

monthly water situation report

South East Region, North East Thames Area

Summary – November 2012

A typically wet November lead to saturated soils and groundwater recharge. The North East Thames Area's rivers reacted to the heavy rainfall, leading to Flood Alerts being issued on several occasions during the month. Groundwater levels rose during November, leading to the sources of several chalk rivers migrating upstream.

Rainfall

The North East Thames Area ("the Area"), recorded 132 % of the long term average (LTA) November rainfall. All parts of the Area received over 100% of their LTA rainfall, with the Colne-Chiltern-Chalk recording 104mm of rainfall (the LTA rainfall for November is 67mm). Large daily totals (>10mm) were seen on the 3, 4, 7, 20, 22, 24 and 26 November, with the biggest total recorded (22.8mm) on the 26 November at Nags Head Lane in the Roding.

Soil Moisture Deficit/Recharge

The persistent heavy rainfall has meant that the Area's soil moisture deficit (SMD) has fallen across the month to zero. With the saturated soils and heavy rainfall there has been significant effective rainfall, contributing to river flows and groundwater recharge in the chalk catchments. The Area received 296% of its LTA effective rainfall with the Colne-Chilterns-Chalk seeing 280% , while the Roding experienced 457% .

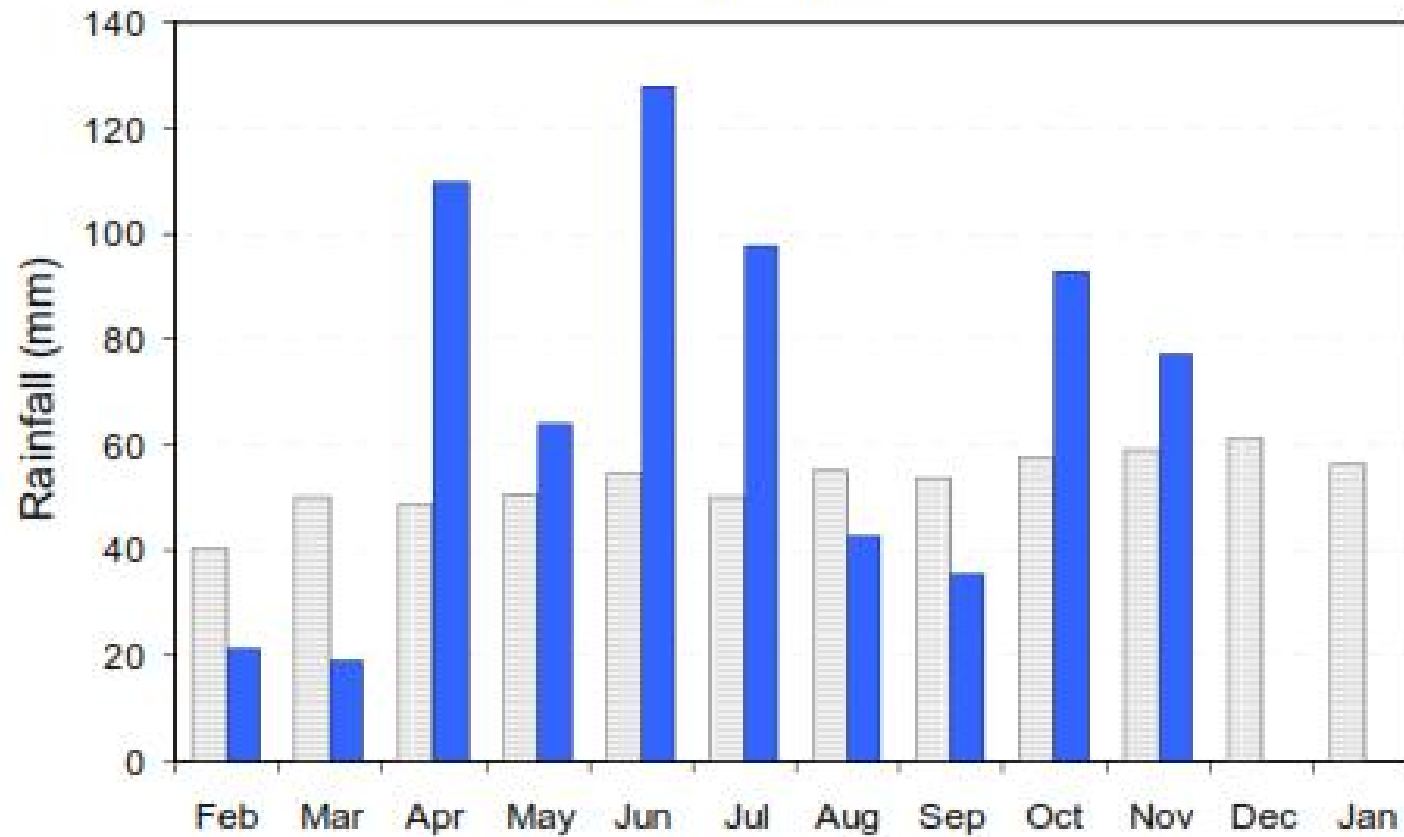
River Flows

Throughout the Area, the rivers rose in response to the rainfall. All the Area's indicator sites recorded *normal* November flows, with many *above normal* or higher. The Lee at Waterhall, Ver, Gade, Colne, Crane and Brent indicator sites recorded *above normal* monthly flows , while the Ash, Lee at Feildes Weir, Roding and Ingrebourne where *notably high* in November. In particular the saturated soils of the Roding catchment resulted in our indicator site at Redbridge recording 276% of its long term average monthly flow.

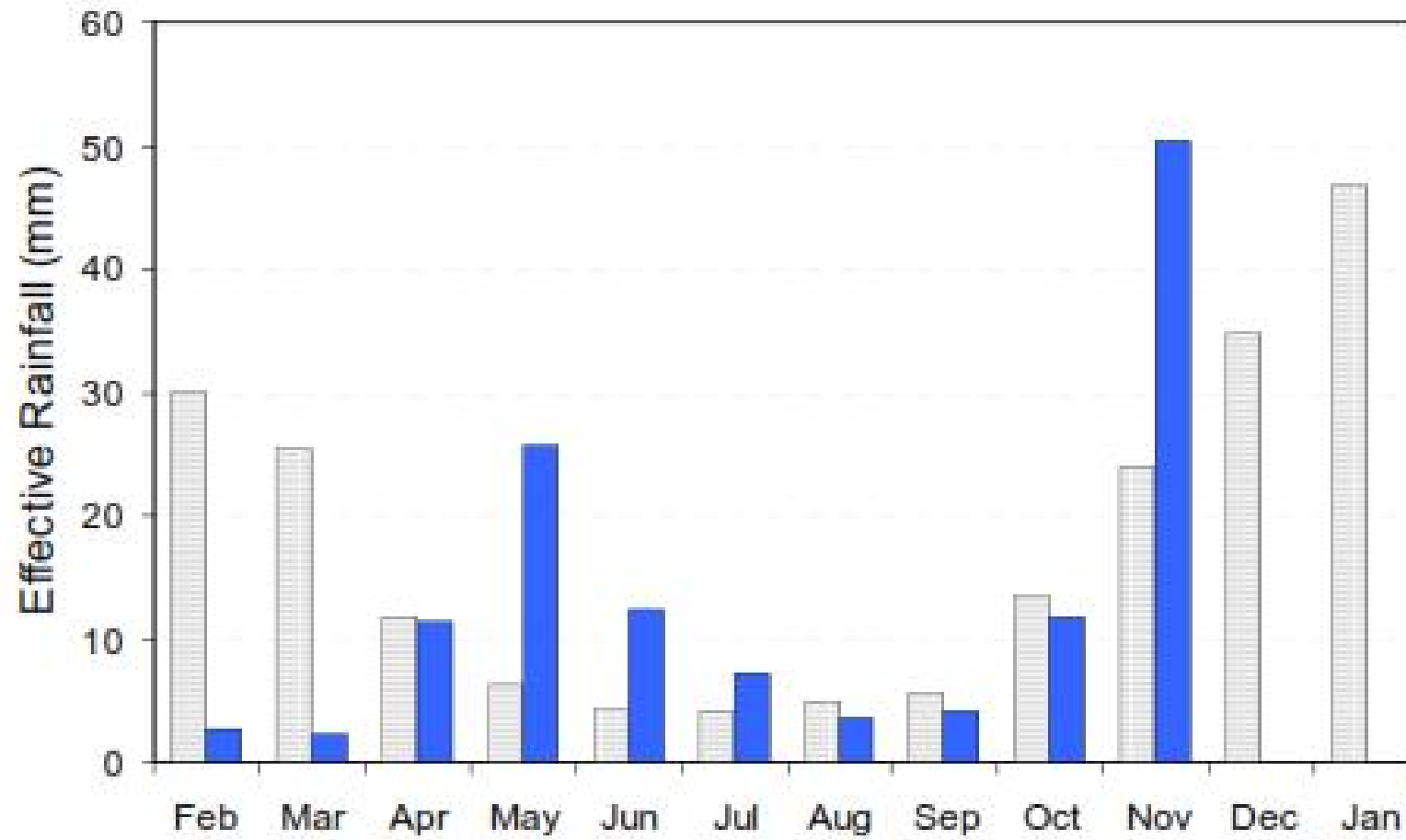
With the high river flows, Flood Alerts were issued for North East Thames Area for the Upper River Roding (4,27 November) Middle River Roding (1,4,23 November), Lower River Roding (27 November), River Ingrebourne (4 November), The Cripsey Brook (4 November), Lower Lee Tributaries (4 November) and the Upper River Colne and Radlett Brook (4, 24 November). No Flood Warnings were issued for the Area.

Monthly total rainfall (mm)

Lee Chalk - Rainfall



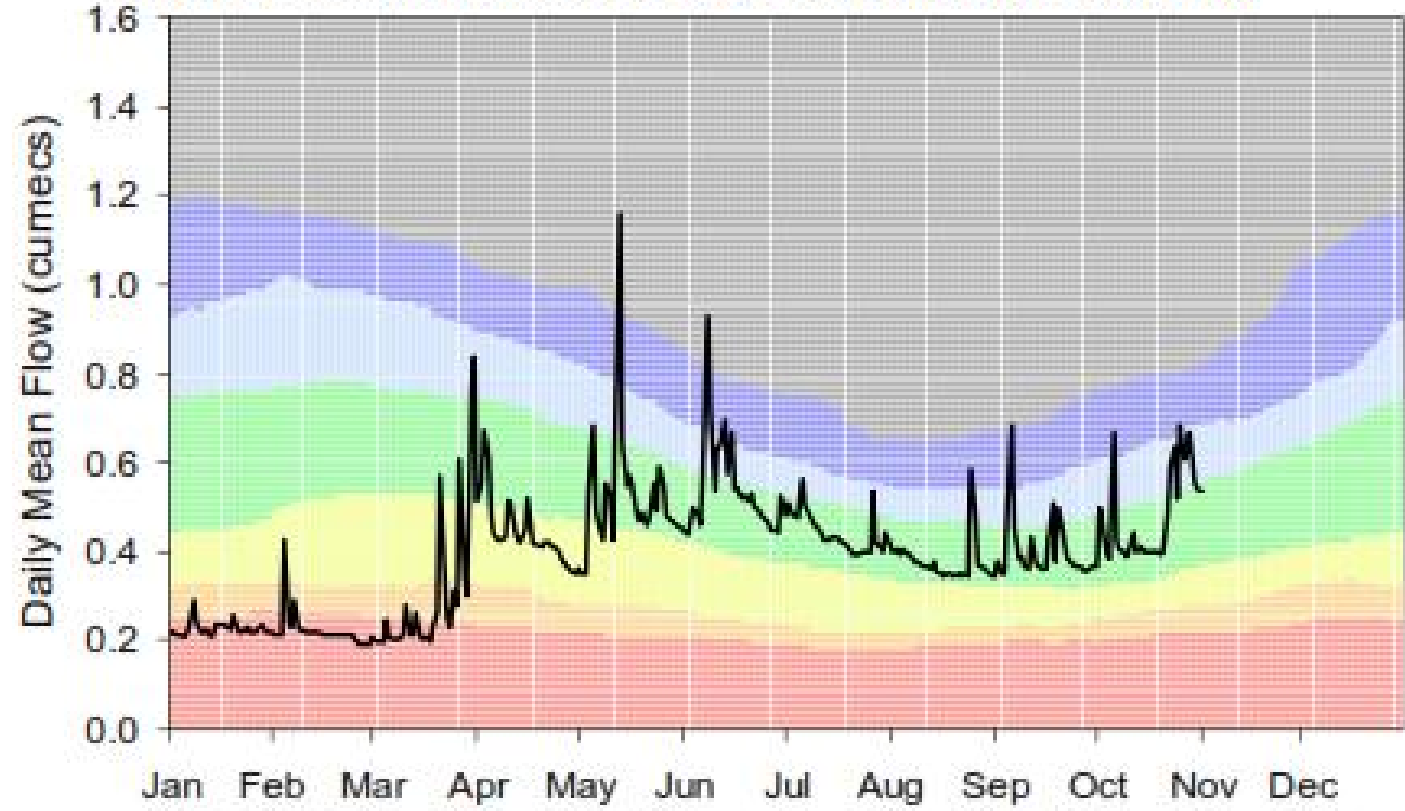
Lee Chalk - Effective Rainfall



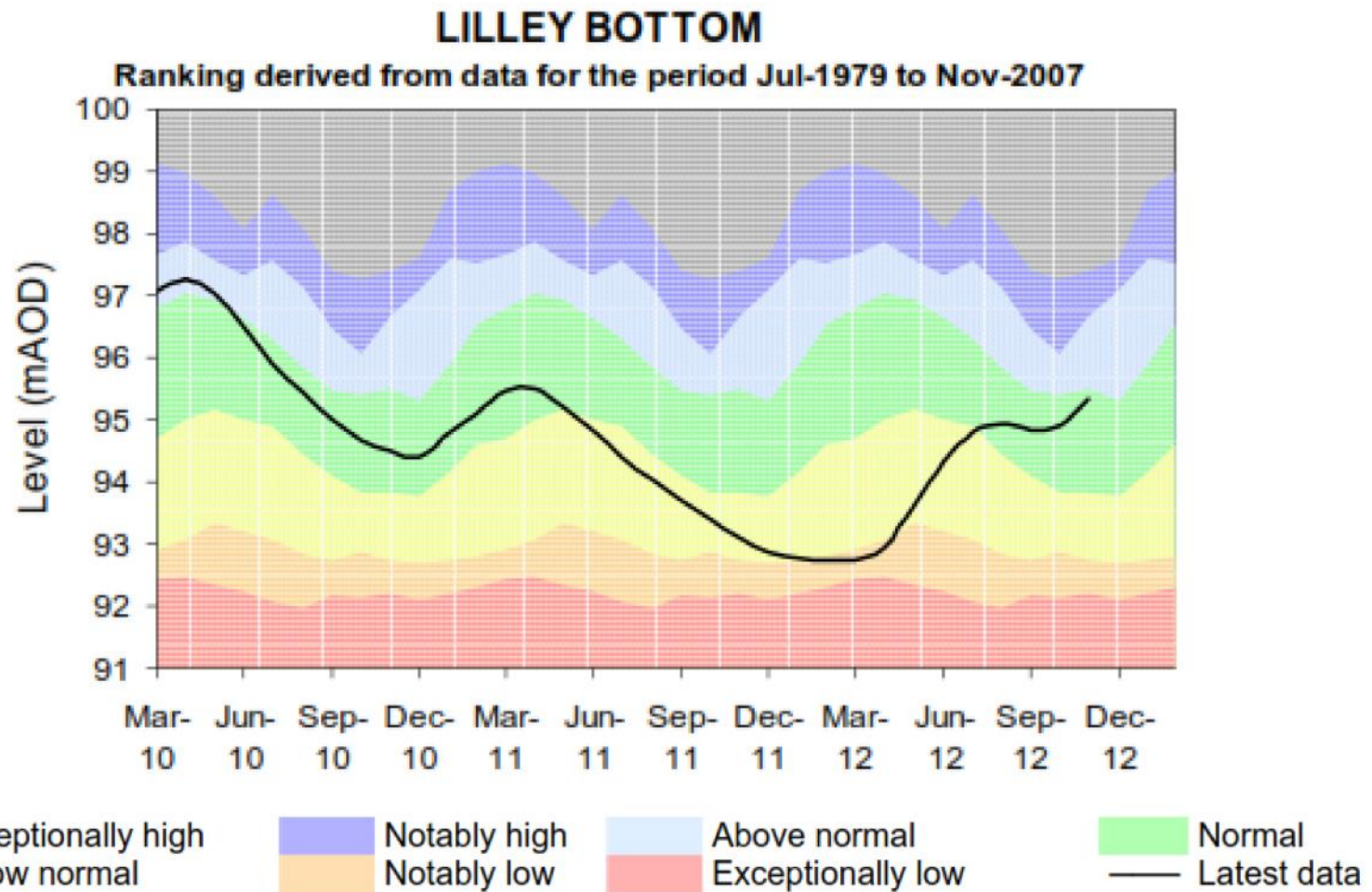
Flow level

PANSHANGER, MIMRAM

Ranking derived from data for the period 01/12/1952 to 31/12/2007



Groundwater



Summary of rainfall, effective rainfall and soil moisture deficit

Rainfall and Effective Rainfall – November 2012

Area	Rainfall (mm)			Effective Rainfall (mm)		
	Total (mm)	LTA (mm)	% of LTA	Total (mm)	LTA (mm)	% of LTA
Chilterns- East - Colne	104	67	155	97	35	280
Lee - Chalk	77	59	130	50	24	210
North London	75	61	123	55	18	302
Lower Lee	69	59	117	63	21	302
Roding Catchment	74	56	133	68	15	457
North East Thames Area Average	80	60	132	67	23	296

Soil Moisture Deficit (SMD) - November 2012

Area	End of Month SMD (mm)	End of Month SMD LTA (mm)
Chilterns- East - Colne	0	23
Lee - Chalk	0	32
North London	0	30
Lower Lee	0	27
Roding Catchment	0	30
North East Thames Area Average	0	28