

<p>Title: The Reservoirs Act 1975 (Capacity, Registration, Prescribed Forms, etc.) (England) Regulations 2013 & The Reservoir Act 1975 (Exemptions, Appeals, and Inspections) (England) Regulations 2013</p> <p>PIR No: 2013/1677 - 2013/1896</p> <p>Original IA/RPC No: 1162</p> <p>Lead department or agency: Defra</p> <p>Other departments or agencies: Environment Agency</p> <p>Contact for enquiries: Nasim Rahman Nasim.Rahman@Defra.gsi.gov.uk 0208 565 4490</p>	Post Implementation Review
	Date: 24/07/2018
	Type of regulation: Domestic
	Type of review: Statutory
	Date measure came into force: 28/07/2013
	Recommendation: Keep
	RPC Opinion: Choose an item.

<p>1. What were the policy objectives of the measure?</p> <p>To ensure public safety measures were proportionate to risk, including the introduction of a risk-based approach to the regulation of Large Raised Reservoirs (“LRRs”). Under this approach, only those LRRs likely to endanger human life in the event of an uncontrolled release of water from the reservoir are designated by the Environment Agency (“EA”) as ‘high-risk reservoirs.’</p>
<p>2. What evidence has informed the PIR?</p> <p>The review was informed by evidence provided by the Environment Agency, as the competent authority. The data collected included a number of risk designation appeals to the First Tier Tribunal. Further evidence was collected from Mott Macdonald who are undertaking a Reservoir Research project commissioned by Defra. This approach was considered proportionate given the comprehensive data that was collected, the limited number of direct stakeholders, the low cost and lack of controversy concerning these regulations, and the wider review of the policy area being undertaken in the near future.</p>
<p>3. To what extent have the policy objectives been achieved?</p> <p>The objectives have been partially met against the assumptions made in the impact assessment.</p> <p>The UK has an excellent record of dam and reservoir safety and this has continued since the introduction of the risk-based legislation, which continues to focus on dams and reservoirs which pose a risk to people and property.</p> <p>The new legislation allowed for some deregulation where risk is deemed to be low. To date, 12% of the reservoirs the EA has assessed have been designated as not being high risk, compared to an assumed circa 55% in the original impact assessment. The EA’s Biennial report 2015-2016 highlights final designation of 211 reservoirs as not high risk and 1491 as high risk). This review has, however, found the approach taken during implementation to be proportionate and reasonable – (See Annex A)</p>

All LRRs continue to be regulated under the Act whether or not they are deemed to be 'high risk.' Those not designated high-risk are subject to fewer inspections, and are not required to employ a supervising engineer.

There have been 229 appeals on the first designation made by the EA and 5 appeals to the First Tier Tribunal. Critically in 4 of the appeal cases, the judge upheld the EA's interpretation of the legislation and approach to the designation. The remaining case awaits the Judge's final decision.

Sign-off for Post Implementation Review: Chief economist/Head of Analysis and Minister

I have read the PIR, and I am satisfied that it represents a fair and proportionate assessment of the impact of the measure.

Signed: ***Nick Haigh – Lead Analyst, Floods & Water***

Date: 24/07/2018

Further information sheet

Please provide additional evidence in subsequent sheets, as required.

4. What were the original assumptions?

The Floods and Water Management Act 2010: Commencing Schedule 4 on reservoir safety, the **2011** Impact Assessment considered the costs and benefits of applying a risk based approach to LRRs, and assumed a certain level of low risk designation. (See Annex A.) For reservoirs designated as 'not high risk,' there would be a relaxation of routine regulation; those reservoirs designated as 'high risk' would continue with the same levels of regulation and inspection.

Other changes did not include a financial benefit. Some of the changes were to tidy up and close loopholes i.e., previously an Undertaker could call for a new section 10 report which would reset the clock (give them more time) for safety works to be completed. Now, if the same safety works are included in a new report then an offence may have been committed. There is an example where one reservoir Undertaker had 7 new Section 10 reports over a 15 year period with the same safety works being required. Section 10 reports are only required every 10 years; this reservoir had one every 2 years.

5. Were there any unintended consequences?

There is no evidence of any significant unintended consequences. The percentage of reservoirs designated 'not high risk' has been lower than the Impact Assessment assumed, but the application of the risk based approach applied by the EA has been found to be appropriate.

6. Has the evidence identified any opportunities for reducing the burden on business?

No, the EA has achieved the aim of designating the risk of the population of LRRs, and four First-Tier Tribunals cases have found in favour of the EA's interpretation of the FWMA 2010.

There has been no change to how reservoirs are registered. Reporting of incidents is now a legal duty placed on the Undertaker, whereas previously this was on a voluntary basis. For the period 2004 -2016 there have been 77 incidents reported. Since 2013 the number of incidents reported remains similar so no change in the burden to the undertakers has been identified.

However, Defra is currently conducting research which will (a) consider refinements to the current risk-based approach and methodology, including taking account of probability and reservoir type (e.g., service reservoirs) for assessing reservoir risk and exemptions, and (b) provide evidence to inform decisions about whether to widen certain aspects of the FWMA 2010, particularly in respect of Small Raised Reservoirs.

7. For EU measures, how does the UK's implementation compare with that in other EU member states in terms of costs to business?

N/A

Annex A

The proposed change was to introduce a more risk-based approach to reservoir safety management and therefore reduce the cost to regulate all 'not high risk' reservoirs above 25,000m³.

The 2011 Impact Assessment indicated there would be potential for substantial savings through partial deregulation based on the assumption that around 55% of LRRs would be partially deregulated. This was based on the assumption that most Category C and D reservoirs would be partially deregulated.

The risk designation process was implemented by the Environment Agency in England. The outcome of the process has been that, of the LRRs that have been designated, only 12% rather than the predicted 55% have been designated as 'not high risk.' Evaluation of the categorisation and risk designation processes has revealed that they are not compatible and that it should not necessarily have been expected that Category C reservoirs would be designated 'not high risk.' However, all Category D reservoirs should have been designated 'not high risk,' and it must be concluded that either the original categorisation was incorrect or that the inundation maps used to inform the risk designation process were over conservative. The approach taken by the Environment Agency in making risk designations has been fully supported by four First Tier Tribunals which have all found in favour of the designations proposed by the Environment Agency. **Please see Annex B** for a brief outline of risk designation and differences in Reservoirs category.

Annex B

The 1975 Act makes no mention of categorisation of reservoirs; it merely states that a reservoir is a Large Raised Reservoir if the escapable volume is greater than 25,000m³. A guide was produced in 1978 titled Floods and Reservoir Safety and was published by the Institution of Civil Engineers. A primary purpose of this publication was to provide guidance on the flood standards to be adopted for reservoirs. To this end it was proposed that LRRs were categorised as follows:

- Category A – where a breach could endanger lives in a community (taken to be ten persons)
- Category B – where a breach could endanger lives, not in a community (less than ten persons) or could result in extensive damage
- Category C – where a breach would pose negligible risk to life and cause limited damage
- Category D – special cases where no loss of life can be foreseen as a result of a breach and very limited additional flood damage would be caused.

Regarding Category C, there is no definition provided for “negligible risk to life”; which has meant that it is up to an Inspecting Engineer to make a decision on the category based on his/her judgement.

Amendments to the Act 1975, resulting from the Flood and Water Management Act 2010 (FWMA), were enacted in July 2013. The Environment Agency is now required to determine whether a large raised reservoir is ‘high-risk.’

Defra's original Impact Assessment for the FWMA in 2008 estimated that about 25% of large raised reservoirs would be deregulated as part of this process. A further Impact Assessment in 2011 highlighted 55% of LRR's would be deregulated. The estimate was based on the number of 'Category C and D' reservoirs on the register.

The risk designation process

The EA may designate a reservoir as high-risk if they think that, in the event of an uncontrolled release of water from the reservoir, human life could be endangered **and**, if the reservoir does not satisfy the conditions (if any) specified in regulations made by the Minister.

Why are fewer reservoirs being deregulated than originally expected?

A range of factors are contributing to fewer reservoirs being deregulated than originally expected:

- **Consultation responses**

A number of the responses to the EA consultation on the risk designation process in 2011/12 asked the EA to look at infrastructure as well as properties when considering whether life could be endangered in the event of an uncontrolled release of water. In the review of the responses, the EA concluded that it would be appropriate to consider infrastructure as well, and incorporated this into their process.

The current categorisation of A-D is used for engineering purposes to determine the appropriate spillway size and considers the risk to life in communities, rather than infrastructure. Although it was used to make the initial estimate of the number of reservoirs that might be deregulated, it is not directly comparable to the EA risk designation process; particularly now they have included

infrastructure in their assessment. Therefore, some reservoirs have been designated as high-risk, where originally it may have been presumed that they would not be.

- **Conditions specified in regulations**

The Minister has not specified any conditions under Section 2C (1) (b) whereby a reservoir might be considered to be not high-risk. These conditions might have included the purpose, construction or maintenance of the reservoir. Without any conditions to consider, the EA can only consider if they think that human life could be endangered in the event of an uncontrolled release of water to designate the reservoir as high-risk.

- **Precautionary principle**

If the EA cannot satisfy themselves that human life would *not* be endangered in the event of an uncontrolled release of water, then in making the provisional designation they will apply a precautionary approach and provisionally designate the reservoir as high-risk. There is an opportunity for the undertaker to provide evidence to support a “not high-risk” designation, if appropriate. The EA will assess the information provided and may decide to deregulate the reservoir as a consequence.