

Oxfordshire Environment and Waste Partnership

28 June 2013

Oxfordshire County Council's work on weather resilience and climate projections

Introduction

1. This report is a brief summary of Oxfordshire County Council's weather and climate resilience work during the past year. It accompanies a short presentation which illustrates some climate projections for Oxfordshire.

Background

2. The County Council's Environment and Energy Strategy Team works across directorates to manage weather and climate risks.
3. Oxfordshire County Council has completed two Local Climate Impact Profiles covering the period 1996 to 2009. These show that during this period there were at least 350 recorded incidents caused by severe weather, costing the council an estimated £21 million.
4. The focus of Oxfordshire County Council's Adaptation action plan is on asset resilience. Key aims and objectives in the 2012-2015 plan are to:
 - Reduce the risk from the impacts of weather events on Oxfordshire County Council services and costs;
 - Ensure that our assets and infrastructure are both resource efficient and resilient to the potentially increasing severity and frequency of weather events;
 - Implement a process for monitoring and recording data about the costs and impacts of severe weather. Recording and reporting this data is a requirement in the contract with the property service provider.

Resilience review

5. At the start of this year we conducted a review to find out how well prepared council services are to cope with severe weather. We looked at weather related risks, based on the weather definitions in the Oxfordshire Joint Severe Weather Plan (2013). For each risk identified, we assessed whether there are mitigation plans to address these risks at national, local or directorate level. These are summarised in Appendix 1. We found that:

a) Emergency response:

The Oxfordshire Joint Severe Weather Plan has effective responses in place for the main weather risks. The latest version introduces systems which take account of the weather events in 2012. We have not needed to test our

response to heat waves recently, but we can expect more heat waves in future.¹

b) Major risks and impacts:

The greatest impacts from severe weather can be seen in the cumulative damage to our assets and infrastructure, especially highways, but also buildings. This damage is evident after the heavy rain and cold weather last winter. There is a risk that the increasing cost of repairs will reduce the budget available for routine maintenance and for capital investment. This could affect our future resilience to severe weather.

c) Need for better data analysis

Services record a large amount of data, but do not yet routinely monitor or report the costs and impacts of severe weather. We need this information to build a stronger business case for investing in resilience to avoid future costs.

6. So the focus of our Adaptation Action plan will continue to be on asset resilience, and we will give priority to monitoring costs. To help services to do this, the county council is taking part in a trial of the Severe Weather Impacts Monitoring System (SWIMS) system developed by Kent County Council.

Implementing SWIMS

7. SWIMS is an online portal hosted by the regional partnership Climate South East, with support from DEFRA. The SWIMS database allows individual services and contractors to report and monitor the costs and impacts of weather on a routine basis. This evidence will help to analyse trends and plan for the future.
8. Once the SWIMS system is up and running, we would like to invite other councils and organisations in Oxfordshire to take part. SWIMS is a valuable opportunity for the partnership to work together to improve resilience to the severe weather that we are already experiencing.

Recommendations

- a) To note the report;
- b) To consider a report about participating in the Severe Weather Monitoring System (SWIMS) at a future meeting of the Partnership.

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¹ UKCP 09 Climate Projections, and UK Climate Change Risk Assessment 2012.

APPENDIX 1

Summary tables

a) Key risks to services

Weather type	Risk/impact	Key services affected
<p>Flooding</p>	<ul style="list-style-type: none"> • roads blocked leading to road closures and traffic disruption such as school closures • flooding of homes and businesses • weather related damage to roads, bridges, and buildings • increased water flow causing erosion (scour) which can undermine bridge foundations. This is very costly to repair and investigate • damage to buildings/subsidence – rising cost of repairs <p>Recent examples from heavy rain in November/December 2012:</p> <ul style="list-style-type: none"> • boats/barges can break loose from moorings and strike bridges (eg Wolvercote in 2012) • ground saturation affecting the stability of embankments and carriageway: this caused collapsed road at Bagley Wood • damage to roof tiles and roofs in schools and community centres; risk of leaking water damaging computer and other equipment 	<p>Transport</p> <p>Property</p> <p>Schools</p>
<p>Cold weather/storm:</p>	<ul style="list-style-type: none"> • disruption and damage to roads • more potholes needing repair • complaints from public • damage to buildings • school closures 	<p>Transport</p> <p>Property</p> <p>Schools</p>
<p>Heatwave</p>	<ul style="list-style-type: none"> • road heave, roads cracking or melting • road closures, increased accident risk 	<p>Transport</p> <p>Property</p>

	<ul style="list-style-type: none"> increased demand for air conditioning and extra resilience measures, disrupting service delivery emergency response not tested recently 	Schools Social and Community Services
Increased frequency of severe weather	<ul style="list-style-type: none"> the cost of responding reduces budget available for normal service delivery 	All service areas

b) Summary of national and local plans/processes to manage weather risks

Flooding	<p>National and local plans for river and surface water flooding (Flood and Water Management Act 2010)</p> <p>Oxfordshire Flood Risk Management Strategy (draft -2013)</p> <p>SUDs implementation (Oxfordshire County Council Drainage Team)</p> <p>Oxfordshire Joint Severe Weather Plan</p>
Heatwave:	<p>Department of Health Heatwave Plan for England 2013</p> <p>Met Office Heat-Health Watch system</p> <p>Social &Community Services Heat Wave Plan</p> <p>SCS/CEF Major Incident Plan</p> <p>Corporate HR advice for county council staff</p>
Cold weather/ storms:	<p>Oxfordshire Joint Severe Weather Plan</p> <p>E&E adverse weather plan eg snow desk</p> <p>Oxfordshire Waste Partnership Emergency Protocol</p> <p>Department of Health Cold Weather Plan for England</p>
All climate related weather risks	<p>UK Climate Change Risk Assessment 2012</p> <p>National Adaptation Programme to be published November 2013</p> <p>Thames Valley Local Resilience Forum Community Risk Register</p> <p>Climate Ready – Environment Agency</p>