 2008 survey: the consumption of children was not included in the overall sample, with adults being classified as aged 16+.

Direct comparisons are possible, therefore, in the **consumption** data between the adult data for the 1995 and 2008 surveys. Other **consumption** comparisons between phases have been presented, but the different profiles of the sample need to be borne in mind.

Valid comparisons can be made between the two phases of the 2008 study and on the majority of the other data presented within the report however, ie for all general household behaviour and trends, as the targets for this element of the study were consistent across all phases (ie the Head of Household).

Key Intake and Exposure Findings

- Across the whole sample there was a total of 79,117 drinks consumed in the summer months compared to 76,621 in phase one, an increase of 3.3%. The 1995 report did not report the total number of drinks consumed across the adult population, so it is not possible to make any comparisons between the two surveys.
- The arithmetic mean of the total daily liquid consumption, using weighted data from phase two, is 2.003 litres per day (lpd) compared to 1.931 lpd in phase one. This represents a marginal and insignificant increase 0.072 lpd (3.7%) from phase one and compares to the 1995 and 1978 estimates of 1.713 lpd and 2.042 lpd respectively¹². As the 1995 survey was only carried out in late winter/early spring it is only possible to make valid comparisons with phase one of the 2008 survey, which was carried out at a similar time of year. There is an observed difference of 0.218 (11.29%) between phase one of the 2008 study and the 1995 survey which, when subjected to statistical analysis, is a significant difference.
- The arithmetic mean of tap water consumption in phase two was 1.314 lpd compared to 1.275 lpd in phase one. This represents a small and insignificant increase of 0.039 lpd (3.5%). The adult consumption of tap water in 1995 was 1.275 lpd and 1.113 lpd in 1978¹³. As stated above, valid comparisons are not possible between the second phase of the 2008 survey, carried out in the summer, and the 1995 survey. However, there is no observed difference between phase one of the 2008 survey and the 1995 survey.
- The proportion of tap water in drinks increases with age, such that those 40 or over consume the most tap water, while the youngest age group consumes the least. As with both the previous studies of 1978 and 1995, the survey has shown that men drink more liquid overall, but women drink more tap water.
- Analysing water consumption by people's weight is a new feature in this study and is the first time such data has been collected. The data is taken from the consumer diaries and the results show that in terms of overall liquid consumption, the results are consistent with phase one, in that those who weigh less consume less.
- The mean tap water consumption of boiled water drinks eg tea, coffee and HMD, was 0.827 lpd in the spring survey and 0.552 lpd on the summer survey. This represents a significant reduction of 33% in the mean tap water consumption of boiled water drinks and reflects the fact that considerably less hot drinks were consumed in the summer.
- For the first time, this study has captured the liquid intake from sports bottles. While still a small proportion compared to some of the other containers used for consuming drinks, respondents consumed 0.025 lpd from sports bottles.

¹² The latter does not include data for 16-17 year olds who were considered children in the 1978 survey

¹³ As above.

- Across the sample the number of baths taken by respondents in phase two (summer) showed a marginal decrease (1%) compared to phase one (3181 cf 3221). Whereas the number of showers recorded showed a 6% increase in phase two compared to phase one (7576 cf 7143). These are the first data gathered in this respect.

Key Conclusions on Consumer Behaviour, Perceptions and Observations

- In terms of the quality of tap water, the vast majority of households in phase two have not had any problems with the quality or appearance of tap water in the last 12 to 18 months. In fact, there were even fewer people in phase two, compared to phase one, who had had water quality problems. Both phases showed a smaller percentage of households who had had water quality problems than in 1995.
- Where there were water quality issues, people were more cautious in phase two about using tap water for making drinks and brushing teeth. The increased caution in peoples' behaviour is thought to be mainly driven by an incident involving the issue of advice to boil water in Northampton. The vast majority in phase two, as with phase one, (89% cf 93%) said they would follow the advice completely when they received 'boil advice' or 'do not drink' notices.
- Exactly the same proportion (97%) in phase two reported using tap water for making drinks as in phase one; this compares to 99% in the 1995 survey. The same is true of those households that use the kitchen cold tap for making drinks or drinking water, where 97% in both phases reported doing this, whilst 11% in phase two (cf 12% in phase one), said they used the kitchen hot tap to make drinks. This compares with 95% and 3% respectively in the 1995 study, and 95% and 8% in the 1978 study who used the cold and hot water taps to make drinks.
- There has been a reduction in the number of households, 49% in phase one to 41% in phase two, reporting that someone within their household filled sports bottles with tap water to drink when they were not at home. As with phase one, the vast majority reported that it was one or two people who consumed tap water in this way, 88% in phase two compared to 85% in phase one.
- There was a slight reduction from phase one to phase two in the number of people who reported owning various appliances like water filtering jugs and cold water dispensers in fridges. This is possibly due to the 'top up' sample added to phase 2 owning fewer of the listed appliances. Notwithstanding this, phase two shows a consistent pattern to phase one compared to 1995, where there has been a significant increase since 1995 in the proportion of people who own water filtering jugs, as well as a significant decrease in those who own soda stream type appliances and teas made machines.
- There was little difference between the two phases in terms of those who used any extra form of water treatment. Around three quarters, (76% in phase two cf 74% cf in phase one), did not use any extra water treatment process. The proportions of people who used different water treatment processes were virtually the same between the two phases where nearly one fifth (18% in both phases) filtered the water and one eighth (13% phase 1 and 12% phase 2) boiled the tap water (allowing

it to cool before using it). In 1995 only 9% filtered their tap water, so the 2008 proportion represents a significant increase from the last survey.

- Again, there is little difference between the two phases in the first use of tap water in the day, where around three quarters (73% in phase one and 74% in phase two) washed and/or used the toilet before using tap water to prepare a drink.
- The face to face surveys showed that, in phase two, a total of 46% of households used bottled water for drinking; this compares with 44% in phase one and 30% in 1995. There is therefore no real difference between the two 2008 phases, but they do represent a big increase since 1995. The second phase is also consistent with the first phase in that many more households drink still bottled water than its sparkling counterpart. Around a third of households (33% in phase one and 35% in phase two), a significant increase from a quarter of households in 1995, consumed still bottled water and fewer than one in ten (8% in phase one and 7% in phase two) consumed sparkling water, which is half the number of households than in 1995.
- Although the number of households drinking bottled water has increased, the actual number of people drinking bottled water, as indicated by the self completion surveys, has remained fairly static between the two phases. If anything, there are slightly fewer consumers of bottled water in 2008 compared to 1995. However, the 2008 study does show that more people say they drink more bottled water in the summer now than said they did in 1995.
- There were a variety of different bottled water brands mentioned, with two imported brands being reported as being most frequently consumed. Supermarkets' own brands were also reported as being quite frequently consumed, particularly where sparkling water is concerned. It is unclear to what extent bottled water acts as a substitute for drinking tap water.
- Although the number of cups of tea and also coffee has dropped between the Spring and Summer waves of research, the proportions stating that they consume tea and coffee has largely remained the same between the two phases, which means between two thirds and three quarters say they drink about the same as they did five years ago. These proportions are not dissimilar to the 1995 study.
- Again, although the diary data showed that there were changes in the actual number of showers and baths taken between the Spring and Summer waves of research (with the number of baths down and the number of showers up), the actual proportions of people taking showers and baths remain similar, with the majority of respondents reporting using both. In both phases, over four fifths (82%) said they used showers and just under three quarters said they used baths (74% and 72%).

APPENDIX A

Face to face questionnaire

Interviewer Number

Interviewer Name

Date: /

Time Interview started :

Day temperature:

Household No:

Individual No:

Recruitment

Good morning/afternoon/evening. My name is from Accent and I am carrying out research for the Drinking Water Inspectorate who need to know how much tap water people consume in one way or another, for future planning purposes.

In order to find this out, they have asked us to conduct a survey of a representative number of households throughout the country. Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society.

Q1. Do you or any members of your family work in the following industries?

- 1. market research ☐
- 2. journalism ☐
- 3. PR ☐
- 4. water industry ☐
- 5. None of the above ☐ **CONTINUE**

IF YES THANK AND CLOSE

Q2. Do not ask, note gender

- 1. male ☐
- 2. female ☐

Q3. We are looking for a range of different people to take part in our research. If we were to ask each person within your household to collect information about your tap water consumption, who within your household would be most likely to co-ordinate that?

- 1. Respondent **ASK RESPONDENT WHAT THEIR OCCUPATION IS**
- 2. Someone else **ASK WHAT THAT PERSON'S OCCUPATION IS**
- 3. Don't know **ASK FOR CHIEF WAGE EARNER: IF NAME GIVEN, ASK WHAT THE OCCUPATION OF THAT PERSON IS**

INTERVIEWER: PLEASE CODE BELOW

- 1. AB ☐
- 2. C1 ☐
- 3. C2 ☐
- 4. DE ☐

Q4. And into which of the following age groups do you fall?

- 1. 16 to 34 ☐
- 2. 35 to 54 ☐
- 3. 55+ ☐

Q5. Do you mind if I ask you what weight band do you fall into as it will really help with our analysis of tap water consumption? **PLEASE SHOW RESPONDENT SHOWCARD**

- 1. up to 10 stone or up to 64 kg ☐
- 2. 10 to 12 stone or 64 to 76 kg ☐
- 3. 12 to 15 stone or 76 to 95 kg ☐
- 4. Over 15 stone or more than 95 kg ☐
- 5. Refused ☐

Q6. Tenure?

- 1. Owner occupier ☐
- 2. Local Authority ☐
- 3. Other rented (includes private rented/HA rented/tied) ☐

Q7. Household type?

1. Household with 1 or more children aged 0-15 years old ☐
2. Household with 2 or more adults (no children) ☐
3. Household with 1 non-pensionable adult ☐
4. Household with 2 or more pensionable only ☐
5. Household with 1 pensionable only ☐
6. Household with 1 worker and 1 pensioner ☐
7. Household with pensioner who is also still working ☐
8. Other (please specify) ☐ _____

Q8. Which of the following ethnic origin groups are you from? **PLEASE SHOW RESPONDENT SHOWCARD**

- | | | | |
|----------------|--------------------------|-------------------------|--------------------------|
| 1. White | <input type="checkbox"/> | 5. Black African | <input type="checkbox"/> |
| 2. Bangladeshi | <input type="checkbox"/> | 6. Black Caribbean | <input type="checkbox"/> |
| 3. Indian | <input type="checkbox"/> | 7. Other Black or Asian | <input type="checkbox"/> |
| 4. Pakistani | <input type="checkbox"/> | | |

CHECK QUOTAS & PROCEED TO MAIN INVITATION IF POSSIBLE, OTHERWISE THANK & CLOSE

Main Questionnaire

The questionnaire will take about 10 minutes. You do not have to answer questions you do not wish to and you can terminate the interview at any point. All the answers you provide are purely for research purposes and will be in the strictest confidence.

As well as completing the questionnaire I will be asking all members of your household, who are 16 and over, to complete a seven day diary of the tap water that they use, as well as a self completion questionnaire. To show our appreciation of you taking part we would like to give you £8 when your household has completed this set of surveys.

NOTE TO INTERVIEWERS: PLEASE ENSURE OBTAIN AGREEMENT TO DO THE DIARIES AND SELF-COMPLETION SURVEYS BEFORE YOU PROCEED

Q9. Is your home connected to the mains supply?

- | | | |
|---------------------------------------|--------------------------|------------------|
| 1. Yes | <input type="checkbox"/> | GO TO Q11 |
| 2. Yes, but water supply disconnected | <input type="checkbox"/> | GO TO Q10 |
| 3. No | <input type="checkbox"/> | GO TO Q10 |

Q10. So where or how do you get water for making drinks at home? **(MULTI CODE)**

- | | |
|--------------------------------|--------------------------------|
| 1. Well water supply | <input type="checkbox"/> |
| 2. Rain water supply | <input type="checkbox"/> |
| 3. Spring water from source | <input type="checkbox"/> |
| 4. Bottle water | <input type="checkbox"/> |
| 5. From a communal stand-pipe | <input type="checkbox"/> |
| 6. Other source (please state) | <input type="checkbox"/> _____ |

Q11. Thinking about all the cold and hot water taps in or around your home. Starting with the kitchen, do you or any other people in your household, make drinks or drink water **using water from the kitchen cold tap?**

- | | | | | | |
|--------|--------------------------|------------------|-------|--------------------------|------------------|
| 1. Yes | <input type="checkbox"/> | GO TO Q12 | 2. No | <input type="checkbox"/> | GO TO Q13 |
|--------|--------------------------|------------------|-------|--------------------------|------------------|

Q12. Is that often (daily or most days) or just sometimes? **ASK IF Q11 = Yes**

- | | | | |
|----------|--------------------------|--------------|--------------------------|
| 1. Often | <input type="checkbox"/> | 2. Sometimes | <input type="checkbox"/> |
|----------|--------------------------|--------------|--------------------------|

Q13. And what about the kitchen hot tap, does anyone make drinks or drink water **using water from the kitchen hot tap**

1. Yes ☐ **GO TO Q14**

2. No ☐ **GO TO Q15**

Q14. Is that often (daily or most days) or just sometimes? **ASK IF Q13 = Yes**

1. Often ☐

2. Sometimes ☐

Q15. Now thinking of other cold and hot water taps in or around your home, are there any cold and hot taps which you use for making drinks or drinking water?

PROMPT: IS THAT THE HOT AND/OR COLD WATER TAP?

PROMPT: IF ANY, IS THAT OFTEN OR SOMETIMES

ROOM (eg bathroom, bedroom)	Cold			Hot		
	Often	Sometimes	None	Often	Sometimes	None
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q16. Do you have any of the following appliances in your home? If yes, how often are they used?

	Yes No		Most days or every day	Once a week or so	Rarely (monthly or less)	At Certain times of the year	Never
	Yes	No					
A Water filtering jug	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A plumbed in special water filtering tap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A bottled water cooler machine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A water softening device eg a 'Permutit'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 'soda-stream' or fizzy drinks appliances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A 'Teas-made' machine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A cold water dispenser in your fridge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please state)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q17. So far as you know, does anyone in your household use any other source of water for drinking purposes, apart from using the tap?

1. Yes ☐ **GO TO Q18**

2. No ☐ **GO TO Q21**

Q18. What other sources do you use (**ASK IF Q17 = YES**)

1. Bottled water ☐
2. Rain water ☐
3. Well water ☐
4. Loch/river water ☐
5. Stream water ☐
6. Spring water ☐
7. Other source (please state) ☐

Q19. Does anyone in your household drink or make drinks with bottled water?

ONLY ASK IF BOTTLED WATER NOT MENTIONED AT Q18

1. Yes ☐ **GO TO Q20**

2. No ☐ **GO TO Q21**

Q20. And which brands of bottled water are generally drunk? **ONLY ASK IF BOTTLED WATER MENTIONED AT Q18 OR Q19**

Do you use still water: if Yes which brands?

☐ Yes ☐ No

Brand Name

Do you use sparkling water: if Yes, which brands?

☐ Yes ☐ No

Brand Name

Q21. So far as you know, does anyone in your household treat their tap water in any of the following ways before drinking it? **TICK ALL THAT APPLY (MULTI CODE)**

- | | |
|---|--------------------------|
| 1. Use sterilising tablets | <input type="checkbox"/> |
| 2. Boil the tap water (allowing it to cool before using it) | <input type="checkbox"/> |
| 3. Filter the water | <input type="checkbox"/> |
| 4. Put it into a special fridge water dispenser | <input type="checkbox"/> |
| 5. Any other treatment (please state) | <input type="checkbox"/> |
| 6. None of the above | <input type="checkbox"/> |

Q22. So far as you know, does anyone in your household fill sports bottles with tap water to drink when they are not at home?

1. Yes ☐ **GO TO Q23**

2. No ☐ **GO TO Q24**

Q23. And can you say how many people in your household actually fill sports bottles with tap water to drink when they are not at home?

- | | |
|--------------------------|--------------------------|
| 1. One person | <input type="checkbox"/> |
| 2. Two people | <input type="checkbox"/> |
| 3. Three people | <input type="checkbox"/> |
| 4. Four people | <input type="checkbox"/> |
| 5. Five people | <input type="checkbox"/> |
| 6. More than five people | <input type="checkbox"/> |

Q24. Does anyone in the household **not** use tap water **at all** for drinking or making drinks?

1. Yes ☐ **GO TO Q25**

2. No ☐ **GO TO Q26**

Q25. If Yes above please could you say

Who

--

What do they use?

--

And why don't they drink tap water?

--

Q26. Thinking about the start of the day when the first person in the house gets up would you say, in general, the first use of the household's water is for making a drink - or is it to run water for washing, flushing the toilet and so on?

1. Uses the tap to prepare a drink, before washing/using the toilet
2. Wash and/or use the toilet first
3. Other (please state)

☐
☐
☐

Q27. Within the past 12 to 18 months, has anyone in your household had any problems with the quality or appearance of tap water used for drinking?

- | | Yes | No |
|-------------------------|--------------------------|--------------------------|
| 1. Smell | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Colour | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Taste | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Other (please state) | <input type="checkbox"/> | <input type="checkbox"/> |

IF NO TO ALL GO TO Q36

Q28. And what were those problems? **ONLY ASK WHERE RESPONDENT HAD PROBLEMS ABOVE**

Smell.....

Colour.....

Taste

Other (please state) ...

Q29. In those areas where you had problems did you report the problem or make a complaint?

1. Yes ☐ **GO TO Q30**

2. No ☐ **GO TO Q33**

Q30. And who did you report it or complain to? **ONLY ASK IF Q29 = YES**

	Water company	Consumer Council for Water	Ofwat	Public Health	Other
Smell	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Taste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please state)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q31. And was your complaint or report dealt with in a satisfactory way? **ONLY ASK IF COMPLAINED AT Q29**

- | | Yes | No |
|-------------------------|--------------------------|--------------------------|
| 1. Smell | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Colour | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Taste | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Other (please state) | <input type="checkbox"/> | <input type="checkbox"/> |

Q32. If your query was not dealt with in a satisfactory way please say why.

ONLY ASK IF ANY OF Q31 = NO

Smell

Colour

Taste

Other (please state)

Q33. Whilst your problem was ongoing did you do any of the following?

1. Use the hot and cold water taps for drinking water or making drinks
2. Boil water first, before making drinks
3. Take showers and/or baths
4. Use the hot and cold water taps for washing face and/or brushing teeth

Yes No

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

IF YES TO ANY GO TO Q34, IF NO TO ANY GO TO Q35

Q34. And did you do it with the same frequency or less often than normal?

1. Use the hot or cold water taps for drinking water or making drinks
2. Boil water first, before making drinks
3. Take showers and/or baths
4. Use the hot and cold water taps for washing face and/or brushing teeth

Same frequency Less often

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

IF 'LESS OFTEN' TO ANY GO TO Q35

Q35. If not, or done less often, please can you say why?

ONLY ASK IF NO AT Q33 AND LESS OFTEN AT Q34

Use the hot and cold water taps for drinking water or making drinks

Boil water first, before making drinks

Take showers and/or baths

Use the hot and cold water taps for washing face and/or brushing teeth

THOSE WHO HAVE ANSWERED Q34 OR Q35 GO TO Q40

Q36. Even if you have not had any problems with the quality eg taste and smell or appearance of your water in the last 12 to 18 months, I would like to ask what you would do if you did have such problems. If you had any problems with the quality or appearance of your tap water would you report the problem or make a complaint?

1. Yes ☐ 2. No ☐ **GO TO Q38**

Q37. And who would you report it or complain to? **ONLY ASK IF 36 = YES (SINGLE CODE)**

1. Water company ☐
2. Consumer Council for Water ☐
3. Ofwat ☐
4. Public Health ☐
5. Other (please state) ☐ _____

Q38. And if you had a problem would you do any of the following?

- | | Yes | No | Not sure |
|---|--------------------------|--------------------------|--------------------------|
| 1. Use the hot and cold water taps for drinking water or making drinks | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Boil water first, before making drinks | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Take showers and/or baths | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Use the hot and cold water taps for washing face and/or brushing teeth | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

IF 'YES' TO ANY GO TO Q39. IF NO OR NOT SURE TO ALL GO TO Q40

Q39. And would you do it with the same frequency or less often than normal?

- | | Same frequency | Less often |
|---|--------------------------|--------------------------|
| 1. Use the hot and cold water taps for drinking water or making drinks | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Boil water first, before making drinks | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Take showers and/or baths | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Use the hot and cold water taps for washing face and/or brushing teeth | <input type="checkbox"/> | <input type="checkbox"/> |

Q40. Before we finish I would just like to ask you what action you and your household would take on the rare occasions that water companies have to send out 'boil notices' or 'do not drink notices'.
On receiving such notices would you

1. Follow the advice completely ☐
2. Follow the advice somewhat ☐
3. Ignore the advice ☐

Q41. And would you continue to ...

- | | Yes | No |
|---|--------------------------|--------------------------|
| 1. Take showers and/or baths | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Use the hot and cold water taps for washing face and/or brushing teeth | <input type="checkbox"/> | <input type="checkbox"/> |

Q42. As mentioned earlier we would like everyone in the household who is 16 and over to complete a 7 day diary about their consumption of drinks. We therefore just need to be sure we include everyone living in your household in the diary completion. I'd like to emphasise that any information given is in the strictest of confidence and will not be used for any other purpose except for this survey - the results won't identify you or any other members of your household.

For each member of the household, please state their first name, gender and their age last birthday.

PLEASE TURN OVER

Name	M/F	Age	last birthday	Individual code

As well as the actual diary there is a short and simple instruction sheet which explains how the diary should be completed. I will take a moment to go through it with you now and then at the end of the week I'll come and collect all the forms.

THANK YOU FOR YOUR HELP IN THIS RESEARCH

This research was conducted under the terms of the MRS Code of Conduct and is completely confidential.

If you would like to confirm my credentials or those of Accent please call the MRS free on 0500396999.

HAND OVER THE THANK YOU SLIP

Please can I take a note of your name and where we can contact you for quality control purposes?

Respondent name:

Telephone number:Mobile:

Thank you

I confirm that this interview was conducted under the terms of the MRS Code of conduct and is completely confidential.

Interviewer's signature

TIME INTERVIEW COMPLETED

		:		
--	--	---	--	--

APPENDIX B

Self completion individual questionnaire

INTERVIEWER TO COMPLETE THESE CODES:

Region

District

FOR OFFICE USE ONLY

FOR OFFICE USE ONLY

--	--	--

--	--	--

Name

--

HOUSEHOLD

--	--	--	--

INDIVIDUAL CODE

--	--	--

Individual Questionnaire

This questionnaire is to help us get a national picture of people's drinking behaviour. Because peoples' drinking behaviour is different we need a completed questionnaire for everyone who fills in a diary.

We want you to think about **all** drinks you consume.

There are four basic questions:

- What **type** of drinks you consume
- For **each** type of drink consumed, do you drink more of it in the summer, more in winter or about the **same** all year round
- For each type of drink consumed, are you tending to drink **more** of it now than in the past (say 5 years ago), or **less** of it now.
- The final section asks about tap water use for washing/bathing, using a similar format to the previous questions.

PLEASE COMPLETE THE QUESTIONNAIRE USING A BLACK BIRO

Please put a cross (X) in **one** box Yes ☐ or No ☐ - column **A** for each drink listed, or ones which you have added. Then for **every** Yes, **move across** and put a cross (X) in one box for column **B** - Trends over seasons, then **move** across and put a cross (X) in one box for column **C** - Trends in last 5 years.

Do you drink		Trends over seasons	Trends in last 5 years
--------------	--	---------------------	------------------------

WATER	A	B	C
Plain tap water	Yes <input type="checkbox"/> No <input type="checkbox"/>	More in summer <input type="checkbox"/> More in winter <input type="checkbox"/> Same all year <input type="checkbox"/>	More nowadays <input type="checkbox"/> Less nowadays <input type="checkbox"/> About the same <input type="checkbox"/>
Bottled still water	Yes <input type="checkbox"/> No <input type="checkbox"/>	More in summer <input type="checkbox"/> More in winter <input type="checkbox"/> Same all year <input type="checkbox"/>	More nowadays <input type="checkbox"/> Less nowadays <input type="checkbox"/> About the same <input type="checkbox"/>
Bottled sparkling water	Yes <input type="checkbox"/> No <input type="checkbox"/>	More in summer <input type="checkbox"/> More in winter <input type="checkbox"/> Same all year <input type="checkbox"/>	More nowadays <input type="checkbox"/> Less nowadays <input type="checkbox"/> About the same <input type="checkbox"/>

Hot Tap Water Based**A****B****C**

Tea	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Coffee	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Instant chocolate/malt	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Savoury (Bovril/Oxo)	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Cup-a-Soup	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>

Alcohol**A****B****C**

Beer/lager/cider	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Wine	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Spirits	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Home-made beer/lager/cider	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
Home-made wine	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>

Cold Tap Water Based**A****B****C**

Squashed/cordial/syrups	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>

DEACTIVATED

Other drinks**A****B****C**

Milk

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Fruit juice

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Fizzy drinks

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Milkshakes/yoghurt drinks

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Ready prepared soups

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Food Drink

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Write in name of drink

Health drinks

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Write in name of drink

Sport drinks

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Write in name of drink

Slimming drinks

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Write in name of drink

Other

Write in name of drink
eg lattes, hot chocolateYes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Other

Write in name of drink

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Other

Write in name of drink

Yes ☐No ☐More in summer ☐More in winter ☐Same all year ☐More nowadays ☐Less nowadays ☐About the same ☐

Do you use		Trends over seasons		Trends in last 5 years		
A		B		C		
A shower	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
A bath	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>
A bathroom sink for washing	Yes	<input type="checkbox"/>	More in summer	<input type="checkbox"/>	More nowadays	<input type="checkbox"/>
	No	<input type="checkbox"/>	More in winter	<input type="checkbox"/>	Less nowadays	<input type="checkbox"/>
			Same all year	<input type="checkbox"/>	About the same	<input type="checkbox"/>

APPENDIX C

Self completion diary

Household: Individual: **Accent**

1763

**National Tap Water Consumption Survey: 2008
Daily Diary**First Name: Postcode Age: Approx. weight

FOR OFFICE USE ONLY

Household: Individual: No. do drinks **O 1****Please put 'X' in the day of the week you are completing this diary for (one diary must be completed for each day of the week; one page for each drink consumed or bath/shower taken)**Monday ☐Tuesday ☐Wednesday ☐Thursday ☐Friday ☐Saturday ☐Sunday ☐**Tap water usage for drinks/food (please put 'X' in one box only)**Coffee ☐Hot milky drinks ☐Soft drink ☐Alcohol ☐Other ☐Tea ☐Fruit juice ☐Fizzy drink ☐Water based food ☐**Size of container**cup ☐mug ☐small glass ☐large glass ☐pint mug ☐bottle ☐sports bottle ☐small bowl ☐large bowl ☐Other (what?) **How full was it?**full ☐3/4 full ☐1/2 full ☐1/4 full ☐less than 1/4 full ☐**How much of the contents was tap water?**All ☐3/4 ☐1/2 ☐1/4 ☐less than 1/4 ☐None ☐**When did you consume it? (using 24 hr clock)****Early morning**
01:00 - 06:00**morning**
07:00 - 11:00**afternoon**
12:00 - 16:00**evening**
17:00 - 20:00**night**
21:00 - 24:00

1 <input type="checkbox"/>	3 <input type="checkbox"/>	5 <input type="checkbox"/>	7 <input type="checkbox"/>	9 <input type="checkbox"/>	11 <input type="checkbox"/>	13 <input type="checkbox"/>	15 <input type="checkbox"/>	17 <input type="checkbox"/>	19 <input type="checkbox"/>	21 <input type="checkbox"/>	23 <input type="checkbox"/>
2 <input type="checkbox"/>	4 <input type="checkbox"/>	6 <input type="checkbox"/>	8 <input type="checkbox"/>	10 <input type="checkbox"/>	12 <input type="checkbox"/>	14 <input type="checkbox"/>	16 <input type="checkbox"/>	18 <input type="checkbox"/>	20 <input type="checkbox"/>	22 <input type="checkbox"/>	24 <input type="checkbox"/>


Where did you consume it?Home ☐Work ☐Friend/relatives ☐School ☐Shop/cafe ☐Bar/pub ☐on journey ☐other ☐

Please use one page for each drink consumed.

Tap water usage for drinks/food (please put 'X' in one box only)

Coffee ☐ Hot milky drinks ☐ Soft drink ☐ Alcohol ☐ Other ☐
 Tea ☐ Fruit juice ☐ Fizzy drink ☐ Water based food ☐

Size of container

cup mug small glass large glass pint mug bottle sports bottle small bowl large bowl Other (what?)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐


How full was it?

full ☐ 3/4 full ☐ 1/2 full ☐ 1/4 full ☐ less than 1/4 full ☐

How much of the contents was tap water?

All ☐ 3/4 ☐ 1/2 ☐ 1/4 ☐ less than 1/4 ☐ None ☐

When did you consume it? (using 24 hr clock)

Early morning 01:00 - 06:00				morning 07:00 - 11:00				afternoon 12:00 - 16:00				evening 17:00 - 20:00				night 21:00 - 24:00							
1	<input type="checkbox"/>	3	<input type="checkbox"/>	5	<input type="checkbox"/>	7	<input type="checkbox"/>	9	<input type="checkbox"/>	11	<input type="checkbox"/>	13	<input type="checkbox"/>	15	<input type="checkbox"/>	17	<input type="checkbox"/>	19	<input type="checkbox"/>	21	<input type="checkbox"/>	23	<input type="checkbox"/>
2	<input type="checkbox"/>	4	<input type="checkbox"/>	6	<input type="checkbox"/>	8	<input type="checkbox"/>	10	<input type="checkbox"/>	12	<input type="checkbox"/>	14	<input type="checkbox"/>	16	<input type="checkbox"/>	18	<input type="checkbox"/>	20	<input type="checkbox"/>	22	<input type="checkbox"/>	24	<input type="checkbox"/>

Where did you consume it?

Home ☐ Work ☐ Friend/relatives ☐ School ☐ Shop/cafe ☐ Bar/pub ☐ on journey ☐ other ☐



Please put a cross ('X') in one box for each shower/bath taken

Number of baths/showers

Tap Water Usage for baths/showers

1

Bath ☐ Shower ☐

How long did you shower/bath?

less than 2 minutes	2-5 mintues	6-10 minutes	11-15 minutes	16-30 mintues	over 30 mintues
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How long did you stay in the bathroom after your shower/bath

less than 2 minutes	2-5 mintues	6-10 minutes	11-15 minutes	16-30 mintues	over 30 mintues
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tap Water Usage for baths/showers

2

Bath ☐ Shower ☐

How long did you shower/bath?

less than 2 minutes	2-5 mintues	6-10 minutes	11-15 minutes	16-30 mintues	over 30 mintues
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How long did you stay in the bathroom after your shower/bath

less than 2 minutes	2-5 mintues	6-10 minutes	11-15 minutes	16-30 mintues	over 30 mintues
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tap Water Usage for baths/showers

3

Bath ☐ Shower ☐

How long did you shower/bath?

less than 2 minutes	2-5 mintues	6-10 minutes	11-15 minutes	16-30 mintues	over 30 mintues
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How long did you stay in the bathroom after your shower/bath

less than 2 minutes	2-5 mintues	6-10 minutes	11-15 minutes	16-30 mintues	over 30 mintues
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

