

### THE SUMMER OF 2003.

The summer of 2003 with its "index" of 735.3 ranked in 5<sup>th</sup> place in order of excellence in data extending back to 1956, behind [in order] 1995, 1976, 1975 and 1989. The air maximum of 33.1C/91.6F was the highest since 1990 and the 2<sup>nd</sup> highest on record. The summer mean maximum of 22.5C/72.5F was the best since 1995 and the 4<sup>th</sup> highest on record whilst the mean minimum of 12.1C/53.8F was the highest ever recorded on this site [previous 11.7C/53.1F in 1997]. The mean daily temperature ended at 17.3C/63.1F giving the 2<sup>nd</sup> equal highest figure on record [17.4C/63.3F in 1995].

All soil and earth temperatures show marked positive anomalies ranging from +3.2C at 5cm depth to +1.6C at 100cm depth. The soil temperatures for August were particularly high leaving the ground baked hard with very severe cracking.

The mean maximum of 22.5C/72.5F was +2.0C above normal, the mean minimum of 12.1C/53.8F was +1.4C above normal, with the mean daily of 17.3C/63.1F was +1.7C above.

Rainfall at 114.3mm/4.50ins was 60mm/2.36ins below expectation and the lowest since 2000, though several years showed values well below this figure. This gave a percentage value of 65.5% for summer rainfall. Duration of rain at 92.4hrs was also well below expectation by 35.1 hours making this also the lowest since 2000. Air pressure has been roughly average for the season though the maximum MSL pressure was slightly below expectation.

Rain fell on 30 days, down on normal, though the 7 days with thunder was 2 above expectation. In terms of other summers we had 10 in 1999 and 16 in 1982. No fog or hail was recorded.

Sunshine at 621.9hours was 59.4hours above normal and the highest since 1999. In all 4 days were sunless, about average for the season though the sunniest day with its 15.3hours also ended roughly in line with recent years. In percentage terms 2003 saw a figure of 111% for total summer sunshine.

Winds were light averaging 6kn/7mph with no gusts to gale force recorded. The single grass frost of -0.6C/30.9F on August 31<sup>st</sup> was the first since 2000 though since 1956 grass frost has occurred in summer on 25 occasions! Mean humidity at 74.1% was low for the summer, the norm being 79.5%, giving the lowest figures since the 73.3% in the summer of 1996. The lowest on record was the 66.4% registered during the quite exceptional summer of 1976!

In terms of water conservation the situation is now becoming quite acute, though very little seems to have been mentioned about this in the media to date. I feel that at some stage in the near future someone will cotton on to the fact that rainfall has been so much less than evaporation over the year to merit serious consideration.

The summer produced a total of 114.3mm/4.50ins of rain whilst evaporation for the same period amounted to 263.5mm/10.37ins. This

equates to a water *loss* of 149.2mm/5.87ins that is both substantial and worrying for hydrologists.

So, though we have had a good summer, it has not broken any long-standing records, and has ended with a considerable water deficiency. We must hope for adequate rainfall over the autumn, provided that this does not come with the very heavy and prolonged seasonal rainfall of recent autumns, the cause of widespread flooding along the Midland Rivers and on the flood plains.