

# Flooding from groundwater

## Improved flood warning service - frequently asked questions

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# **General**

#### 1. What is flooding from groundwater?

Flooding from groundwater can happen when the level of water within the rock or soil that makes up the land surface (known as the water table) rises. The level of the water table changes with the seasons due to variations in long term rainfall and water abstraction.

When the water table rises and reaches ground level, water starts to emerge on the surface and flooding can happen.

There are some key features of flooding from groundwater:

- Flooding will usually occur days or even weeks after heavy or prolonged rainfall;
- Flooding may occur for a long time, often lasting several weeks;
- The water doesn't always appear where you would expect it to (i.e. valley bottoms). It may also emerge on hillsides;
- Water may rise up through floors rather than coming in through doors.

Flooding from groundwater is most common in areas where the underlying bed rock is chalk, but it can also happen in locations with sand and gravel in the river valleys.

## 2. Who deals with flooding from groundwater?

Under the Flood and Water Management Act 2010 the Environment Agency has a strategic overview of all sources of flood risk and coastal erosion.

Lead Local Flood Authorities (LLFAs) are responsible for mapping, modelling and managing the risk of flooding from groundwater. LLFAs are the unitary authority or (if there is no unitary authority), the county council for the area. LLFAs work in partnership with other organisations, including the Environment Agency, district councils, water and sewerage companies to manage this risk

We have agreed with DEFRA that in the short/medium term we will continue to provide and maintain the flood warning services we developed in the past for flooding from groundwater. We are working

with Defra and the Local Government Group on potential future groundwater flood warning arrangements.

### 3. How do I find out if I'm at risk of flooding from groundwater?

Mapping the risk of flooding from groundwater is complex and is currently not possible. There are no flood risk maps for groundwater. If you want to find out if your property could be at risk of flooding from groundwater or may have flooded in the past you should contact your Lead Local Flood Authority. If they do not have any information on the risk in your area you may find in helpful to contact:

- your local Environment Agency office;
- Your parish or town council;
- any Flood Wardens or Flood Action Groups in your area.

If you are still unsure whether your home could be affected by flooding from groundwater, then you may wish to carry out a flood risk assessment. To do this, you will need to contact a professional such as a consulting engineer or chartered surveyor.

### 4. Are there any flood maps for flooding from groundwater?

Mapping the risk of flooding from groundwater is complex. There are currently no national, publicly available maps showing the chance of groundwater flooding. However, groundwater susceptibility or emergence maps give an indication of areas where geological conditions mean that groundwater emergence is possible. Historic records may show where flooding from groundwater has occurred in the past. You should contact your Lead Local Flood Authority to see if they have this type of information.

## 5. How are you targeting the service for groundwater flooding?

We offer our flood warning service in areas that have been affected by flooding from groundwater in the past. Many of these areas were affected by flooding from groundwater in winter 2000. We use the experience and knowledge of our local Flood Incident Management and groundwater teams to identify which properties might be affected by flooding from groundwater.

## 6. How can I sign-up for flood warnings for groundwater?

You can find out if groundwater flood alerts/flood warnings are available in your area by:

- calling Floodline on 0845 988 1188;
- visiting our website (www.environment-agency.gov.uk) and registering online;
- speaking to a member of your local Environment Agency flood team. You can find contact details online at <a href="https://www.environment-agency.gov.uk">www.environment-agency.gov.uk</a>.

In the future, in some areas we will also send out briefing notes which contain more detailed information on the groundwater situation. To receive these briefings, you will need to register an email address.

### 7. What can I do to prepare for flooding from groundwater?

Many of the actions for preparing for flooding from groundwater are the same as those for flooding from rivers or the sea. For example, we would still urge you to complete a personal flood plan, move items to safety or prepare a flood kit. The main difference is that some usual methods of flood protection (e.g. sandbags) may not be effective. The best method to try and keep groundwater out of a property is to use a drainage or pump system. More information about these types of protection can be found in our new flooding from groundwater leaflet which is available on our website.

# 8. Will signing up for flood alerts/flood warnings for groundwater affect by insurance?

Receiving our messages or flood warnings does not affect your insurance. We do not give insurance companies information about who receives flood warnings.

### 9. How can I get further information about flooding from groundwater?

You can get more information about flooding from groundwater by:

- Calling Floodline on 0845 988 1188;
- Contacting your Lead Local Flood Authorities. LLFAs are the unitary authority or (if there is no unitary authority), the county council for the area.
- visiting our website (<u>www.environment-agency.gov.uk</u>) and downloading our leaflet about flooding from groundwater;
- speaking to one of our local flood team.

# **Existing flood warning customers**

# 10. I'm registered to Floodline Warnings Direct for rivers/sea- will I get flood alerts/flood warnings for groundwater?

The Environment Agency issue Flood Alerts when we think flooding is possible and Flood Warnings when flooding is expected in your area.

If you are registered to our Floodline Warnings Direct to receive information for flooding from rivers or the sea and you are in an area that could also be affected by flooding from groundwater then you will automatically be registered to receive these groundwater warnings too. From now on you will receive an alert or warning for flooding from groundwater if we issue it.

Receiving Flood Alerts is optional. You will only receive flood alerts for groundwater if you have opted in to receiving them.

### 11. Why have I received multiple flood alerts / flood warnings?

You may have received more than one flood alert as your property is in an area where we offer alerts/warnings for flooding from rivers and the sea and also for flooding from groundwater. We will send you separate flood alerts/warnings as they contain different information depending on where the risk of flooding is coming from.

# Flood alerts / Flood warnings

# 12. Are flood alerts/flood warnings for flooding from groundwater available everywhere?

No. We only provide flood alerts/flood warnings in locations that have (to our knowledge) been previously affected by flooding from groundwater. These are primarily in the South East and South West of England. Groundwater isn't widespread in Wales so the service is not available there.

# 13. Why can't I register to receive flood alerts / flood warnings for groundwater?

We only provide flood alerts/flood warnings in locations that have (to our knowledge) been previously affected by flooding from groundwater. These are primarily in the South East and South West of England. Groundwater isn't widespread in Wales so the service is not available there.

# 14. How will I know that the flood alert/ flood warning is for flooding from groundwater?

The message you receive will mention 'groundwater flooding'. Although the message is very similar to that which we send for flooding from rivers or the sea, the groundwater messages will include the following:

- an estimation of the duration of flooding;
- tell you that groundwater levels are high;
- tell you to check pumps.

## 15. Why has a groundwater flood alert been in force for so long?

Flooding from groundwater can occur for a long time and may often last several weeks. We have kept the flood alert in place as flooding from groundwater is still possible for that area.

### 16. How accurate are flood alerts / flood warnings for groundwater?

This is a new service and so it may not be as accurate as the warning service we provide for flooding from rivers and the sea. We will develop and improve the service over time as we experience future floods and as our knowledge and understanding improves.

# 17. Are flood alerts / flood warnings for groundwater shown on your website?

Groundwater flood alerts/flood warnings do appear on our website. When we issue a flood alert or flood warning for groundwater this will be displayed on our website along side alerts and warnings for rivers and the sea. Areas where we offer flood warnings for groundwater also appear on our 'What's in your backyard' web pages.

# 18. Why aren't severe flood warnings available for flooding from groundwater?

Although flooding from groundwater can cause significant disruption to communities it would generally not pose a risk to life and so severe flood warnings are not being developed for groundwater. The groundwater flood warning service is in its infancy and we may review the need for severe flood warnings for groundwater in the future.

### 19. Can I get information on current groundwater levels?

In the future we hope to be able to display real time groundwater level information on our website. However this service is still in development. In the meantime you can find water situation reports on our website which are published on a monthly basis and include levels of key groundwater boreholes.

# Three day forecast

### 20. What groundwater information is included in the three day forecast?

We publish county based flood risk forecasts for flooding from rivers, the sea, groundwater and heavy rain that could lead to surface water flooding on our website. This gives you an indication of the risk of flooding over the next three days.

# Flood Warnings for Infrastructure & the Targeted Flood Warning Service

## 21. Is groundwater information included in FWFI and TFWS?

Yes, data on groundwater flood alerts and warnings is fed into the FWFI hub and the Targeted Flood Warning Service. This means that any Value Added Resellers (VARs) who have access to the FWFI hub and any Category 1 or 2 responders that receive Targeted Flood Warnings will also receive information on alerts and warnings for groundwater.