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 respectively. 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 1.329 lpd compared to 1.284 lpd in phase one. This represents a small and insignificant increase of 0.045 lpd (3.5%). The adult consumption of tap water in 1995 was 1.275 lpd and 1.113 lpd in 1978. 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, the observed difference between phase one of the 2008 survey and the 1995 survey is therefore a statistically insignificant increase of 0.009 lpd (0.7%).

- 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 below 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.

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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%).