# Weather, Climate Change and Water: Optimising Operations and Strategy

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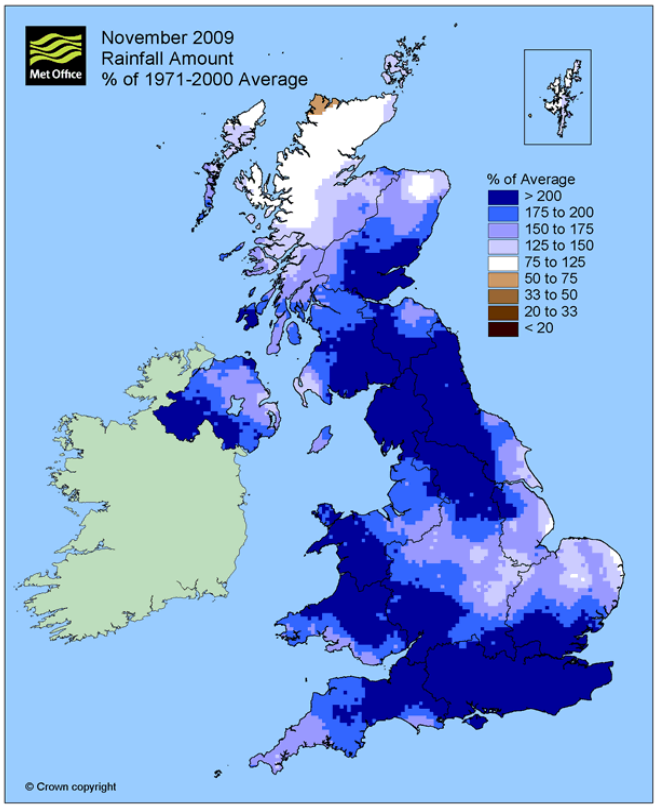
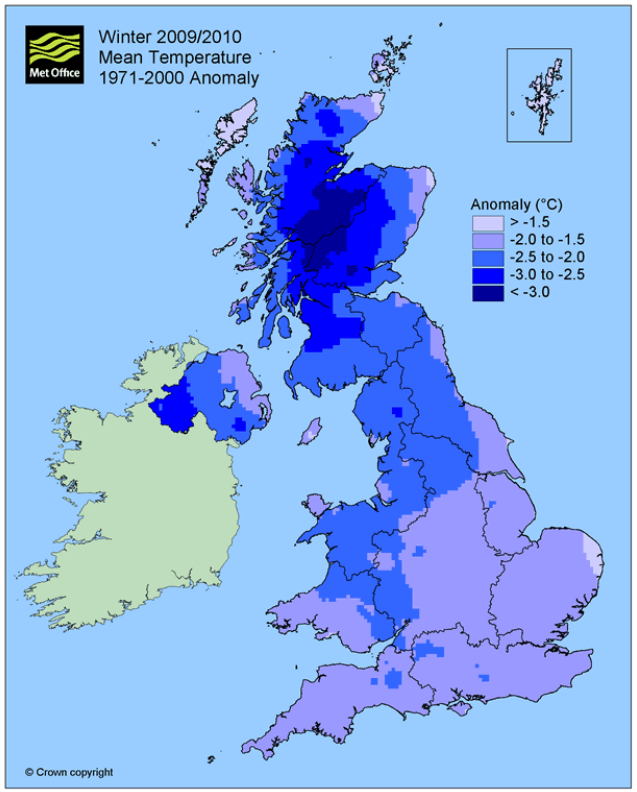
# Focus on Winter 2009/10




November 2009 Rainfall




Winter 2009/10 Temperature

# 2009/10 Operational Impacts

| | | Time from start of event | | |
|---|---|---|---|---|
| | | 24 hrs | 48 hrs | 72 hrs |
| Event intensity | ≥ 7.5mm/3hrs | 2.295 | 1.772 | 1.552 |
| | ≥ 10mm/3hrs | 2.870 | 1.985 | 1.718 |
| | ≥ 12.5mm/3hrs | 3.372 | 2.268 | 1.825 |
| | ≥ 15mm/3hrs | 4.111 | 2.709 | 2.160 |
| Maximum multiple from average calls | | 15.36 | 8.432 | 6.224 |

Figure 1- Average flood-type call factor compared with mean of the same period at varying rain event intensities (July – Nov 09)

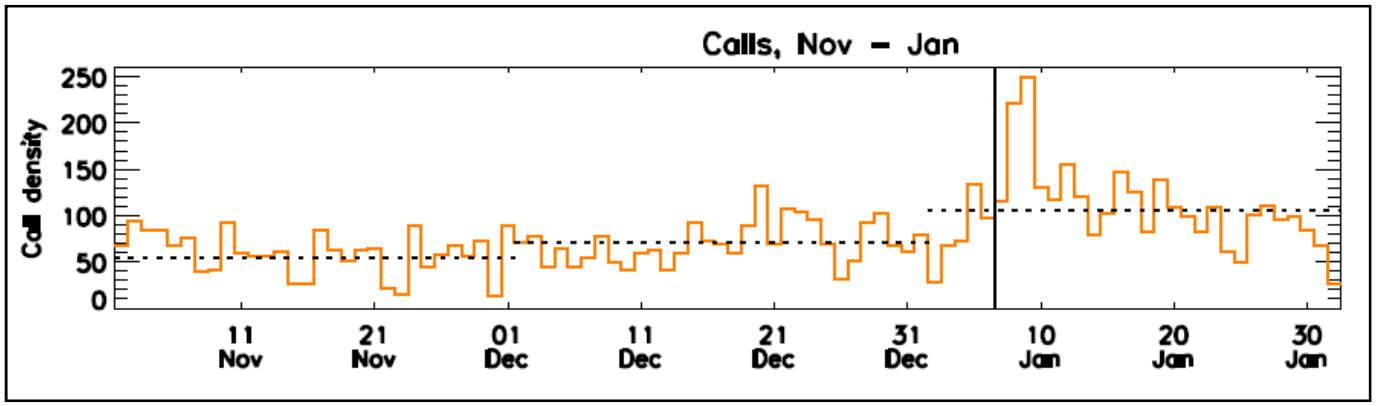



Figure 2- November 2009 to January 2010 daily call data for one county with mean 24hr call volume data plotted (dotted black lines)

# Optimising Operations and Strategy to Weather and Climate

- Winter 2009/10 weather had a significant impact on water company water and waste water operations.
- Two key areas affected were sewerage flooding and leakage (background + bursts).
- Quantifying the magnitude of these effects enables Water Companies to identify the cost/benefit of changing operational procedure according to a tailored weather forecast.
- Identification of the critical weather thresholds is important together with an understanding of forecast accuracy on all timescales.
- DEFRA Climate Change Adaptation reporting – To fully understand the impact of a future climate on operations it is important to fully understand the impact of today's climate.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