

What are the risks of Reservoir Flooding?

Provided a reservoir is properly maintained the likelihood of it failing and causing flooding is extremely low. Large scale flooding is extremely unlikely to occur and reservoirs in the UK have an excellent safety record. Since the first reservoir legislation was introduced in the 1920s the UK has not had a single reservoir failure resulting in loss of life.

Although unlikely, each year there are a small number of incidents that are deemed serious enough to require emergency drawdown of the reservoir. One of the most high profile incidents was in 2007 at the Ulley Reservoir in Rotherham. Extreme rainfall caused damage to the dam and the risk of flooding led to the evacuation of around 1,000 people near to the reservoir as well as closing of main roads (including the M1). It was this that prompted Sir Michael Pitt, in his review, to recommend the government take measures to improve reservoir emergency preparedness.

Part of this recommendation was that the government should produce reservoir flood maps showing at risk areas and give these to Local Resilience Forums so they could use them to prepare emergency plans in line with this; reservoir flood maps for 2,007 reservoirs under the Reservoirs Act were completed in November 2009.

Since completion of the mapping project the Environment Agency has provided access on its website to allow members of the public to see whether they are in a location which might be subject to flooding from reservoirs.

Most reservoirs in the UK have been there for over a hundred years without any problems. Many communities have therefore been living with the very small risk of reservoir flooding for many years and those communities close to reservoirs have always been aware that a risk existed. Nothing has changed and the risk of reservoir flooding has not increased.

Reservoir legislation and regulation help to ensure that these reservoirs remain safe, and the reservoir flood maps allow people to better estimate the areas potentially at risk and to put in place emergency plans to be better prepared to respond should reservoir flooding occur.

Reservoir Flooding Risk maps

You can access flood maps on the Environment Agency Website

<https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>

The maps show whether your property is in an area possibly affected by flooding from a reservoir if it fails and breaches.

The reservoir flood maps available on the Environment Agency website are only outline maps, showing only the areas that might be flooded in a realistic “worse case” reservoir failure scenario.

This means that the extent of the flooding shown is the worst that could realistically happen. In actuality, if reservoir flooding did occur it would most likely be much less severe than the worse case scenario. However maps showing a realistic worst case scenario are useful to emergency planners who need to know the area that might need to be evacuated and where it is safe for people to go.

The maps on the Environment Agency website do not give any information about the depth or speed of the flood waters or the length of time it would take for the flood waters to reach any location. Even in a worst case scenario many areas shown as being at risk of reservoir flooding would be expected to receive no more than one or two centimetres of flood water. Emergency planners do have access to maps containing additional information. However due to the sensitive nature of the information from a national security perspective this information is not publically available.

The reservoir flood maps do not give any indication of the likelihood of flooding occurring unlike the maps for river and coastal flooding which are also available on the Environment Agency website. Reservoir regulation ensures that these reservoirs are stringently inspected and supervised by qualified civil engineers and that any required maintenance or upgrade works are carried out quickly. This helps ensure that the likelihood of one of them failing remains extremely low.

Northumbria Reservoir flooding plans

The Northumbria Local Resilience Forum (NLRF) has no reservoirs in its area that are identified as high risk. The NLRF has therefore developed a generic Plan for multi-agency response in the unlikely event that any of the designated reservoirs in Northumbria (Northumberland and Tyne and Wear) should be breached. It can be found on the NLRF website: www.northumbrialrf.org.uk

If you have any questions about reservoir flooding within your specific location you can use the Environment Agency enquiry facility on its webpage or contact your local council using the links overleaf:

Gateshead Council	- DavidPatterson@gateshead.gov.uk
Newcastle City Council	- resilience@newcastle.gov.uk
North Tyneside Council	- jonathan.hutchinson@northtyneside.gov.uk
Northumberland County Council	- eplan@northumberland.gov.uk
South Tyneside Council	- James.Maughan@southtyneside.gov.uk
Sunderland City Council	- David.Turnbull@sunderland.gov.uk

Further information about reservoir flooding and reservoir safety can be found on the Environment Agency Website

<https://www.gov.uk/government/organisations/environment-agency>