



# Guidance on SEPA's reservoir risk designation process

## Reservoirs (Scotland) Act 2011



We are the Scottish Environment Protection Agency (SEPA). As Scotland's environmental regulator we protect and improve the environment by helping business and industry to understand their environmental responsibilities, enabling customers to comply with legislation and good practice and to realise the many economic benefits of good environmental practice.

We are a non-departmental public body, accountable through Scottish Ministers to the Scottish Parliament, and are experienced in providing advice and guidance to business, industry and the public on environmental best practice.

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# 1. Introduction

# 1. Introduction

Through the phased implementation of the Reservoirs (Scotland) Act 2011 (the 2011 Act), we are becoming the regulatory authority for reservoir safety in Scotland. Taking over responsibility for reservoir safety contributes to our strategic role in flood risk management, introduced by the Flood Risk Management (Scotland) Act 2009, by enabling a more streamlined and consistent approach to flood risk management.

Ensuring that reservoirs are correctly managed and maintained is essential. They provide Scotland with drinking water, power, resources for business and social amenities. The consequences of poor management and maintenance could be devastating and lead to a serious risk of flooding which impacts our communities, businesses, infrastructure and environment. We can manage this risk more efficiently through effective regulation.

Reservoir safety legislation is relatively new within the UK, with laws coming into effect in 1930. The Reservoirs (Safety Provisions) Act 1930 was passed following two major dam failures in 1925, which led to the deaths of 21 people. This legislation was followed by the Reservoirs Act 1975 (the 1975 Act). The 1975 Act was enforced by Scotland's 32 local authorities, with approximately 660 reservoirs falling within its remit. The new legislation, namely the 2011 Act, is now improving the regulatory landscape and changing our roles and responsibilities.

Prior to the implementation of the 2011 Act, SEPA undertook significant engagement with local authorities, panel engineers and reservoir managers to help inform our planning and development of key processes and systems. As a result of this work and once the registration process is complete we will have a comprehensive database which contains details of all the reservoirs to which the 1975 Act applies.

As a modern regulator we proactively engage with the reservoir industry to increase your awareness of responsibilities under the 2011 Act and provide support, where possible, to help reservoir managers comply with the legislation.

We will help to support the reservoir industry through a suite of guidance documents that offer advice and good practice on how to fulfil the requirements of legislation. This supports reservoir managers by identifying the specific roles and responsibilities brought in by the 2011 Act. This publication provides guidance on SEPA's risk designation process and includes an overview of the indicators (receptors) considered, how risk is assessed and designation awarded. All guidance documentation can be found at [www.sepa.org.uk/reservoirs](http://www.sepa.org.uk/reservoirs). If you require a hard copy to be sent to you please email [reservoirs@sepa.org.uk](mailto:reservoirs@sepa.org.uk) or call 03000 996699 to get put through to the Reservoir Regulatory Unit.

# 2. Flood Risk Management (Scotland) Act 2009

2.1 Flood Risk Management (Scotland) Act 2009

2.2 National Flood Risk Assessment (NFRA)

2.3 Approach to assessing risk

## 2.1 Flood Risk Management (Scotland) Act 2009

The Flood Risk Management (Scotland) Act 2009 (FRM Act) introduces a more sustainable and catchment led approach to how we manage flood risk in Scotland. For the first time in Scotland we are producing Flood Risk Management Strategies and Local Flood Risk Management Plans to manage flood risk from all sources of flooding (river, coastal and surface water from overwhelmed drainage systems) and working closer than ever before with local authorities and Scottish Water to co-ordinate actions and make the most effective use of resources. The FRM Act, similar to the 2011 Act, takes a risk based approach to flood risk management by tasking SEPA to identify areas at greatest risk to the impacts of flooding through the development of maps, models and tools.

## 2.2 National Flood Risk Assessment (NFRA)

The first step in implementing the risk based approach to flood risk management was the preparation and publication of the National Flood Risk Assessment (NFRA)<sup>1</sup>. This strategic tool for Scotland assessed the adverse consequences of flooding by considering the estimated impact on people, the economy and the environment. The combined understanding of where flooding is likely to occur and the impact when it does is helping SEPA, local authorities and Scottish Water to target our efforts in the areas with greatest risk and where the benefits of intervention can be realised the most.

The NFRA identified 241 Potentially Vulnerable Areas across Scotland where the risk and impacts of flooding were greatest. It also helped us to identify that one in 22 residential properties and one in 13 non-residential properties are at risk of flooding from rivers, the sea or heavy rainfall which can not enter drainage systems or river networks.

The NFRA is updated every six years. The next cycle of information for the NFRA will consider reservoirs and other impounded water sources in the assessment of flood risk, including the chance of dam failure and resulting consequences by taking into account reservoir inundation maps. The information contained in the NFRA is stored and published in accordance with SEPA's security requirements and users are governed by our terms and conditions of use.

## 2.3 Approach to assessing risk

The NFRA utilises available and readily derivable information that is considered to be reliable. The NFRA therefore uses national datasets either held by SEPA, the Scottish Government or responsible authorities (local authorities and Scottish Water) to provide information on the potential adverse consequences of flooding.

The NFRA takes account of the likelihood of flooding from all sources, together with the potential impact of flooding on human health, economic activity, the environment and cultural heritage. This required us to examine what we expect to happen in the future and what has happened in the past. The NFRA methodology and outputs were subject to wide consultation and review.

**The NFRA takes a risk based approach to the assessment of flood risk which will be adopted by the reservoir risk designation process, providing consistency across flood risk management in Scotland.**

<sup>1</sup> [http://www.sepa.org.uk/flooding/flood\\_risk\\_management/national\\_flood\\_risk\\_assessment.aspx](http://www.sepa.org.uk/flooding/flood_risk_management/national_flood_risk_assessment.aspx)

# 3. Reservoir risk designation process

3.1 Reservoir risk designation process

3.2 Assessing the probability of an uncontrolled release of water from reservoirs

3.3 Assessing consequences of an uncontrolled release of water

3.4 Provisional risk designation

3.5 First risk designation

3.6 Risk designation review process

3.7 Appeal process



## 3.1 Reservoir risk designation process

Section 22 of the 2011 Act states that SEPA must consider the potential adverse consequences of an uncontrolled release of water and the probability of such a release when carrying out the risk designation process.

When considering the consequences of an uncontrolled release of water, there are a number of receptors that the 2011 Act stipulates must be considered. These are;

- Human health
- The environment
- Cultural heritage
- Medical facilities, power supplies, transport, the supply of water for consumption and anything connected with such matters
- Other social or economic interests
- Any other potential damage SEPA considers relevant.

Aspects that SEPA may take into account in assessing the probability of an uncontrolled release of water from a reservoir include;

- The purpose for which the reservoir is (or is to be) used
- The materials used to construct the reservoir
- The way in which the reservoir was or is being constructed
- The maintenance of the reservoir.

To enable SEPA to assess the potential impacts on the above receptors a reservoir inundation map will be produced for each of the registered controlled reservoirs.

## 3.2 Assessing the probability of an uncontrolled release of water

As noted above, Section 22 of the 2011 Act requires SEPA to consider the probability of an uncontrolled release of water from a reservoir. It lays out a number of aspects that *may* be considered for this process but does not state that they *must* be considered.

The practice of considering the probability of dam failure, and thereafter the uncontrolled release of water, is still in development and is a complex matter. There is not currently an agreed process or methodology that is widely used within the UK reservoir industry to determine the probability of an uncontrolled release of water. Consideration would need to be given as to the scale of work required to properly assess probability on a national scale and to its cost effectiveness. The Environment Agency published a "Guide to risk assessment for reservoir safety management" in 2013 which is starting to be used by the reservoir engineering profession and, together with this guidance, there may be an opportunity at a later date to incorporate probability into the risk assessment.

Until an agreed approach is established SEPA will assign an overall score of one for the probability factor for each reservoir, thereby ensuring that each reservoir will receive the same level of prediction for an uncontrolled release of water, and therefore all dams will be considered equal in terms of their probability of failure.

If evidence emerges to support the use of certain criteria to predict probability, SEPA will further develop the reservoir risk designation methodology to take account of these new developments. For criteria to be adopted it would need to be reliable, complete and accompanied by readily

available data to support its use. This is particularly relevant when the 2011 Act is fully implemented and captures those sites (10,000m<sup>3</sup> – 25,000m<sup>3</sup>) not currently regulated under the Reservoirs Act 1975.

## 3.3 Assessing consequences of an uncontrolled release of water

The reservoir risk designation process will utilise available and readily derivable information that is considered reliable. The reservoir risk designation process will therefore use national datasets held by SEPA, the Scottish Government or associated organisations to provide information on the potential adverse consequences of flooding from an uncontrolled release of water.

Section 22 of the 2011 Act stipulates the receptors that should be considered when assessing the impact of flooding in terms of potential adverse consequences.

SEPA has placed these receptors into seven high level categories (Table 1). Within the categories there are a suite of indicators (Table 2) that will be assessed for potential impacts which will enable SEPA to assign a risk designation.

A weighting has been applied to some categories in terms of the influence the receptor may have on the risk designated to the reservoir. This weighting has been applied by restricting which receptors can be assessed at each risk level. For example, it is not possible for the 'Agriculture' or 'Environment' receptor groups to achieve a score of high.

**Table 1: Receptor groupings used for risk designation**

<b>1</b>	<b>Human health – People</b>	Potential risk to life attributed directly to an uncontrolled release of water. This will <b>not</b> include potential injuries, illness or risk to life resulting from secondary issues
<b>2</b>	<b>Human health - Community</b>	Important facilities that could cause community disruption if affected e.g. schools
<b>3</b>	<b>Economic activity - Businesses</b>	No. of business properties and the estimated weighted annual average damage of property
<b>4</b>	<b>Economic activity - Transport</b>	Roads, railways and airports
<b>5</b>	<b>Economic activity - Agriculture</b>	Agricultural land and forestry areas
<b>6</b>	<b>The environment</b>	Designated areas and their vulnerability to flooding
<b>7</b>	<b>Cultural heritage</b>	Cultural sites such as UNESCO World Heritage Sites

Where a reservoir has a number of dams that are each capable of holding back 10,000m<sup>3</sup> of water or more, an inundation map must be produced for each dam. Subsequently an assessment of risk will be undertaken for each of these dams, using inundation maps to assess the consequences of an uncontrolled release of water.

Once an assessment has been completed for each dam associated with the reservoir, the reservoir will be given a single provisional risk designation. This designation will be equal to the highest risk level of any of the assessed dams, not an average of the risk designations.

It is important to note that for a reservoir to be assigned a high risk designation it will only be necessary for one of the seven receptor groups to have been impacted at a high.

It should though be noted that where a reservoir is deemed to be high risk due to the impacts on a single receptor following the automated process, further sense checking will be undertaken to confirm the risk designation.

**Table 2 indicators which will be assessed for impacts**

	Risk Designation		
	Low	Medium	High
<b>Human health (A) - People</b>	<ul style="list-style-type: none"> <li>No risk to life identified within the reservoir inundation area.</li> </ul>		<ul style="list-style-type: none"> <li>Risk to life for one or more persons within the reservoir inundated area.</li> </ul>
<b>Human health (B) - Community</b>	<ul style="list-style-type: none"> <li>GPs and dentists</li> <li>Pharmacies</li> <li>Post offices.</li> </ul>	<ul style="list-style-type: none"> <li>All residential care homes in urban location</li> <li>Health centres and clinics in urban areas</li> <li>Police or fire station in urban areas.</li> <li>Water pumping and waste water treatment sites.</li> </ul>	<ul style="list-style-type: none"> <li>All hospitals and ambulance depots</li> <li>Residential care homes in remote/rural locations.</li> <li>Health centres &amp; clinics in remote/rural locations</li> <li>Police or fire stations in remote/rural locations</li> <li>Education facilities</li> <li>Prisons</li> <li>Power supply/production</li> <li>Water for consumption.</li> </ul>
<b>Economic activity (A) - Businesses</b>	<ul style="list-style-type: none"> <li>Non residential property (NRP) score of 0</li> </ul>	(NRP score of 1-70) <ul style="list-style-type: none"> <li>1-12 retail properties or</li> <li>1-4 factories or</li> <li>1-3 warehouses or</li> <li>1-11 offices</li> </ul>	(NRP score of 70+) <ul style="list-style-type: none"> <li>13+ retail properties or</li> <li>5+ factories or</li> <li>4+ warehouses or</li> <li>12 +offices</li> </ul>
<b>Economic activity (B) - Transport</b>	<ul style="list-style-type: none"> <li>All 'B' roads unless in remote and very remote areas.</li> <li>All minor roads unless in very remote areas.</li> </ul>	<ul style="list-style-type: none"> <li>'B' roads in remote and very remote areas.</li> <li>All 'A' roads unless in remote and very remote areas</li> <li>Minor roads in very remote areas.</li> </ul>	<ul style="list-style-type: none"> <li>Airports</li> <li>Motorways</li> <li>'A' roads in remote and very remote areas</li> <li>Railways.</li> </ul>
<b>Economic activity (C) - Agriculture</b>	<ul style="list-style-type: none"> <li>Agricultural land class 1 ≤136 ha</li> <li>Agricultural land class 2 ≤193 ha</li> <li>Agricultural land class 3a ≤377 ha</li> <li>Agricultural land class 3b ≤755 ha</li> <li>Agricultural land class 4 ≤1,038 ha</li> <li>Agricultural land class 5 ≤2,076 ha.</li> </ul>	<ul style="list-style-type: none"> <li>Agricultural land class 1 &gt;136 ha</li> <li>Agricultural land class 2 &gt;193 ha</li> <li>Agricultural land class 3a &gt;377 ha</li> <li>Agricultural land class 3b &gt;755 ha</li> <li>Agricultural land class 4 &gt;1,038 ha</li> <li>Agricultural land class 5 &gt;2,076 ha.</li> </ul>	
<b>Environment</b>	<ul style="list-style-type: none"> <li>Designated areas containing species/habitats deemed to be 'VL' vulnerability</li> <li>Designated areas containing species/habitats deemed to be 'L' vulnerability.</li> </ul>	<ul style="list-style-type: none"> <li>Designated areas containing species/habitats deemed to be 'M' vulnerability</li> <li>Designated areas containing species/habitats deemed to be 'H' vulnerability.</li> </ul>	
<b>Cultural heritage</b>	<ul style="list-style-type: none"> <li>Category C listed buildings.</li> </ul>	<ul style="list-style-type: none"> <li>Category B listed buildings, gardens and designed landscapes.</li> </ul>	<ul style="list-style-type: none"> <li>UNESCO World Heritage Sites, scheduled monuments, Grade A listed buildings.</li> </ul>

## 3.4 Provisional risk designation

On the outcome of the risk designation process, SEPA is required to provide reservoir managers with a provisional risk designation as soon as is reasonably practicable after their site has been registered with SEPA.

Provisional risk designation will be fulfilled when SEPA notifies the reservoir manager of the designation, explains the reason for the level of designation and explains how the reservoir manager can make representations to SEPA.

The representations procedure will provide reservoir managers with the opportunity to provide SEPA with additional information to support their challenge of the designation, should they feel the provisional risk designation assigned to their site is incorrect.

Representations must be made by reservoir managers within two months of receiving the provisional risk designation.

## 3.5 First risk designation

Following the end of the two month period in which representations can be made, SEPA must, as soon as is reasonably practicable, provide the reservoir manager with a first risk designation.

SEPA will notify the reservoir manager of their site's risk designation, again outlining the reason for the designation, and addressing any representations that have been made. Within this notification SEPA will outline the process for a reservoir manager to seek a review of the risk designation, should they be dissatisfied with the outcomes of any representations made.

## 3.6 Risk designation review process

If a reservoir manager seeks a review of the risk designation assigned to their site, they must notify SEPA within 12 months from the date of receiving notification of the first risk designation, and submit the relevant review fee. A review of the risk designation will involve additional regulatory resources from SEPA, therefore we will seek to recover the costs of this review.

### **During the review process**

During the review period the initial first risk designation will stand and the associated statutory duties associated with the level of risk designation must be complied with. Only when SEPA has completed the review process and, where as a result of this review, the reservoir is given a different risk designation, the designation which was originally given ceases to have effect from the date on which SEPA gives its decision.

On completion of the review process, which will be undertaken as soon as reasonable practicable, SEPA will provide its decision to the reservoir manager, specifying if it confirms the initial risk designation or gives the reservoir a different risk designation. Where the risk designation is different, SEPA will provide the new risk designation, and specify the reasons for its decision. It will also provide information about the right of appeal to Scottish Ministers

Where, following the completion of the review process, SEPA provides a lower risk designation than that originally provided, SEPA will refund the associated fee for undertaking the review process.

## 3.7 Appeal process

If a reservoir manager is dissatisfied with the outcome of the review then an appeal to Scottish Ministers can be made.

The appeal must be made within 12 months from the date on which the reservoir manager received notification of the outcome of the review process.

The risk designation assigned to a site following the review process stands and must be adhered to during the appeal process.

Scottish Ministers must notify the reservoir manager and SEPA of the outcome of the appeal process, specifying whether they confirm the initial risk designation or give the reservoir an alternative designation and specify the reason for doing so.

Where the risk designation has been altered to that of a lower category, SEPA will return the fee charged for the review process.

# 4. Further information

4.1 Frequently asked questions

4.2 Sources of information

4.3 Glossary

## 4.1 Frequently asked questions

Here are some frequently asked questions relating to the new regulations for reservoirs in Scotland. After reading this section, if you have some unanswered queries please look at the sources of information section (p26). A glossary is also included (p27) to help you understand some of the new terms and concepts associated with the 2011 Act.

### **Q. Does the 2011 Act apply to all reservoirs?**

**A.** When fully implemented only those reservoirs capable of holding at least 10,000 cubic metres of water above the lowest natural ground level.

### **Q. How many reservoirs will be regulated by 2011 Act?**

**A.** There are currently 660 reservoirs in Scotland that are regulated under the 1975 Act which will fall under the new legislation. In addition to these sites it has been estimated that there could be a further 800 to 850 reservoirs that would fall under the 2011 Act, when the registration for reservoirs that hold or are capable of holding 25,000 cubic metres of water above natural ground level is reduced to 10,000 cubic metres of water above natural ground level.

### **Q. Who is responsible for enforcing reservoir safety?**

**A.** SEPA will be the regulatory authority for reservoirs in Scotland. We will take over responsibility for the enforcement of reservoir safety from local authorities in April 2016. Until then local authorities will continue to regulate reservoir safety in Scotland.

### **Q. What is the role of SEPA as the regulatory authority?**

**A.** SEPA, as the regulatory authority, will be responsible for comprehensive regulation and enforcement of the 2011 Act. We are also required to maintain a Statutory Public Register of Reservoirs and to produce biennial reports to the Scottish Government.

For further information, please visit [www.sepa.org.uk/reservoirs](http://www.sepa.org.uk/reservoirs)

### **Q. Who is the reservoir manager?**

**A.** The operator(s), user(s) and/or owner(s) of the reservoir. This can be more than one person or company.

### **Q. Who has ultimate responsibility for the safety of reservoirs?**

**A.** Under the 2011 Act, reservoir managers (operators, users and owners) have ultimate responsibility for the safety of their reservoirs. They must operate within the law, and must consider the need for planning permission or environmental consents when introducing measures to be taken in the interests of safety.

### **Q. Who are panel engineers?**

**A.** Panel engineers are a group of specialist civil engineers (“qualified civil engineers”) who are experienced and qualified in reservoir safety. They are appointed by Scottish Ministers to one of the panels for a specific period, typically five years. Towards the end of this period, the civil engineer has to re-apply for appointment to the panel.

The 2011 Act requires them to oversee the safe construction, operation and maintenance of reservoirs and inspect their safety every ten years or more frequently if necessary. A panel engineer must be appointed by the reservoir manager when a new reservoir is built or repairs and changes are made to existing ones where these might affect the safety of the reservoir. Panel engineers (qualified civil engineers) may be construction engineers, inspecting engineers or supervising engineers.

The list of current panel engineers can be found at:

[www.gov.scot/Topics/Environment/Water/16922/panengineerlist](http://www.gov.scot/Topics/Environment/Water/16922/panengineerlist)

**Q. What is the role of a construction engineer?**

**A.** A construction engineer is appointed by the reservoir manager to supervise the design and construction of a new reservoir, the modification of a reservoir, for example if it changes its capacity or for other work which might affect its safety and for which Scottish Ministers have issued regulations.

**Q. What is the role of the inspecting engineer?**

**A.** The inspecting engineer's role is to inspect the reservoir when appointed to do so by the reservoir manager, to advise the reservoir manager of the condition of the reservoir and to make recommendations regarding works required to ensure its continued satisfactory operation, to give directions regarding monitoring required in the period up to the next inspection, and to provide advice on matters to be watched by the supervising engineer.

**Q. What is the reservoir manager's role in the inspection process?**

**A.** The reservoir manager should normally attend the inspection and provide the inspecting engineer with the necessary documents to help them carry out the inspection. It is recommended that the reservoir manager check the report to make sure it is accurate before it is finalised and issued. They also have an opportunity to check any queries with the inspecting engineer, such as what measures to be taken in the interests of safety he/she may need to introduce.

**Q. What is the role of the supervising engineer?**

**A.** A supervising engineer is appointed by the reservoir manager and is required to notify the reservoir manager about any safety issues related to the reservoir. They are also required to monitor any matters specified in safety reports, preliminary and final certificates as well as inspection reports. They are also required to report to the reservoir manager and SEPA any failures to comply with the previously mentioned reports and certificates. The supervising engineer must produce a written statement at least every 12 months which must be supplied to the reservoir manager and SEPA.

**Q. What other organisations are responsible for the enforcement of safety issues that are not covered by the Reservoirs (Scotland) Act 2011?**

**A.** We recognise the role of other organisations and will not take on responsibilities that rightly sit with others or duplicate effort unnecessarily. In particular the Health and Safety Executive has a key role under the Health and Safety at Work etc. Act 1974 and Local Authorities have key roles in addressing site safety under the Building Act 1984 (section 76 to 79). We will provide information to these bodies on risks that we find that are their responsibility.



## 4.2 Sources of information

### 4.2.1 SEPA

[www.sepa.org.uk](http://www.sepa.org.uk)

As the enforcement authority for reservoir safety in Scotland the SEPA website hosts comprehensive information on reservoir safety. We also have a national, strategic role for flood risk management and are the flood warning authority for Scotland.

### 4.2.2 Scottish Government

[www.scotland.gov.uk/Topics/Environment/Water](http://www.scotland.gov.uk/Topics/Environment/Water)

The Scottish Government drafted the Reservoirs (Scotland) Act 2011 in consultation with the reservoir industry. A list of panel engineers is available from the Scottish Government website, along with information on development of the new legislation.

### 4.2.3 Institution of Civil Engineers

[www.ice.org.uk](http://www.ice.org.uk)

The Institution of Civil Engineers (ICE) seeks to advance the knowledge, practice and business of civil engineering, to promote the breadth and value of the civil engineer's global contribution to sustainable, economic growth, and ethical standards, and to include in membership all those involved in the profession. The ICE, through its Reservoirs Committee, advises government ministers on the appointment of Panel Engineers.

### 4.2.4 British Dam Society

[www.britishdams.org](http://www.britishdams.org)

The British Dam Society (BDS) is an Associated Society of the Institution of Civil Engineers. It exists to advance the education of the public and the profession in technical subjects relating to the planning, design, construction, maintenance, operation, safety, environmental and social issues of dams and reservoirs. The BDS is also a member of the International Commission on Large Dams (ICOLD).

### 4.2.5 International Commission on Large Dams

[www.icold-cigb.org](http://www.icold-cigb.org)

International Commission on Large Dams (ICOLD) comprises 82 countries and seeks to develop dams in a technically safe, ecologically and socio-economically sustainable manner.

## 4.3 Glossary

Term	Definition
Civil sanctions	An enforcement intervention that can be applied directly by the regulator.
Controlled reservoir	After the Reservoirs (Scotland Act) 2011 is fully implemented, a controlled reservoir will be a structure designed or used for collecting water which is capable of holding 10,000 cubic meters of water or more above the natural level of any part of the surrounding land.
Dam	A dam is a man made barrier usually built across a river to hold back water forming a loch or reservoir behind it. It can be constructed from concrete or natural materials like earth and rock.
First risk designation	The risk designation ('high', 'medium' or 'low') is assigned to a reservoir once the period for representations has ended
Impoundment	Any dam, weir, or other works by which water may be impounded (i.e. collected and stored); or any works diverting waters in connection with the construction or alteration of any dam, weir or other works. Raising the level of an existing natural loch is also considered an impoundment. A pond or loch created by excavation below the pre-existing ground level (e.g. a dug pond or flooded quarry) is not included.
Incident reporting	Reservoir managers are required to report to SEPA incidents that have occurred at their reservoir.
Inspecting engineer	Appointed by the reservoir manager of a high risk or medium risk reservoir to carry out an inspection.
Inundation map	A map showing areas that would be affected by flooding from releases from a dam's reservoir. The flooding may be from either controlled or uncontrolled releases or as a result of a dam failure. A series of maps for a dam could show the incremental areas flooded by larger flood releases.
Nominating reservoir manager	A reservoir manager who has nominated another manager to act on their behalf for decisions relating to the safety of the reservoir.
Nominee	Nominated to act on behalf of multiple reservoir managers and may act as a central point of contact in correspondence with SEPA. All individual reservoir managers are still legally responsible for complying with regulation.
Panel engineer	A specialist civil engineer appointed by Scottish Ministers. All reservoirs must be designed, constructed, inspected and supervised by a panel engineer.
Provisional risk designation	SEPA is required to give a provisional risk designation to all registered controlled reservoirs as soon as practicable once registered. Reservoir managers are able to make a representation to SEPA within two

	months, if they are dissatisfied with the risk assigned to their reservoir.
Register	The reservoir manager of each controlled reservoir must register the reservoir with SEPA. SEPA must establish and maintain a controlled reservoirs register which contains specific information on each reservoir. SEPA must make the controlled reservoirs register available to the public at all reasonable times.
Representation	If a reservoir manager is dissatisfied with the risk designation assigned to their reservoir following SEPA's provisional risk designation, they can make a representation to SEPA explaining why they feel that the risk designation is wrong.
Reservoir	Reservoirs are artificial storage places for water, such as ponds, impoundments and raised lochs, from which the water may be withdrawn (abstracted) for purposes such as electricity generation, irrigation, water supply or flood storage. They can also be recreational or amenity sites from which no water is normally abstracted.
Reservoir manager	This is the new term under the Reservoirs (Scotland) Act 2011 for the manager or operator of a reservoir. Reservoir Managers have ultimate responsibility for the safety of their reservoirs and will have control over the operation of the dam. The definition has been updated so as to ensure organisations who merely lease or use the water, such as angling clubs, may not be responsible for supervisory and maintenance requirements. However if under the terms of the lease they are required, for example, to operate valves then they may be classed as reservoir managers.
Review	A reservoir manager may seek to have their reservoir's risk designation reviewed if following a representation they are still dissatisfied with the risk designation given to their reservoir. SEPA is also required to undertake a review of a reservoir's risk designation when it considers it to be no longer appropriate or by the end of the period of six years.
Risk designation	The Reservoirs (Scotland) Act 2011 requires SEPA to assign a risk designation of either 'high', 'medium', or 'low' to all controlled reservoirs. The risk designation will be based on the potential impacts on a variety of receptors from an uncontrolled release of water. 'High' risk sites will receive a greater level of regulation than either 'medium' or 'low'.
Supervising engineer	Appointed by the reservoir manager of high and medium risk reservoirs to monitor matters as required in various engineers certificates and reports.
Undertaker	In terms of the Reservoirs Act 1975, the "undertaker" is the person or organisation with responsibility for a reservoir. The "Reservoir Manager" will replace the "undertaker" and be responsible for registering each controlled reservoir under the Reservoirs (Scotland) Act 2011.