Reducing flood risk through early action

Flood Warning

Flood warnings need to be accurate and timely to help reduce impact on vulnerable communities.

Halcrow has been helping a wide range of clients for more than a decade in improving flood warning effectiveness. We help our clients around the world develop, assess and improve their flood warning services by offering a comprehensive range of services. We assess client needs, develop tools and assess performance of flood warning services.

We have expertise, experience and capability in:

- Developing enterprise systems for monitoring and responding to flood events
- Developing public service and field operative flood alert applications
- Development and in-depth experience of Surface Water Flooding and the Extreme Rainfall Alert service
- Assistance with revision of national flood warning codes
- Development of flood warning plans and solutions

Environment Agency Channel Partner

Halcrow is an Environment Agency licensed flood warnings service provider and can produce custom applications and enterprise solutions to meet specific client needs.

FloodViewer

Halcrow is at the heart of bringing new technology to flood warning and increasing flood warning information availability to all.

FloodViewer enables you to see outputs from models and existing flood maps, turning modelling information into user-friendly illustrations of the risk of flooding in a particular area. It enables easy viewing of a range of flooding scenarios, such as different return-period events, climate scenarios or defence options.

For more information, visit our website at halcrow.com/floodviewer

Flood Alert – flood warning information for all

Using the latest technology available, the Environment Agency provides Halcrow, as a licensed flood warning service provider, live flood warning data throughout England and Wales 24 hours a day.

Using the Environment Agency's live flood warning feeds, Halcrow has developed Flood Alert, a smartphone application which allows users to quickly, efficiently and conveniently monitor flooding in areas that are important or close to them.

For more information, visit our website at halcrow.com/floodalert or download Flood Alert from the Apple App Store.

Delivering value – case studies

Flood Warning Improvements in Coverage: East Somerset Rivers

For the Environment Agency we developed separate flood warning areas for Shepton Mallet and Croscombe, including maps showing the flood extents for a range of peak flows. As lead times are so short, we developed flood warnings triggers from rainfall action thresholds.

Effective flood warnings can help avoid risk to life and property damage (Launceston Flooding, November 2010)

Developing Rainfall Alerting for Surface Water Flood Risk

Using the latest meteorological developments in rainfall forecasting, we have our hydrometeorologists have worked in partnership with meteorological agencies to develop surface water flood alerts in the UK and Algeria. In the UK these alerts now go to around 1,000 response organisations.

Rainfall alerts can reduce urban surface water flood disruption (Buenos Aires)

Lowdham, Woodborough & Scotter Flood Warning Feasibility Study

Following the flooding that occurred in these three areas during summer 2007 the Agency was keen to offer a flood warning service to these areas. We appraised forecasting techniques, identifying primary and contingency techniques proposed for each area, looking at lead-time and accuracy.

Applying Probabilistic Flood Forecasting in Flood Incident Management

We are leading this study for the Environment Agency of England & Wales to assess how probabilistic flood forecasting can be used by flood warning duty officers to reduce flood risk and manage flood incident management actions more effectively, covering case studies in coastal, fluvial and surface water flood environments.

Gloucester Flood Warning Improvements

This project has recommended community-based flood warning areas and examined the technical feasibility of providing flood warnings based on precipitation events on the small Gloucester watercourses. These watercourses present significant challenges for forecasting and warning due to the short lead time available for warning as they respond very quickly to rainfall. A total of nine forecasting technique options were examined and evaluated, highlighting pros and cons of each. The client was very pleased with this study and indicated it would become “the benchmark against which we will measure any other studies”

Contact us

- **Murray Dale - UK**
  tel +44 (0)1392 444 252
  email DaleM@halcrow.com
- **John Martin – Central and Eastern Europe**
  tel +44 (0)1793 816 465
  email MartinJ@halcrow.com
- **Sergio Herbon – South America**
  tel +54 11 4311 4911
  email HerbonSD@halcrow.com
- **Paul Robinson – North America**
  tel +1 813 386 1973
  email RobinsonPM@halcrow.com
- **Paul Wilkinson – Australasia**
  tel +61 7 3169 2900
  email WilkinsonPL@halcrow.com

For your nearest Halcrow office, visit halcrow.com