



## METEOROLOGICAL OFFICE

ESTIMATED SOIL MOISTURE DEFICIT AND POTENTIAL  
EVAPOTRANSPIRATION OVER GREAT BRITAIN

SOIL MOISTURE DEFICIT AT 0900 GMT ON 25 JUNE 1980

The long spring drought (dating from the beginning of April) broke down over virtually the whole country in the last few days of May, although much of southern England experienced further quite dry weather up to 9 June. The period from 10 June has been very unsettled over the whole country, apart from 4 dry days at the beginning of the period in northern Scotland. Rainfall has often been in the form of heavy showers accompanied by thunderstorms. The period 10th - 16th was particularly wet over England and Wales with more than 20 mm on 11th on Salisbury Plain and in northeast England (there was more than 40 mm on Tyneside). Values exceeded 30 mm quite widely in southern England on 13th (29 mm fell in 37 minutes at Heathrow) and in northern England and Scotland on 14th. The general value was 26 mm over Scotland on 14th and only the extreme north escaped heavy rain. The period 17th - 21st was generally rather drier over England and Wales but not completely rain free. Heavy rainfall was experienced in northwest Scotland from 18th to 20th. Heavy showers, often accompanied by thunderstorms, followed one after the other over much of England in the daylight hours of the last few days of the fortnight.

Rainfall exceeded average everywhere in the past fortnight except in Shetland. More than twice the average was recorded in parts of the North West Highlands, parts of Galloway, much of northern England, the west Midlands, southern England and Glamorgan. Values exceeded three times the average in northeast England, west London and the Weald and over much of southwest England. More than four times the average was recorded in parts of Somerset and Sussex.

With the varied spatial incidence of heavy storms the maps have assumed a much more diverse look than the rather flat distribution apparent at the time of the spring drought. There was a quite substantial decrease in areal land use deficits in the first week of the most recent fortnight over most areas but in the second week evaporation has about balanced rainfall and there is little general change. There were substantial general reductions in deficit in the Solway and Clyde River Purification Board areas over the fortnight but little change in other Scottish areas. General deficits over River Areas are now below average for this time of year over Northumbrian, Yorkshire, Sussex, Devon, Cornwall and Dee and Clwyd. They are above average over all other River Areas of England and Wales and all RPB areas in Scotland.

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# ESTIMATED SOIL MOISTURE DEFICIT (S.M.D.) AT 09 GMT ON 25 JUN 1980

River Area	Areal Land Use Estimated S.M.D. MM	Change during the week ending 09 GMT on	
		25 Jun 1980 MM	18 Jun 1980 MM
Northumbrian	42.8	+ 5.8	- 33.0
Yorkshire	53.4	+ 1.7	- 30.5
Trent	64.4	+ 1.5	- 15.0
Lincolnshire	85.1	+ 1.9	- 9.1
Welland and Nene	82.6	+ 2.3	- 2.8
Great Ouse	101.5	+ 4.2	- 4.7
Norfolk and Suffolk	106.7	+ 0.7	+ 0.1
Essex	111.7	+ 2.3	- 2.2
Lee Division	95.1	+ 6.0	- 13.5
Thames Conservancy	89.0	+ 6.5	- 16.8
London Area	78.4	+ 1.5	- 21.5
Kent	84.5	- 7.9	- 8.7
Sussex	66.5	- 9.1	- 17.2
Hampshire	80.1	+ 5.3	- 19.0
Isle of Wight	110.7	+ 11.2	+ 0.5
Upper Thames	91.8	+ 3.7	- 7.5
Avon and Dorset	65.6	+ 0.2	- 20.5
Devon	34.0	- 0.2	- 43.1
Cornwall	39.2	+ 1.6	- 43.6
Somerset	51.0	- 1.9	- 32.0
Bristol Avon	73.4	- 1.2	- 20.8
Severn	67.1	- 1.4	- 14.3
Wye	63.6	- 1.5	- 21.2
Usk	57.1	+ 1.1	- 33.2
Glamorgan	47.6	+ 4.2	- 45.4
South West Wales	58.1	+ 4.9	- 35.6
Gwynedd	49.1	- 0.4	- 27.3
Dee and Clwyd	40.7	- 3.8	- 28.8
Mersey and Weaver	45.6	- 1.6	- 16.6
Lancashire	50.5	+ 3.1	- 31.2
Cumbria	51.7	+ 4.2	- 25.3

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







