



METEOROLOGICAL OFFICE

ESTIMATED SOIL MOISTURE DEFICIT AND POTENTIAL
EVAPOTRANSPIRATION OVER GREAT BRITAIN

SOIL MOISTURE DEFICIT AT 0900 GMT ON 27 SEPTEMBER 1978

The day on which the last bulletin was published (13 September 1978) was wet over almost the whole country with amounts exceeding 12 mm in East Anglia, west Wales, north-west England and south-west Scotland; thunderstorms occurred in south-east England. Over much of southern England, the rest of the fortnight was dry and at many places in the south, the 13th was the only rainy day since 7 September. Rainfall was mainly light over the remainder of England, the midlands and north although rainfall occurred generally in these areas on 24th and was heavy in the Manchester area on 26th. Over Scotland, weather was much more unsettled during the fortnight; heavy rain fell in the north on 14th and 15th and a heavy thunderstorm was reported in the Glasgow area on 25th. Rainfall was not everywhere heavy in the fortnight and amounts were mainly small in north-east Scotland.

Rainfall was below average for the fortnight everywhere except the north of Scotland and was well below average over most of southern England, the east Midlands, Vale of York and Fife and Aberdeen.

At this time of year, evaporation rates are beginning to fall rapidly and smaller amounts of rain are needed to reduce soil moisture deficits. Moreover, after a dry late summer, soil moisture deficits are at a high level and any increase in potential deficit results in a small increase in actual. These are factors which inhibit increases in deficits in late September. Nevertheless, deficits have increased over most parts of England and Wales (except Northumbria and the North West) and are above average in all areas (except the North), even in Lincolnshire and East Anglia where they have been very slow to build during the summer. Deficits are more than twice the average in parts of the West Country and east Wales.

Over Scotland, general deficits have decreased slightly over most RPB areas (they have increased slightly over Forth). A more substantial decrease is apparent in Highland and decreases are marked in the Western and Northern Islands. Deficits are below average for near end of September, except over Solway generally.

RATES OF SUBSCRIPTION: £15.00 per season (post free)

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ESTIMATED SOIL MOISTURE DEFICIT (S.M.D.)
AT 09 GMT ON 28 SEPTEMBER 1978

River Area	Estimated Areal	Change during the week ending 09 GMT on	
	S.M.D. mm	27 September 1978 mm	20 September 1978 mm
Northumbrian	39.2	+ 1.3	+ 1.1
Yorkshire	63.8	+ 4.2	+ 9.6
Trent	75.2	+ 4.8	+ 8.1
Lincolnshire	83.0	+ 5.5	+10.9
Welland and Nene	94.9	+ 5.7	+ 7.9
Great Ouse	99.7	+ 6.1	+ 4.7
Norfolk and Suffolk	92.4	+ 6.6	+ 4.0
Essex	119.5	+ 3.9	+ 1.4
Lee Division	111.9	+ 4.5	+ 1.8
Thames Conservancy	99.8	+ 3.8	+ 5.5
London Area	119.0	+ 4.6	+ 3.0
Kent	116.5	+ 2.8	+ 2.8
Sussex	109.4	+ 2.7	+ 3.6
Hampshire	92.6	+ 3.5	+ 2.5
Isle of Wight	127.0	+ 3.4	+ 5.2
Upper Thames	103.6	+ 5.0	+13.1
Avon and Dorset	99.5	+ 6.5	+ 5.5
Devon	94.8	+ 5.5	+ 3.9
Cornwall	94.8	+ 5.6	+ 3.8
Somerset	94.8	+ 6.4	+ 5.3
Bristol Avon	107.8	+ 5.2	+10.5
Severn	80.5	+ 3.6	+ 4.0
Wye	97.4	+ 5.4	+ 8.4
Usk	81.9	+ 7.2	+ 7.4
Glamorgan	63.0	+ 8.0	+ 2.5
South West Wales	45.9	+ 7.1	- 2.7
Gwynedd	46.3	- 0.9	+ 2.0
Dee and Clwyd	41.3	- 2.5	+ 2.6
Mersey and Weaver	30.8	- 7.3	+ 5.4
Lancashire	16.3	- 5.2	+ 4.1
Cumbria	19.0	- 4.2	- 8.8

N.B. Apart from normal changes these differences also reflect retrospective adjustments after receipt of additional data.



