

IS THE UK EXPERIENCING DROUGHT?

In the spring of 2017 the UK was starting to get concerned about a future drought. An extended period of dry weather from July 2016 through until spring 2017, which covered the 2016/2017 winter had resulted in notably low groundwater levels in some indicator boreholes and low reservoir storage.

Whilst the possibility of a summer drought in 2017 could be managed, severe hydrological droughts in the UK are associated with two concurrent dry winters, and concern rose about the possibility of a dry summer followed by a second dry winter. The 2010-2012 dry period was fresh in the minds of water resources professionals.

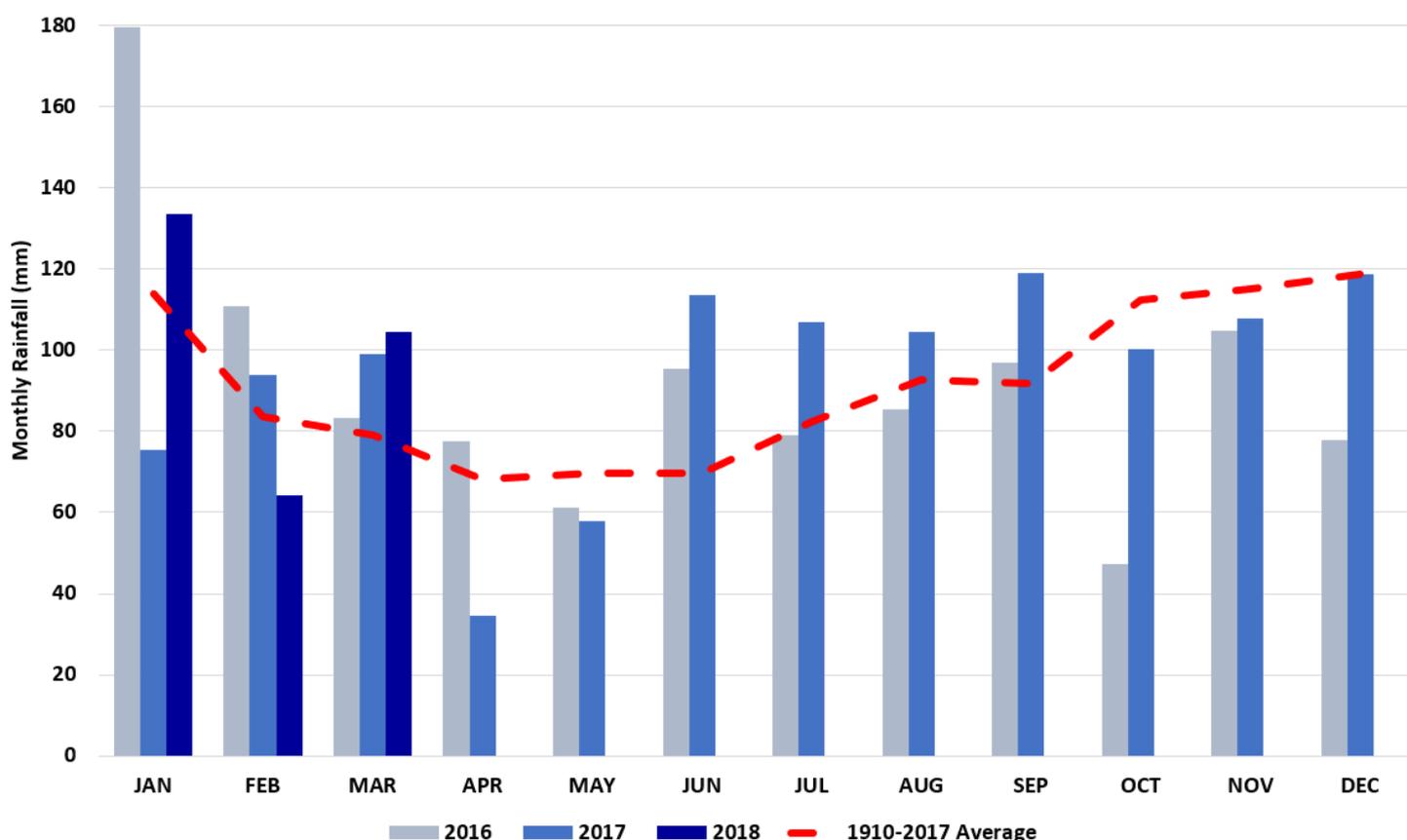
Despite the higher than average rainfall in summer 2017, low groundwater levels and reservoir stocks from the preceding dry months were not counteracted. As autumn 2017 approached, the start of what is normally considered the recharge season, the Met Office were predicting that above average rainfall was more likely than below average rainfall, and as such the likelihood of a dry “winter” was slightly less than normal¹.

Given the lack of certainty of a wet winter, concern continued to rise about a dry winter as autumn 2017 approached², and preparations for a summer drought in 2018 started to be made, as concerns grew.

But the UK weather is fickle.

October and November 2017 fed the concerns as less than average rainfall fell, with some relief coming in December with the average rainfall falling. January raised concerns again with only about 65% of average, with some relief in February. Overall December-January-February brought less than average rainfall with the Met Office suggesting provisional figures of 96% of the 1981-2010 average rainfall. Concerns continued to rise, and South East Water applied for a drought permit to assist with filling Bewel Reservoir. The heat was on.

Then March came with the majority of England receiving 160% of the average rainfall. It also snowed, and the south east and East Anglia got their fair share, Wales similarly experienced high levels where as Scotland and

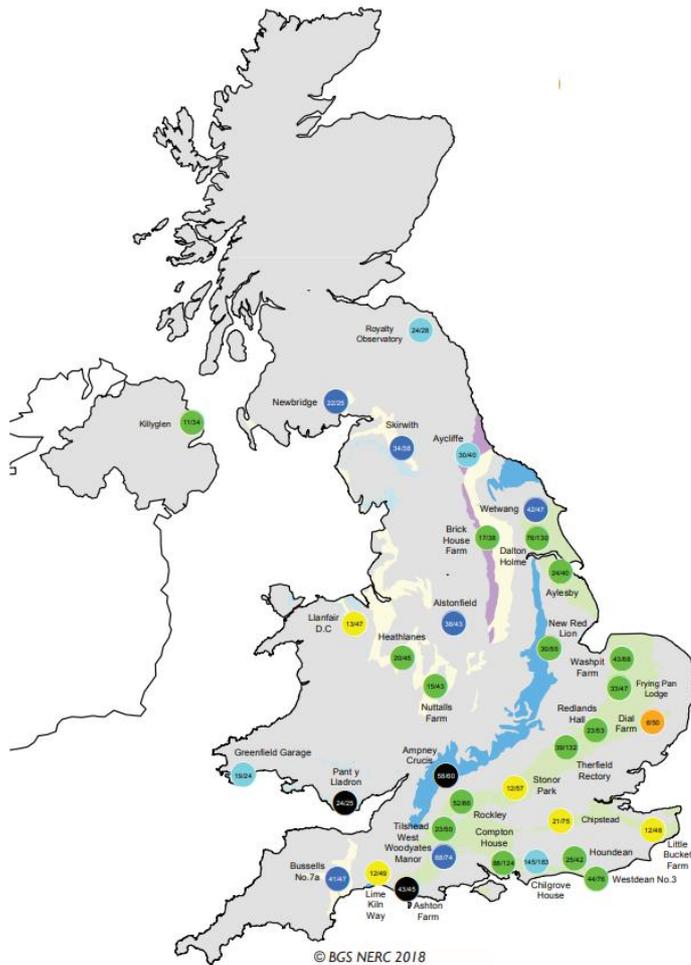


Northern Ireland received less than average rainfall. The low temperatures delayed the on set of spring, and coupled with the steady rainfall, groundwater recharge was significant and both reservoir and groundwater levels recovered and river flows progressively increased, as spring failed to break through, to normal or above normal levels.

It continued to rain into the beginning of April and by the 13th April there was a groundwater flooding alert for the Salisbury Plain area with exceptionally high groundwater levels identified there as well as other parts of the south west.

Key

-  Monthly rank/Period of record (record figure when circled)
-  Exceptionally high levels
-  Notably high levels
-  Above normal
-  Normal range
-  Below normal
-  Notably low levels
-  Exceptionally low levels



The Environment Agency’s monthly water report for March 2018 predicts groundwater levels and river flows over the next 12 months based on recent rainfall trends, and their likelihood of occurrence based on historical records dating back to 1910. The report predicts that the most likely scenario (57-63% likelihood) is average rainfall resulting in average groundwater and river flow levels!³

Over the last year we have gone from great concerns about drought, to groundwater flooding and to “average” conditions. This is not surprising. We live in a country with very variable weather. What water resources professionals must take care about is “crying wolf”. While it is important to contingency plan, and the prospect of drought focusses the mind, it is also important to keep communications and reactions in context with risk. Alarmist announcements are picked up by the media and when the scary outcome fails to deliver, it is the professionals that lose credibility.

References:

¹ Met Office 2017 (http://www.hyoutuk.net/files/9915/1022/5673/A42017_Forecast-precip-NDJ-v1.pdf)

² CEH 2017 <https://www.ceh.ac.uk/news-and-media/blogs/hydrological-situation-update-december-2017>

³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/698974/Water_situation_report_March_2018.pdf

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