What is a Flood Storage Reservoir?

A Flood Storage Reservoir (FSR) is a basin or large area designed to temporarily hold floodwaters and reduce the risk of flooding downstream. Unlike water supply reservoirs, many FSRs remain dry most of the time. They appear as farmland, parks, or meadows and only fill during heavy rainfall or flood events.

FSRs must comply with The Reservoirs Act 1975. The Act ensures adequate safety in the design, construction and operation of a Flood Storage Reservoir.

Most of our FSRs are high risk Large Raised Reservoirs (LRR). These reservoirs can hold more than 25,000 cubic metres of water above natural ground level. Smaller reservoirs are known as Small Raised Reservoirs (SRR) and can hold 10,000–25,000 cubic metres of water. While SRRs are not yet fully regulated under the Act (non-statutory), future legislation may extend safety requirements to them due to the risks they can pose.

Why are Flood Storage Reservoirs Important?

FSRs are a critical part of the UK's flood risk management strategy. Their primary role is to protect people, property, and infrastructure by storing excess floodwater. They do this by managing the increasing risks of extreme rainfall and flooding due to climate change. They also provide wider benefits such as wildlife habitats, green spaces, recreation, and water quality improvements.

Water Resources Act 1991

The Water Resources Act 1991 is the primary legislation relating to water resources activities. It sets out the requirements for abstraction and impounding (containment) licences when water is removed from a waterbody or when the flow in a waterbody is impounded, impeded, or obstructed. The Water Resources Act made the Environment Agency the enforcing authority for England.

Nationally, over 75% of reservoirs were built before 1900. It is critical that the Environment Agency ensures the safety of old structures and maintains the standards of new ones. In comparison in Mainland Europe, only 10% are over 100 years old.

Our FSR Undertaker Duties

There are 14 recorded dam failures in the UK in the 19th century with a loss of 427 lives. This resulted in the need for legislation. Since the introduction of the Reservoirs (Safety Provisions) Act in 1930, there have been no failures involving loss of life. Various revisions have ultimately resulted in Reservoirs Act 1975.

In relation to the Reservoirs Act 1975, we are deemed the 'Undertaker' for Flood Storage Reservoirs managed and operated by us. We are the undertakers of 222 reservoirs in England.

As an undertaker for these reservoirs, we are responsible for their safety under the provisions of the Act, including appointing qualified civil engineers.

Maintenance

Our Field Teams and contracted partners carry out regular maintenance on our Flood Storage Reservoirs. Some landowners and tenants may also have maintenance responsibilities if they have Riparian Owner responsibilities. Maintenance often includes several yearly grass cuts including inspections for damage by burrowing animals and embankment erosion, ensuring operation of any fish and eel passes on the flood storage reservoir, inspections of concrete and masonry structures, hydraulic controls, and safety inspection equipment, and security of the site.

To find out more about the design, operation, and adaptation of reservoirs for flood storage, please visit: https://www.gov.uk/flood-and-coastal-erosion-risk-management-research-reports/design-operation-and-adaptation-of-reservoirs-for-flood-storage

You can find further information about safety inspections of reservoirs here: https://www/gov.uk/guidnace/reservoir-inspecting-engineers-safety-inspection-of-reservoirs

Who can I contact for more information?

If you would like further information on riparian ownership, please use the contact details below:

Post - National Customer Contact Centre PO Box 544 Rotherham S60 1BY United Kingdom

Email - LNenquiries@environment-agency.gov.uk

Telephone - 03708 506 506 (Monday to Friday, 8am-6pm)

Incident Hotline - 0800 80 70 60 - to report flooding, blockages, pollution, unusual changes in flow of water, collapsed or badly damaged defences (24-hour service).