Flood Guidance Statement

Our assessment for daily flood risk in Scotland is below. This statement is valid at the time of issue.

16:00hrs Monday 11 August 2014
Flooding in recent years, across many parts of the country, has reminded people of our vulnerability to extreme weather.

To help protect lives, homes and livelihoods, the Met Office and the Scottish Environment Protection Agency (SEPA) have set up the Scottish Flood Forecasting Service — a partnership that provides Category 1 and 2 responders with better indications of flood risk.

I was extremely impressed by how well prepared authorities were — aided by the timely and accurate flood forecasts from the Scottish Flood Forecasting Service run by SEPA and the Met Office.

Paul Wheelhouse, Minister for Environment and Climate Change, comment in Scottish Parliament
Overview

The Flood Guidance Statement provides information for Category 1 and 2 responders to assist with tactical planning decisions around flooding.

Statements are issued on a daily basis by the Scottish Flood Forecasting Service to Category 1 and 2 responders and government departments.

The guidance presents an overview of the expected flood risk across Scotland for the next five days ahead at Local Authority level. It identifies developing situations that could cause flooding and significant disruption to normal life.

The guidance highlights the risk for the main types of flooding – river, coastal and surface water.

The risk assessment is based on the impact and likelihood of flooding, drawing on meteorological information and advice, and an understanding of the situation across river catchments and the coast. Risk levels are agreed on a daily basis through consultation between Scottish Environment Protection Agency hydrologists and Met Office weather forecasters.

The level of impact is defined according to the table on page 6. Potential impacts are assessed by taking into account:

- What, how much, how long and where – for instance, how much rain is expected, how heavy will it be, where will it fall, how long will it last?
- Recent weather conditions – is the severe weather occurring shortly after a period of prolonged heavy rain or other high impact events?
- Knowledge about the condition of the catchments within the areas at risk – how saturated are they, how high are the rivers and how susceptible are they to flooding?
- Impact of tides – is extreme weather expected at a period of high (spring) tides?
- This impact is then combined with the likelihood of the event happening (taking into account the confidence in the forecast) to give a combined risk for each area and each day of the assessment.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Minimal</th>
<th>Minor</th>
<th>Significant</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Low</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Low</td>
<td></td>
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</tbody>
</table>

Overall flood risk

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th>MEDIUM</th>
<th>LOW</th>
<th>VERY LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flood risk matrix
(river, tidal/coastal and surface water flooding)
Things to look out for in the Flood Guidance Statement

- Text will refer to impact (minor, significant etc) and likelihood (possible, likely etc) as well as the overall risk.
- Make sure you know where we are on the risk matrix – the same colour can refer to different levels of potential impact, with different likelihood.
- Even if all areas are coloured green there could be the potential for minor impacts.
- The text will give further information beyond what is in the risk maps.
- Area of Concern maps will give further specific information on areas at risk, and how the risk colour has been chosen from the matrix. These are sometimes used even when the risk is very low (green) as there may still be minor impacts to be pointed out.

Examples of some scenarios you may see in the Flood Guidance Statement

- **High**: Potentially severe event, may be some days away and not even happen, but this acts as a heads up
- **Medium**: Significant event expected, e.g. well forecast tidal or frontal rain
- **Low**: Quite common minor impacts, confident forecast
- **Very Low**: Thundery showers that could give minor impacts but low confidence
- **Minimal**: More intense thundery showers, low confidence

Area of concern map that will usually be added when more detailed local information is needed

In Area A, there is a high likelihood of significant disruption. This brings a MEDIUM flood risk overall. Rivers including the Spey, Lossie, Nairn and Daverslaw have already continued to respond to the prolonged significant rainfall from Sunday night with impacts including flooding to land and roads, disruption and property flooding likely through Monday evening. Impacts are expected to continue into Tuesday, particularly into the area within the dotted line, where the most significant impacts have occurred.

In Area B there is a high likelihood of minor impacts for river flooding. This brings a LOW flood risk overall. Rivers will continue to be very high throughout Monday evening, with impacts potentially lasting into Tuesday. Potential impacts could include flooding to land and roads and isolated properties.

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FLOOD GUIDANCE STATEMENT SECTIONS EXPLAINED

General overview of flood risk
This section provides an overview of flood risk for the next five days and explains how flood risk status has been allocated to different areas. It is always worth reading this in conjunction with the five-day flood risk maps.

Bear in mind that there may still be localised issues despite an overall GREEN status. The text should highlight this.

Weather summary
This is an overview of weather conditions expected over the next five days. When read in conjunction with the ‘General overview of flood risk’ it helps explain the rationale behind the risk maps.

Warnings and Alerts in force in Scotland
This provides a summary of the numbers of both Flood and National Severe Weather Warning Service Alerts and Warnings in force at the time the statement is issued. The links take you to the SEPA and Met Office websites for the latest and live information.

Flood risk
Up to three paragraphs (one for each type of flooding) detail the risk of flooding from rivers, coastal effects and surface water (i.e. localised flooding due to very intense rainfall). These paragraphs are ordered by severity and/or priority of flood risk.

Area of concern map
When there is a need to provide further detail there will be a map that shows the main areas at risk, including matrices to indicate how the risk has been derived.

Next statement due
This indicates when the next statement will be issued. Normally this is at the same time the next day but if an event is ongoing, or is expected, then updates are likely to follow later in the day.

Contact details
This gives the number for the SEPA Communications Centre, (01698 839039), where all enquiries should be directed in the first instance.

FREQUENTLY ASKED QUESTIONS

Q. How frequently are statements issued?
A. Flood Guidance Statements are issued daily at the following times:
• Very low and low risk situations – 10:30 (local time)
• Medium risk situations – 10:30 and 16:00
• High risk situations – 10:30, 16:00 and at other times as required

Q. Who receives the statements?
A. All Category 1 and 2 responders including emergency services and local authorities can register to receive the daily Flood Guidance Statement by emailing flooding@sepa.org.uk.

Q. Are the statements targeted?
A. All those registered are sent the 10:30 statement. Subsequent statements during the day are targeted at responders for areas at risk, or where there has been a change in flood risk since the previous statement.

Q. What are the recommended actions following receipt of a statement?
A. The aim of the statement is to provide longer lead times to prepare for a flood event. Partners will need to consider what actions they can take in the lead up to an event to minimise the impact of the event and reduce recovery time.

The Scottish Flood Forecasting Service advises partners to talk to their local SEPA Flood Advisor or Met Office Public Weather Service Advisor for a more detailed discussion about local risk.

For more information on the SFFS visit www.sepa.org.uk/flooding
## FLOOD RISK MATRIX GUIDANCE ON IMPACTS

<table>
<thead>
<tr>
<th>Typical impacts</th>
<th>Minimal disruption</th>
<th>Minor disruption</th>
<th>Significant disruption</th>
<th>Severe disruption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Generally no impact, however there may be:</td>
<td>• Localised flooding of land and roads.</td>
<td>• Flooding affecting parts of communities.</td>
<td>• Widespread flooding affecting whole communities.</td>
</tr>
<tr>
<td></td>
<td>• Isolated and minor flooding of low-lying land and roads.</td>
<td>• Localised flooding affecting individual properties.</td>
<td>• Damage of buildings/structures is possible.</td>
<td>• Collapse of buildings/structures is possible.</td>
</tr>
<tr>
<td></td>
<td>• Isolated instances of spray/wave overtopping in coastal roads and promenades.</td>
<td>• Localised disruption to key sites on floodplains.</td>
<td>• Possible danger to life due to fast flowing/deep water/wave overtopping/wave inundation.</td>
<td>• Danger to life due to fast flowing/deep water/wave overtopping/wave inundation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Individual properties in coastal locations affected by spray and/or wave overtopping.</td>
<td>• Disruption to infrastructure.</td>
<td>• Widespread disruption or loss of infrastructure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Local disruption to travel.</td>
<td>• Small scale evacuation of properties may be required.</td>
<td>• Large scale evacuation of properties may be required.</td>
</tr>
<tr>
<td>Expected partner response level</td>
<td>Business as usual.</td>
<td>Single agency operational response.</td>
<td>Regional Resilience Partnership awareness likely to be needed at a tactical level.</td>
<td>Regional Resilience Partnership awareness likely to be needed at a tactical level.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SGoRR may be considered.</td>
<td>Mutual aid likely with perhaps national co-ordination. SGoRR convened.</td>
</tr>
<tr>
<td>Implications for public</td>
<td>Generally no impact; however there may be some isolated and minor flooding. Little or no disruption to travel although wet road surfaces could lead to difficult driving conditions.</td>
<td>Localised flooding possible. Wet road surfaces and possibility of ponding water, especially in known trouble spots. Local disruption to travel – longer journey times.</td>
<td>Flooding of land and roads and property is likely. Disruption to travel and infrastructure.</td>
<td>Widespread flooding of property. Severe disruption to travel. Loss of gas, electricity, water supplies. Significant disruption to communities.</td>
</tr>
</tbody>
</table>

## FLOOD RISK MATRIX GUIDANCE ON LIKELIHOOD

<table>
<thead>
<tr>
<th>Guidance on likelihood</th>
<th>Very low</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flooding is possible, although the likelihood is very low. Forecast suggests less than 20% chance of occurrence.</td>
<td>Flooding is possible. Forecast suggests between 20% and 40% chance of occurrence.</td>
<td>Flooding is likely. Forecast suggests between 40% and 60% chance of occurrence.</td>
<td>Flooding is expected or ongoing. Forecast suggests greater than 60% chance of occurrence.</td>
</tr>
<tr>
<td>Product</td>
<td>Who is responsible?</td>
<td>Who receives them?</td>
<td>Purpose</td>
<td>Scale</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------------------------</td>
<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>National Severe Weather Warning Service (NSWWS) Alerts and Warnings</td>
<td>Met Office</td>
<td>All recipients, including the general public.</td>
<td>Includes Alerts and Warnings for the potential impact of rainfall. The impact will often be a flood risk or flood event.</td>
<td>Region based.</td>
</tr>
<tr>
<td>Flood Guidance Statement</td>
<td>Scottish Flood Forecasting Service</td>
<td>Category 1 and 2 responders.</td>
<td>Planning tool to help category 1 and 2 responders prepare for a flood event.</td>
<td>Area based.</td>
</tr>
<tr>
<td>Flood Alerts</td>
<td>SEPA</td>
<td>All registered recipients, including the general public.</td>
<td>General information about the possibility of flooding.</td>
<td>Local Authority or large Hydrological boundaries.</td>
</tr>
<tr>
<td>Flood Warnings</td>
<td>SEPA</td>
<td>All registered recipients, including the general public.</td>
<td>Specific information about an imminent flooding event, requiring action by the recipient.</td>
<td>Flood warnings are for more localised areas, based on detailed local forecasting models.</td>
</tr>
</tbody>
</table>
How to register

Category 1 and 2 responders and other partners can register to receive daily flood guidance statements by emailing flooding@sepa.org.uk

For more information on the Scottish Flood Forecasting Service visit www.sepa.org.uk/flooding