

Monthly water situation report

Hertfordshire and North London

Summary – August 2015

The Hertfordshire and North London Area (“the Area”) received 161% of the long term average rainfall for August. There was a decline in soil moisture deficits which ended the month close to the long term averages across the Area. River flows varied throughout the Area, ranging from below normal on the River Gade to exceptionally high on both the Rivers Crane and Brent. A decline in the groundwater levels was recorded at all of our indicator sites across the Area during August.

Rainfall

The Hertfordshire and North London Area (“the Area”) received 161% of the long term average (LTA) rainfall for August. There was variation in the rainfall totals across the Area. The Colne-Chilterns-Chalk had **normal** rainfall (116% LTA), while North London received **above normal** rainfall (156% LTA). All other parts of the Area recorded nearly 100mm of rain during August. The Lee Chalk had 96mm (196% LTA), the Lower Lee had 97mm (181% LTA), while the Roding received 98mm (182% LTA). The majority of the month’s rainfall fell on just 2 days (24th and 26th); the largest daily totals were recorded on the 24th at Whitwell STW (51mm) and on the 26th at Heathrow Airport (45.2mm). Despite August’s heavy rainfall, the Area received 96% of the summer (April to August) LTA rainfall.

Soil Moisture Deficit/Recharge

Across the Area, with the exception of Colne-Chilterns-Chalk, there was a decline in the soil moisture deficits (SMD) since July. The Area ended the month with a SMD close to its LTA. As would be expected after the heavy rainfall, the Area received 160% of the LTA effective rainfall for August but between April and August (summer) received only 47% of the LTA effective rainfall.

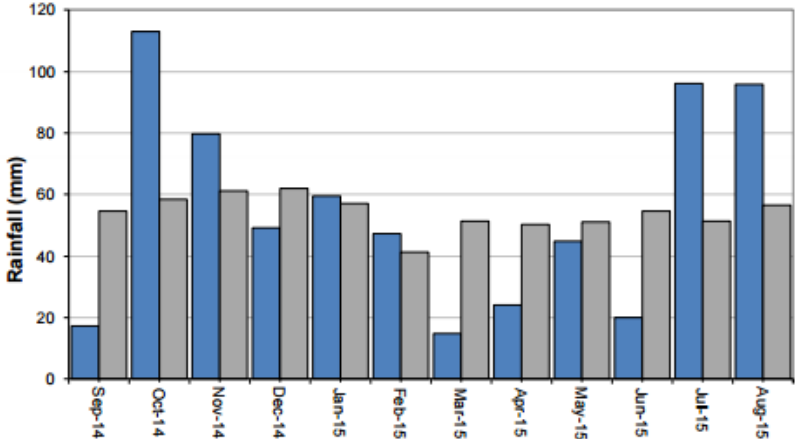
River Flows

The majority of our river flow indicator sites recorded **normal** monthly mean flows for August. However, the River Gade recorded **below normal** monthly mean flows, while the River Crane and the River Brent recorded **exceptionally high** monthly mean flows. In response to the heavy rainfall, flood alerts were issued in and around London, seven on 26th, one on 29th and one on 31st August. A flood warning was issued on 26th August for the Silk stream at Edgware and Colindale.

Upper Lee

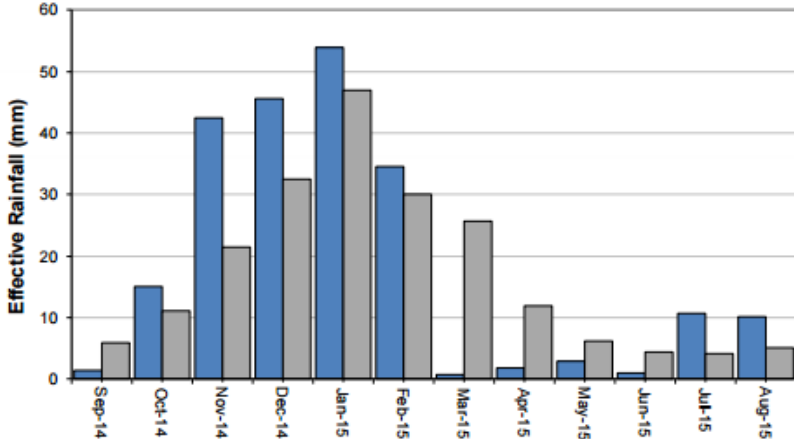
Monthly total rainfall (mm)

Lee - Chalk - Rainfall



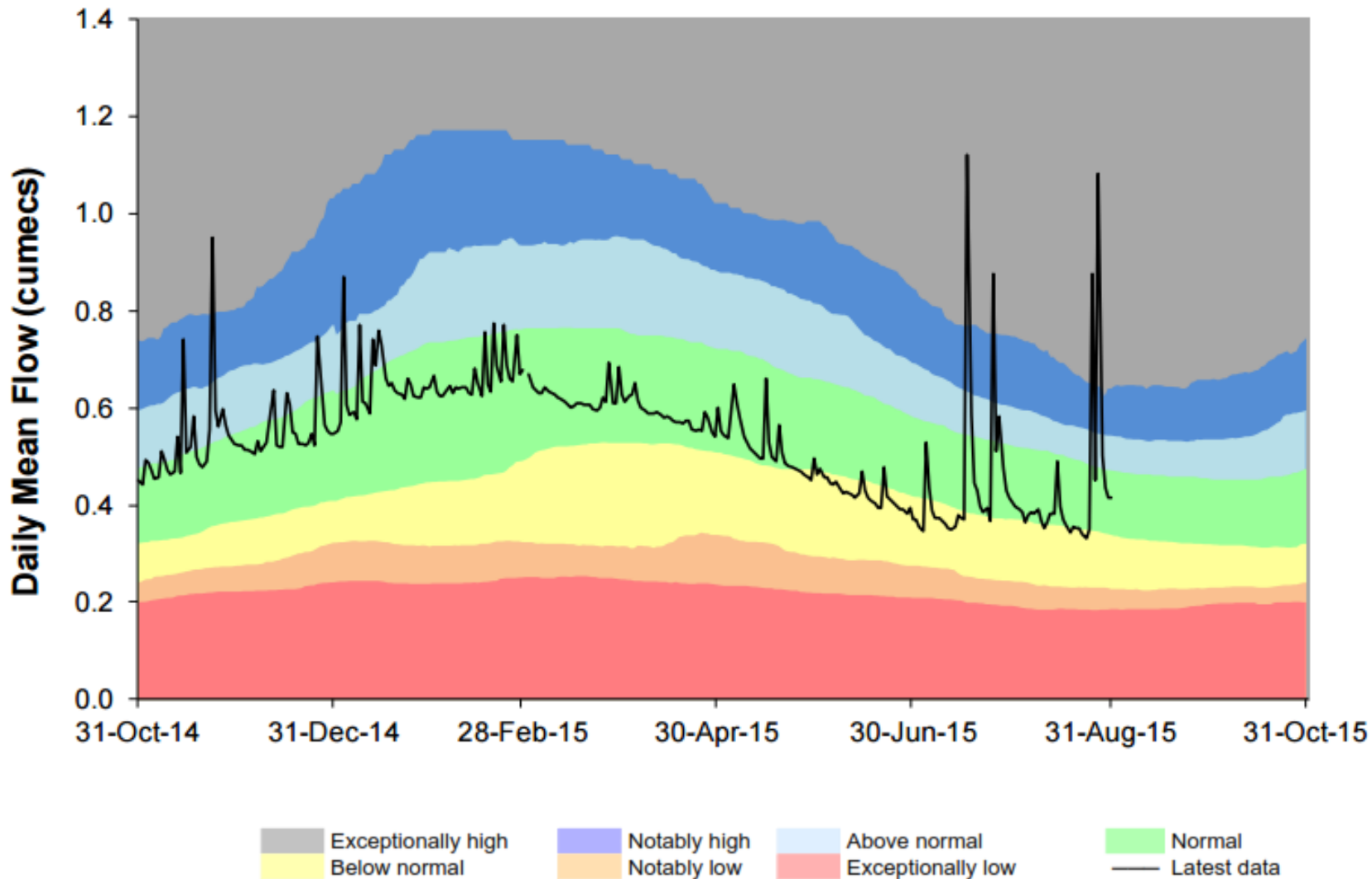
Long term average rainfall (mm)

Lee - Chalk - Effective Rainfall



RIVER MIMRAM AT PANSHANGER

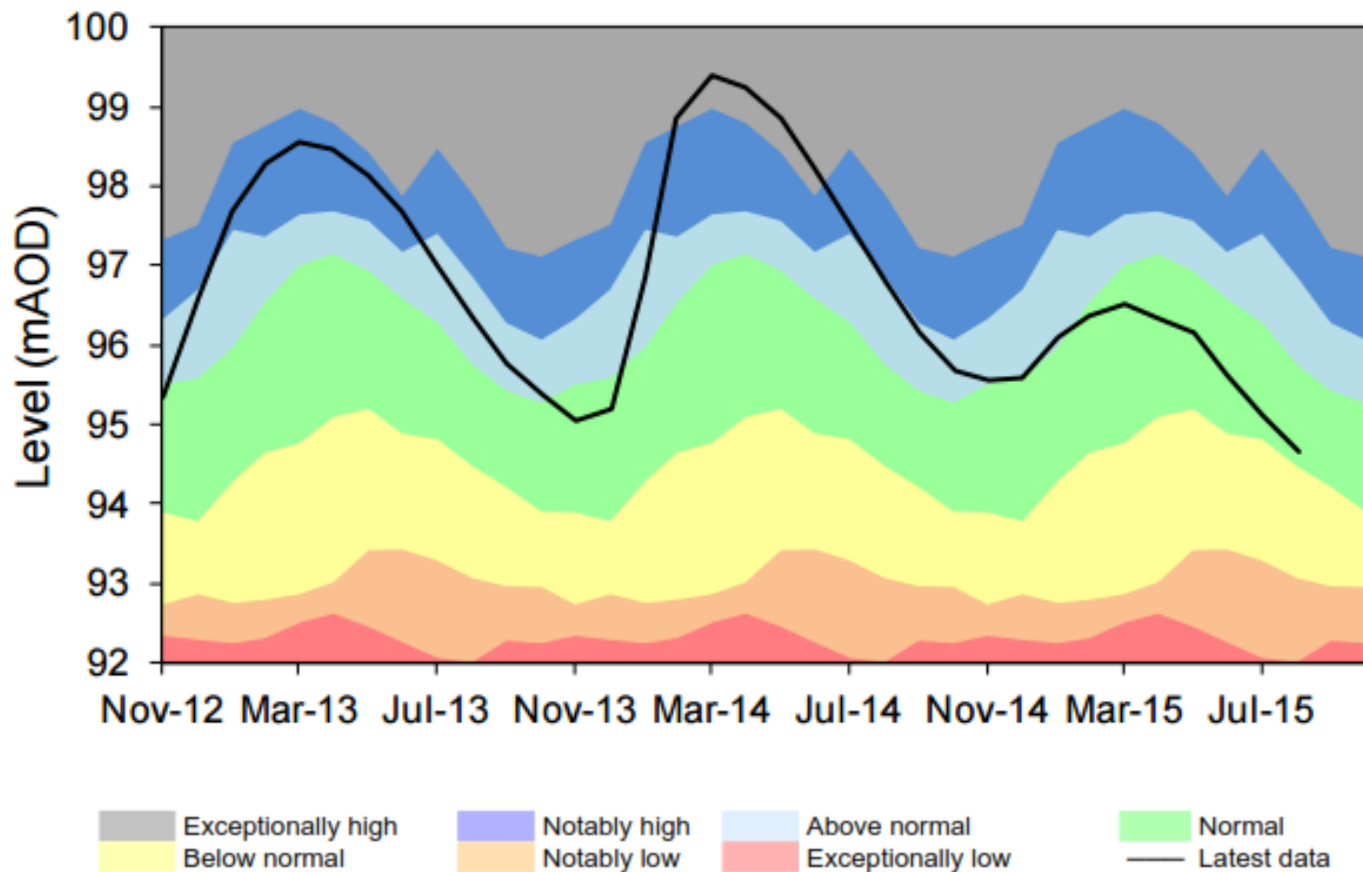
Ranking derived from data for the period 01/12/1952 to 31/12/2012



Upper Lee Groundwater

LILLEY BOTTOM OBH

Ranking derived from data for the period Jul-1979 to Dec-2012



Summary of rainfall, effective rainfall and soil moisture deficit

Rainfall and Effective Rainfall –August 2015

Area	Rainfall (mm)			Effective Rainfall (mm)		
	Total (mm)	LTA (mm)	% of LTA	Total (mm)	LTA (mm)	% of LTA
Chilterns- East - Colne	67	59	115	6	5	118
Lee - Chalk	96	55	174	10	5	203
North London	86	55	157	0	0	-
Lower Lee	97	55	177	0	0	-
Roding Catchment	98	53	186	0	0	-
Hertfordshire and North London Area Average	89	55	161	3	2	160

Rainfall and Effective Rainfall – Summer total for period 1 April 2014 to 31 August 2015

Area	Rainfall (mm)			Effective Rainfall (mm)		
	Total (mm)	LTA (mm)	% of LTA	Total (mm)	LTA (mm)	% of LTA
Chilterns- East - Colne	257	280	92	22	39	57
Lee - Chalk	281	260	108	27	32	84
North London	222	257	86	0	12	0
Lower Lee	241	257	94	0	11	0
Roding Catchment	242	244	99	0	10	0
Hertfordshire and North London Area Average	249	260	96	10	21	47

Rainfall and Effective Rainfall – Summer total for period 1 April 2015 to 31 May 2015

Area	Rainfall (mm)			Effective Rainfall (mm)		
	Total (mm)	LTA (mm)	% of LTA	Total (mm)	LTA (mm)	% of LTA
Chilterns- East - Colne	87	111	78	7	24	28
Lee - Chalk	69	100	69	5	18	27
North London	63	102	62	0	11	0
Lower Lee	75	99	76	0	11	0
Roding Catchment	73	93	78	0	10	0
Hertfordshire and North London Area Average	73	101	72	2	15	15

Glossary

Term	Definition
Aquifer	A geological formation able to store and transmit water.
Areal average rainfall	The estimated average depth of rainfall over a defined area. Expressed in depth of water (mm).
Artesian	The condition where the groundwater level is above ground surface but is prevented from rising to this level by an overlying continuous low permeability layer, such as clay.
Artesian borehole	Borehole where the level of groundwater is above the top of the borehole and groundwater flows out of the borehole when unsealed.
Cumecs	Cubic metres per second (m^3s^{-1})
Effective rainfall	The rainfall available to percolate into the soil or produce river flow. Expressed in depth of water (mm).
Flood Alert/Flood Warning	Three levels of warnings may be issued by the Environment Agency. Flood Alerts indicate flooding is possible. Flood Warnings indicate flooding is expected. Severe Flood Warnings indicate severe flooding.
Groundwater	The water found in an aquifer.
Long term average (LTA)	The arithmetic mean calculated from the historic record, usually based on the period 1961-1990. However, the period used may vary by parameter being reported on (see figure captions for details).