

Paper by: Evidence & Risk (Solihull)

Subject: Flood Forecasting and Flood Resilience Report – October 2019 – Early Jan 2020

Recommendation

The Regional Flood and Coastal Committee is asked to:

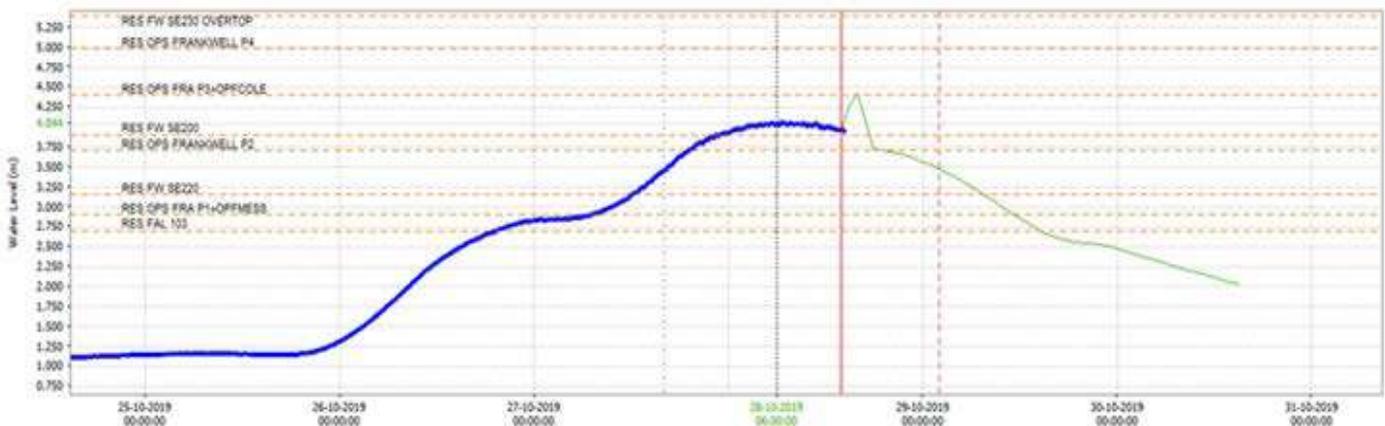
1. Note the content of this report.

1.0 Flood Summary Report

1.1 October 2019

Due to the Jet Stream being further south than usual, the beginning of October was very unsettled. Various low pressure systems moved across the country until the 20th, before turning briefly more settled. Very wet and unsettled weather then moved in for the remainder of the month. There were flooding impacts along the Severn from the 26th in response to this rain. Train lines were closed across the West Midlands and barriers were put up at Shrewsbury due to the forecast river levels (see hydrograph below).

177% of the LTA rainfall fell over the Severn Basin in October.



1.2 November 2019

November began with further unsettled weather, although with major impacts being seen away from the West Midlands in Yorkshire and the East Midlands. More substantial totals fell around the 13th and 14th but without causing major disruption. More settled conditions then set in before the last week of November became unsettled once again, though with no large rain totals.

150% of the LTA rainfall was recorded in November for the Severn Basin.

1.3 December 2019

December was also an unsettled month, especially around the 12th to the 15th on December where some sizeable totals were recorded. The Christmas and New Year period were relatively settled however with no significant rainfall being seen and river levels dropping.

110% of the LTA rainfall fell in December.

1.4 Early January 2020

January has so far been dry with no notable rainfall events. 6% of the LTA rain has been received at the time of writing for the Severn Basin.

2.0 Flood Alerts and Warnings Issued

Flood Alerts

	Severn & Wye
Oct-19	14
Nov-19	21
Dec-19	19
Jan-20	2
TOTAL	56

Warnings Issued

	Severn & Wye
Oct-19	14
Nov-19	32
Dec-19	10
Jan-20	1
TOTAL	78

3.0 Severn and Wye RFCC Community Engagement Return – January 2020

In autumn 2019 the Severn and Wye area was subject to heavy rain and flooding, and here is a summary of impacts and the Environment Agency response, as well as other engagement, through October November and December.

Here are some images to best summarise the events and multi-agency activity across the area through that period, followed by location specific information.



Mark Bowers @MarkBowersEA · Oct 26, 2019

My patch is under there somewhere, not seen this many alerts (59) and warnings (57) out for a long long time. We're operational at numerous sites and supporting communities and partners on the Rivers Wye and Severn.
#Teamwork #TeamEA #multiagency



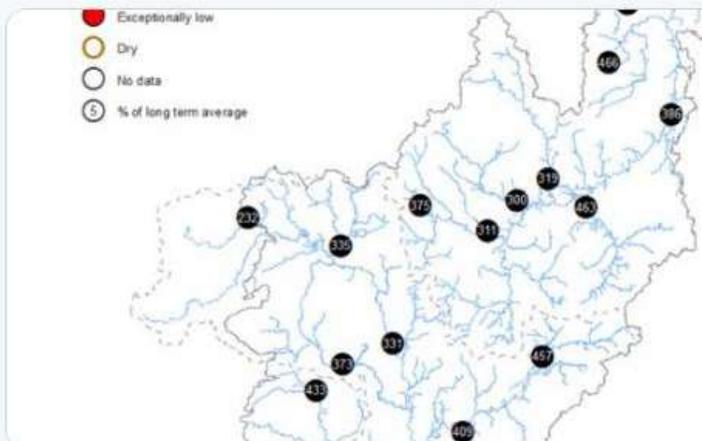
Dave Throup @DaveThroupEA · Nov 11, 2019

I've never seen this before!

Every major river in the Midlands had exceptionally high average flows in October.

Some approaching 500% of average.

#floodaware



Phil Major @HWFireNcluster · Oct 27, 2019

Hereford and Evesham boat crews completing an evacuation of several properties and a nursing home by boat, medical staff being transported to vulnerable members of the public to give support.

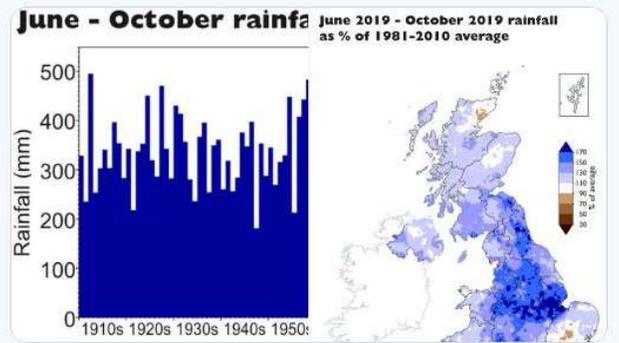


Dave Throup @DaveThroupEA · Nov 22, 2019

In the Severn Trent catchment area it has been the wettest June - October period on record (going back to 1910).

Explains why just small amounts of rainfall now results in flooding problems.

#geographyteacher

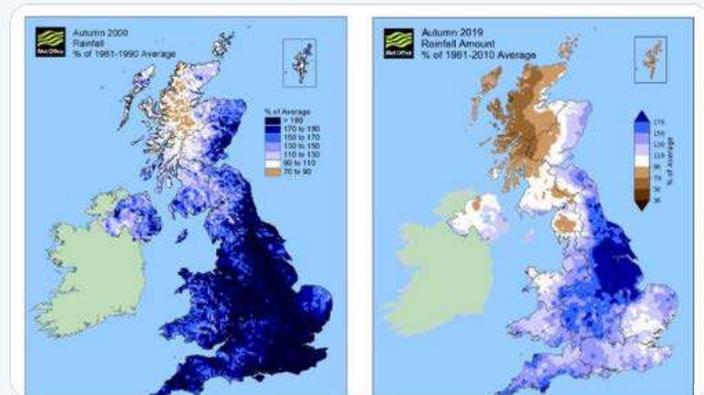


Dave Throup @DaveThroupEA · Dec 2, 2019

For some counties (South Yorkshire, Lincolnshire, Nottinghamshire) it's been the wettest Autumn on record.

For England it's the fifth wettest +

Autumn 2000 which saw severe flooding at many locations across England had more widespread heavy rainfall.



Dave Throup @DaveThroupEA · Nov 18, 2019

Conveniently beautiful clear conditions today coincided with @CopernicusEU @sentinel_hub satellite pass.

Allows great view of the incredible amounts of water still making its way through the lower Severn floodplains.

Thousands of acres currently inundated.

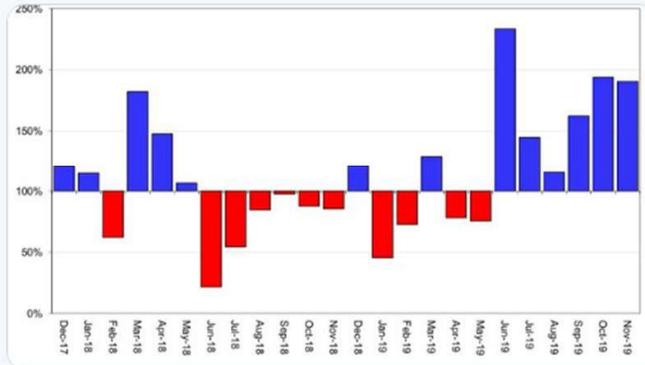




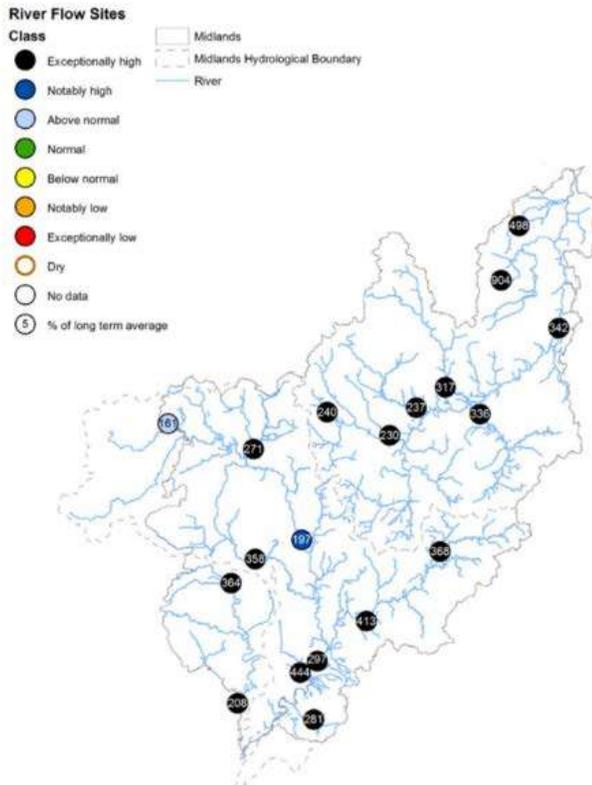
Dave Throup @DaveThroupEA · Dec 12, 2019

November marks the sixth successive month of well above average rainfall in central England.

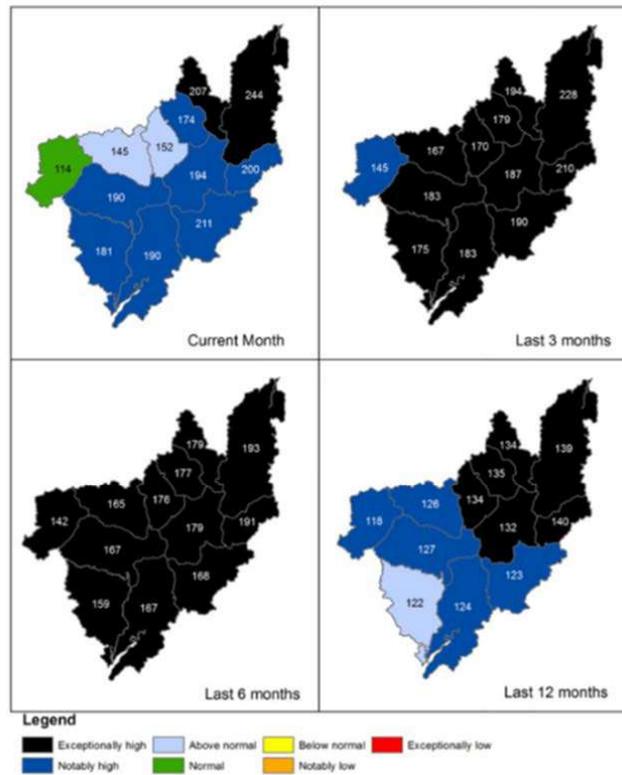
#floodaware



Midlands Mean River Flows For November 2019



Midlands Rainfall Map For November 2019



Worcestershire

We deployed the barriers in Bewdley to good effect, as well as many other flood alleviation schemes and barriers being tested, and we were kept busy throughout the period with repairs and maintenance, including river blockages.

We had staff out during the highest river levels to inform and collect information.



Dave Throup @DaveThroupEA · Oct 27, 2019

High level gauging on the Teme at Tenbury today.

117 tonnes of water per second going under the bridge at the moment.

Important work as it helps to improve our flood models and ensure our fixed gauges are accurate.



Dave Throup Retweeted



Worcestershire County Council @worcscc · Nov 4, 2019

Today's planned closure of Worcester Bridge eastbound to remove flood debris has been postponed due to higher river levels and flows. We are working @EnvAgencyMids to reschedule when river levels are safe to do so. @DaveThroupEA @WorcsTravel @WMerciaPolice



Worcs Highways & Travel @WorcsTravel · Nov 11, 2019

Work to remove the debris from #Worcester Bridge is underway - the crane arrived about half an hour ago. We're monitoring river levels and hopeful we can get a good amount out - this was the scene at the start of work @DaveThroupEA @worcscc #floodaware #WorcestershireHour



Evesham was the worst affected area, with property flooding and very high river levels.

Dave Throup @DaveThroupEA · Nov 15, 2019
 At #Evesham where the River Avon is at its highest level since 2007 (albeit a metre and a half lower).
 Unfortunately a number of homes and businesses have been flooded.
 We're working with partners to do what we can to help.



We were pleased how well our assets performed in general, and we were able to collect useful data to seek to improve our models.

Emma Howard Boyd @EmmaHowardBoyd · Oct 28, 2019
 Today I visited Upton and Kempsey in #Worcestershire and saw how well targeted investment in the flood alleviation schemes, and 72 hours of good work from @EnvAgency colleagues, has helped protect the community from #flooding. #TeamEA #PrepareActSurvive
[Show this thread](#)



Dave Throup @DaveThroupEA · Nov 23, 2019
 Last week our flood defences at #Kidderminster temporarily stored 285,000 cubic metres of water and prevented 230 homes and businesses in the middle of town from flooding.



Dave Throup @DaveThroupEA · Oct 29, 2019
 Filming with @bbcmtid @ITVCentral in #Worcester as Hylton Road flood gate is closed for first time since 2014.



Upton was one of the places to see repeated high river levels.



Keeping in touch with affected businesses and communities, makes it easier for us to do our work ... including looking for stranded fish after flooding!

Dave Throup @DaveThroupEA · Dec 16, 2019
 Sadly Worcestershire Cricket Ground is disappearing under flood water for the fifth time this year.
 Chatting with them, they're well prepared!



Dave Throup @DaveThroupEA · Nov 25, 2019
 Water levels dropping slowly on the #Worcestershire Severn
 We're doing our usual sweep of the floodplains checking for stranded fish. Here at #Worcester Racecourse.
 None found yet



Our flood alleviation schemes can be useful outside of operational use too - and of benefit to wildlife – or just of interest to passing cats!

Env Agency Midlands @EnvAgencyMids · Nov 5, 2019
 Puss caught on camera as he paws-ed to see what was going on at our Severnside South flood barriers, #Bewdley, last week. Guess he was feline unhappy about all that water, but barriers helped prevent a cat-astrophe. He's now cat-egorically #floodaware. Salmon for dinner? #catpuns



Dave Throup @DaveThroupEA · Nov 23, 2019
 When its not storing millions of gallons of water and keeping hundreds of homes and businesses dry, our #kiddeminster flood storage area is a nationally important wildlife site and much loved local public access area.
 Multiple benefits!



Most of our staff have roles they take up in an incident to help keep people informed, or keep us operational by working weekends and night shifts. Of course the work does not stop after the flooding – that’s when the repairs and engagement really get going. We will be meeting with communities across the area about this flood event for months to come, to learn, support and form new partnerships to make us all stronger. This includes to work we are doing to develop new and innovative ways to engage and inspire people to work with us towards healthier rivers and community and climate resilience.

Dave Throup @DaveThroupEA · Dec 22, 2019
 Catchment Coordinator Lucy is spending her Sunday looking after pumping operations at Upton.

Most @EnvAgency staff have incident roles as well as their day job.

We train and exercise for these roles so we’re ready to go whenever needed.



Dave Throup @DaveThroupEA · Jan 2
 Fishery officers out checking our fishing platforms on the Severn at Ripple.

Fair to say they’ve taken a bit of a bashing from the floods.



Dave Throup @DaveThroupEA · Oct 29, 2019
 What a 4 days!

I’ve seen awesome things, horrible things and beautiful things.

But most of all I’ve seen hundreds of folk from dozens of organisations and communities all pulling together to try and help people.

We’ve come a long way since the dreadful floods of 2007.

