

To: Kent Flood Risk Management Committee – 8th July 2021

From: Rebecca Spore, Director of Infrastructure, Strategic and Corporate Services

Subject: Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity.

Classification: Unrestricted

Summary: To update Kent Flood Risk Management Committee on the current water situation, weather statistics, Environment Agency and Met Office Warnings, and flood response activity since the last meeting of the Committee on 15th March 2021.

1. Background

- 1.1 This report is the latest of the regular updates to the Committee addressing the current water situation and severe weather and flood response activity, and covers the period from March to June 2021.
- 1.2 The KCC Resilience and Emergency Planning Service Duty Emergency Planning Officer (DEPO) and Contact Point receive Environment Agency (EA) and Met Office alerts and warnings regarding severe weather on a 24/7 basis. Any site-specific severe weather impacts are notified to the DEPO by the emergency services and other resilience partners, with reports from the public received by Contact Point and passed on to the DEPO and/or Kent Highways. DEPO further initiates multi-agency reporting using the county council's innovative Severe Weather Impacts System (SWIMS) to capture resources and costs arising from severe weather incidents.
- 1.3 Some 85,500 residential and commercial addresses across Kent are located within areas identified as at risk from fluvial (river) or tidal (coastal) flooding. Where possible, flood vulnerable properties are offered a Flood Warning Service by the EA. Early warning of flood risk to communities (including areas outside of floodplains) is delivered through Flood Guidance Statements, Severe Weather Warnings and mobilisation of the Kent Resilience Forum (KRF) Severe Weather Advisory Group (SWAG).

2. Kent water situation and weather statistics

- 2.1 Kent's rainfall total for March 2021 was some 88% of the long-term monthly average for the county. However, April was drier still, with around 8% of normal rainfall for the month.

- 2.2 May was a wetter month, with 151% of long-term average rainfall recorded. Widespread showery rain fell for much of the month, with the highest totals recorded on the 17th May along the Kent / East Sussex border. Drier, more settled weather arrived in the last six days of the month.
- 2.3 June saw some unsettled weather, particularly around the middle of the month, where some spells of heavy rainfall were experienced. Up to 22nd June rainfall was 148% of long-term average. The month of June had by 22nd June recorded a mean temperature a little above average at +1.8 C, following cooler months in April (-2.3 C) and May -1.3 C).
- 2.3 The latest data available from the Environment Agency on soil moisture deficits and groundwater recharge is disappointing. At the end of May soil moisture deficits remained above long-term average right across Kent, with no effective groundwater recharge taking place. With no recharge in April or May, groundwater levels declined throughout these months. However, from an overall groundwater resources perspective, there are no immediate concerns flagged, as current groundwater conditions are still best described as normal to above normal. The situation will continue to be monitored as summer progresses.
- 2.4 Reservoir levels are mostly near their long-term average for the time of year, with Bewl at 90% and Bough Beech at 91% of normal levels.
- 2.5 11 Flood Alerts were issued by the EA since the last meeting of the committee (six fluvial and five coastal)¹. This contrasts with six Flood Alerts (two fluvial and four coastal) for the same period last year.
- 2.6 The Met Office issued five weather warnings covering Kent between March and June 2021 (three yellow warning for wind and two yellow warnings for thunderstorms)². This contrasts with 10 Met Office weather warnings (five yellow warnings for wind, one amber warning for rain and four yellow warnings for thunderstorms) for 2020.
- 2.7 The Thames Barrier was closed on four occasions since the last meeting of the committee in March (two for flood defence and two for test purposes)³. The figure for the corresponding period last year was six (one for flood defence and five for test purposes).
- 2.8 The generally unsettled weather conditions experienced in Kent during the second half of June have resulted in some localised highway and surface water flooding impacts. The A20 London Road at Aylesford, Hythe High Street and parts of the Low Weald and Len Valley were notably affected by these intense summer rainfall events. Collateral impacts from this unsettled weather included a lightning strike on a pumping station at Thanet, resulting in a marine pollution event, and subsidence affecting some local road and rail networks.

¹ Please see appendix 1

² Please see appendix 2

³ Please see appendix 3

3. Outlook

- 3.1 The Met Office three month outlook summary indicates a 15% chance that July to September will be cooler than average, a 50% chance that it will be near average and a 35% chance that it will be hotter than average. In terms of rainfall, the summary indicates a 30% chance the season will be drier than average, 55% chance that it will be near average and a 15% chance it will be wetter than average.
- 3.2 The EA continuously runs surge forecasts, informed by astronomical tide calculations. If a risk of coastal flooding is forecast, then this information is communicated to partners. The next notably high equinoctial spring tides, with a corresponding elevated risk of coastal flooding - if in combination with high winds, are forecast for early November.
- 3.3 To support local contingency planning for flood response, two table-top training exercises are scheduled for the autumn. On 28th October Exercise Scarce Emerald will test the county council's planning for a reservoir dam breach, while on 4th November Exercise Basilea will simulate a storm surge and coastal flooding response scenario. Key county council personnel and partner agencies will participate in these exercises, which form a part of an extensive KCC emergency planning exercise programme.
- 3.3 Kent Flood Risk Management Committee will continue to receive regular updates on water resources, flood alerts, weather warnings and response.

4. Recommendations

- 4.1 That Members note the warnings received since the last meeting of the Committee; and contribute to planning and response policy and practice through oversight and debate.

5. Contact Details

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Appendix 1: EA Flood Alerts and Warnings issued since 15th March 2021

Date issued	Flood Zone	Status
28/04/2021	Tidal Thames riverside from Dartford Creek and Mar Dyke to the Thames Barrier	Alert
28/04/2021	Isle of Sheppey and Coast from Kemsley to Seasalter	Alert
28/04/2021	Coast from Whitstable to Margate	Alert
28/04/2021	Tidal Medway, Medway estuary and Isle of Grain	Alert
28/04/2021	Coast from Dartford to Allhallows	Alert
17/06/2021	Shuttle and Cray	Alert
17/06/2021	Pent Stream in Folkestone	Alert
18/06/2021	Plenty, Swalecliffe and West Brooks	Alert
18/06/2021	River Bourne from Hadlow to East Peckham	Alert
18/06/2021	Upper River Stour	Alert
29/06/2021	Rivers on the Isle of Sheppey	Alert

Appendix 2: Met Office Severe Weather Warnings since 15th March 2021

Warnings (by period of extreme weather)	Date
3 Wind	10 – 11 March, 3 – 4 May & 20 – 21 May
1 Thunderstorm	16 – 19 June
1 Thunderstorm	27 June

Appendix 3: Environment Agency Thames Barrier closures since 15th March 2021

Thames Barrier closures	Date	Status
Thames Barrier closed	18/03/2021	Test
Thames Barrier closed	15/04/2021	Test
Thames Barrier closed	28/04/2021	Operational
Thames Barrier closed	14/06/2021	Operational