





Appendix A

Current flood warning and forecasting

Flood warning and forecasting

We issue flood warnings to give residents and businesses at risk time to take action and help minimise the impacts of flooding on their property. There are four levels of flood warning, which are given below, together with their meanings:

	FLOOD WATCH	Flooding of low lying land and roads is expected. Be aware, be prepared, watch out!
	FLOOD WARNING	Flooding of homes and businesses is expected. Act now!
	SEVERE FLOOD WARNING	Severe flooding is expected. There is extreme danger to life and property. Act now!
	ALL CLEAR	Flood Watches or Warnings are no longer in force for this area.

We currently provide a tidal flood warning service to the following areas:

- Bridgwater
- Steart and Stolford
- Burnham-on-Sea and Brean

In addition we provide a tidal flood watch service for the entire Somerset coastline from Porlock to Avonmouth.

In order for us to issue accurate and timely flood warnings, we need to be able to forecast tide levels. To do this, we use the Storm Tide Warning Service which provides information on the expected tidal surge as a result of forecast climatic conditions. When combined with astronomical tide heights and wind/wave factors this allows us to predict the total tide height and the associated impacts on the ground, which in turn means we can issue the appropriate level of warning.

When high tides are forecast, the actual sea levels and forecast conditions are monitored along the North Coast of the South West Peninsular to allow us to make real time assessments of the likely impacts.

Our tidal flood warning system can typically provide 2 to 6 hours warning time, however, this may be reduced when dealing with tidal surges.

We also offer a fluvial service to the River Brue between Lovington and Highbridge.

All flood warnings and watches can be issued by a variety of means depending on suitability, including:

- Floodline Warnings Direct (FWD). This is an automated system which is programmed to call pre-set contact details and issue flood warnings. Residents and businesses need to be registered with us to receive FWD messages; this can be done by contacting Floodline. Below is the number of businesses and public customers registered to FWD for areas covered in this study.
- Local media. We make extensive use of local media, including radio and television, to disseminate flood warnings.
- Floodline. Residents and businesses concerned about flood risk may telephone Floodline (0845 988 1188) to obtain current flood warning information and general advice. A 'quick-dial' number is available for each flood warning area, to allow callers to quickly access relevant information.
- Internet. All flood warnings are noted on our website (www.environment-agency.gov.uk).
- Loud hailers. In some instances, we make use of loud hailers to ensure that flood warnings are issued as effectively as possible. This is the primary method of dissemination for many of our large coastal communities including Bridgwater and Burnham-on-Sea/Brean. In these locations FWD is not actively promoted to customers as the large numbers affected can be more efficiently warned through loudhailering.

FWD Registered Customer figures (as of July 2008):

- Bridgwater: 18
- Burnham-on-Sea and Brean: 31
- Steart and Stolford: 35
- River Brue Lovington to Highbridge (low-lying and not low-lying properties): 67

Flood Warning Improvements

This financial year we plan to commission Royal Haskoning to carry out an inception (pre-feasibility) report looking at what options we have to improve our existing tidal flood warning criteria (Burnham on Sea/Brean, Steart and Stolford) and to deliver criteria for previously unserved areas such as Stretcholt and Huntspill. Provided the inception report provides suitable options with acceptable cost-benefit ratio we hope to run a project to deliver improvements in 09/10.

We have also awarded a contract to Halcrow to investigate the validity of our existing flood warning service on the River Brue. The final outputs of this project are due in February 2009 and we plan to implement a more community focussed service in line with the Flood Risk Flood Warning areas (FRFWAs) project in the summer 2009.

Internally we are working on developing a flood warning service for the Cannington Brook at Cannington. There are 127 properties at risk within Flood Zone 3 (1:100). A river level site was installed for the Cannington Brook in May 2008 and this will be used to trigger the flood warnings.

There are a number of additional communities that have been identified at risk that currently have no flood warning service, and that we have not yet instigated work on. These are:

Bayley's Brook at Shurton. 20 properties at risk Flood Zone 3 (1:100).

West/East Brook at Stogursey. 3 properties at risk Flood Zone 3 (1:100).

Cannington Brook at Radlet. 6 properties at risk Flood Zone 3 (1:100). We could possible look at providing a service to these properties using the Cannington site.

Cannington Brook (Hawkrige) at Spaxton. 5 properties at risk Flood Risk 3 (1:100).

We work closely with our colleagues in the Flood Forecasting team to develop improved forecasting capability for flood events.

Public Awareness:

We have a comprehensive program of raising public awareness. This includes recruitment campaigns for our FWD service (usually in the form of direct mailings). We regularly use media advertising including use of local radio and newspapers and whenever appropriate we offer local radio/TV interviews during flood events. In areas where loudhailers are the primary method of warning dissemination we regularly mail the residents to inform them of the risk and alert them to the service that we offer to them. We also run a program of flood awareness road shows where we offer information and advice direct to the public.