



METEOROLOGICAL OFFICE

ESTIMATED SOIL MOISTURE DEFICIT AND POTENTIAL
EVAPOTRANSPIRATION OVER GREAT BRITAIN

SOIL MOISTURE DEFICIT AT 0900 GMT ON 2 JANUARY 1980

The few days following the preparation of the previous bulletin (12 December 1979) were wet in most areas, particularly in the east Midlands and north-west Scotland on 12th. The 13th was the second wettest day of the year over England and Wales. The area of heaviest rainfall on 13th extended from Salisbury Plain across the south Midlands to the Wash: more than 40 mm was recorded at Oxford. There was also a parallel area of heavy rain from South Wales across the south Pennines to the North York Moors. There was more heavy precipitation in South Wales, south-west England and northern Scotland (where it occurred as snow) on 14th. The 16th and 17th were also wet days in northern Scotland but in general the period 15th to 24th was rather dry over most of the country.

The most remarkable rainfall event of the year occurred on 26-27th December when heavy prolonged rainfall was recorded in Southern Britain. Amounts for the two days exceeded 175 mm on the Devon Moors, 160 mm on the Welsh mountains and 50 mm as far east as Kent. Widespread flooding, possibly the worst since 1960 in some areas, followed the rainfall and there was considerable damage and even some loss of life. The 27th was the third wettest rainfall day over England and Wales since 1950, the previous wettest being in July 1959. Rainfall was also heavy in north-west England and south-west Scotland on 25th-26th; the rainfall was associated with a rather different weather system and flooding occurred. More than 100 mm was recorded in the Lake District on the two days. The few days from 28 December to 1 January were mainly quiet and dry, although there was some widespread slight snowfall.

Virtually the whole of the country is at field capacity with regard to short-rooted vegetation and no map has been prepared. The areal land use deficits shown for river areas from Lincolnshire to Essex are about average for the time of year.

RATES OF SUBSCRIPTION: £16.32 per season (post free)

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ESTIMATED SOIL MOISTURE DEFICIT (S.M.D.)
AT 09 GMT ON 2 JANUARY 1980

River Area	Areal Land Use Estimated S.M.D.	Change during the week ending 09 GMT on	
	mm	2 January 1980 mm	26 December 1979 mm
Northumbrian	0.1	- 0.3	- 0.2
Yorkshire	1.3	- 1.6	- 0.6
Trent	3.2	- 3.4	- 0.3
Lincolnshire	16.2	- 6.8	- 2.4
Welland and Nene	13.9	- 7.7	- 1.6
Great Ouse	13.7	- 8.4	- 2.6
Norfolk and Suffolk	19.0	- 9.2	- 5.8
Essex	21.5	- 10.4	- 4.2
Lee Division	4.3	- 6.8	- 1.2
Thames Conservancy	4.2	- 7.5	- 1.3
London Area	0.7	- 5.5	- 0.3
Kent	6.8	- 5.2	- 1.7
Sussex	0.3	- 0.6	0.0
Hampshire	0.3	- 2.4	- 0.1
Isle of Wight	7.4	- 10.7	- 0.4
Upper Thames	2.2	- 9.7	- 2.4
Avon and Dorset	0.2	- 2.7	- 0.2
Devon	0.0	- 1.0	0.0
Cornwall	0.0	0.0	0.0
Somerset	0.1	- 1.9	- 0.1
Bristol Avon	0.2	- 1.7	- 1.7
Severn	1.0	- 3.8	- 0.4
Wye	0.2	+ 0.2	0.0
Usk	0.2	+ 0.2	0.0
Glamorgan	0.2	+ 0.1	+ 0.1
South West Wales	0.2	+ 0.2	0.0
Gwynedd	0.2	+ 0.2	0.0
Dee and Clwyd	0.2	+ 0.2	0.0
Mersey and Weaver	0.2	+ 0.2	0.0
Lancashire	0.2	+ 0.2	0.0
Cumbria	0.3	+ 0.3	0.0

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

