



Regulatory Impact Statement

Proposed amendments to improve the Dam Safety Scheme

AGENCY DISCLOSURE STATEMENT

This Regulatory Impact Statement (RIS) has been prepared by the Department of Building and Housing (the Department). It provides an analysis of the proposed options to improve the Dam Safety Scheme (the Scheme) before it comes into force on 1 July 2012.

The analysis in this RIS focuses on key amendments to:

- raise the size threshold of dams to be automatically included in the Scheme, and
- give regional authorities responsibility for all dams in their region.

There are several other proposals of a technical nature to improve legislative clarity and to remove redundant legislative provisions. These amendments do not require regulatory impact analysis.

The Department assumes there are up to 1,150 large dams in New Zealand. The only inventory of dams available is from 1996 that includes 402 dams. Estimations are based on an extrapolation from the 1996 dam inventory. The Department considers this to be a reasonable assumption.

In establishing the costs and benefits of options, the Department is constrained by a current lack of existing costing data for the Scheme. The quantification of costs and benefits outlined in this paper is therefore largely based on quantitative and qualitative information available.

The regulatory proposals recommended in this paper are consistent with our commitments in the Government statement “Better Regulation, Less Regulation”, as the proposals are to remove requirements that are unnecessary, ineffective or excessively costly.

I have reviewed the RIS prepared by the Department and associated supporting material, and consider the information and analysis summarised in the RIS meets the quality assurance criteria.

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Status quo and problem definition

1. The Scheme, as currently prescribed, will affect an estimated 1,150 dams that meet the statutory definition of large dam – dams with a reservoir capacity of more than 20,000 cubic metres and which are more than three metres deep (for example dams that are approximately the size of five to six Olympic swimming pools). This includes dams for such uses as hydro-electricity generation, farming irrigation schemes, stormwater retention facilities, and reservoirs. At an estimated \$3,000 per classification per dam, this results in a compliance cost of almost \$3.5 million.
2. The Building Act 2004 requires that:
 - dam owners classify their dam using a prescribed classification of potential impact (low, medium and high) and have this classification approved by the regional authority;
 - owners of medium or high potential impact dams prepare a Dam Safety Assurance Programme in the prescribed form and containing the prescribed information, and this programme be audited by a recognised engineer before being approved by the regional authority;
 - dam owners provide to the regional authority an annual compliance certificate with prescribed information in a prescribed form; and
 - regional authorities and dam owners provide prescribed information to the Chief Executive of the Department of Building and Housing.
3. The Building (Dam Safety) Regulations 2008 prescribing the technical detail of each of these areas will come into force on 1 July 2012.
4. The current definition of large dam requires too many dams for which the impact of failure is low, to be subject to the Scheme (an estimated 58 percent). This consequently places unnecessary compliance costs on the owners of these dams.

Objectives

5. The objective of the amending the Scheme is to:
 - improve its effectiveness and efficiency, whilst reducing compliance costs; and
 - ensure risk management approaches are balanced with the minimisation of compliance costs.
6. The ultimate objective of the Scheme is to ensure dams are well-built, higher potential impact dams are appropriately monitored, and the potential risks to people and property posed by dam failure are minimised.

Regulatory impact analysis

7. An independent review of the Scheme recommended the best way to achieve the objectives would be to reduce the number of dams in the Scheme. The recommended approach is to increase the size threshold of dams that would require classification under the Scheme, and therefore reduce the number of dams subject to its requirements.

8. The Department considered other possible options to reduce the number of dams in the Scheme, improving effectiveness and reducing compliance costs. Options included different sizes of dams being subject to different Scheme requirements, and dams with lower potential impact ratings being exempt from some requirements of the Scheme. However, these options have the propensity to become over-complicated and would also require additional administrative costs, increasing compliance costs.
9. After considering other possibilities, the Department agrees with the Review's recommendation to increase the definition of a large dam for the purposes of the Scheme. Raising the size threshold proves the simplest and most effective approach to reducing the number of dams captured by the Scheme.

First option for dam size threshold

10. The first option, as recommended in the Review, is to:
 - increase the size threshold of dams (for the purposes of the Scheme) to include dams having the capacity to hold a reservoir of 50,000 cubic metres or more of water or other fluid, and to be at least eight metres high; and
 - give the body responsible for administering the Scheme the power to issue a notice requiring classification of any large dam, regardless of whether the dam meets the dam criteria. Any such notice will only be issued if there is reason to believe the dam may put persons at risk.
11. Increasing the size threshold of dams in line with the Review recommendations, would reduce the number of dams in the Scheme from 1,150 to 517. This is approximately 55 percent fewer dams than under the status quo. Although this option results in a significant saving of an estimated \$1.5 million, it is also a significant reduction in the coverage of the Scheme, potentially compromising risk management by excluding some high potential impact dams.
12. The recommended size threshold in the Review does not take into consideration that a dam can be large either because of its capacity or its height. The recommended size threshold of eight metres in height by 50,000 cubic metres capacity represents a dam that is comparatively high, automatically excluding an estimated 253 large dams with heights between three and eight metres from the Scheme.
13. This option also carries a risk that given regional authority liability for dams in their regions, they would consider themselves to be obliged to survey all dams to assess risk. The consequence of regional authorities reacting in this manner would be an increase in compliance costs rather than a reduction as intended by the Scheme changes.
14. The Department considered that these recommendations in the Review can be fine-tuned to better target the dams to be covered by the Scheme, and further improve efficiency. For the reasons above, this option is not preferred.

Second option for dam size threshold (preferred)

15. The preferred option is a modification of the Review's recommendation and is to amend the Scheme by:
 - narrowing the range of large dams that are automatically required to be classified ("classifiable dams"), to large dams that are over eight metres in height and 20,000 cubic metres in volume or three metres in height and 100,000 cubic metres in volume; and

- defining large dams that are not classifiable dams as “referable dams” and providing regional authorities with tightly limited discretion to consider requiring these referable dams to be classified where there are reasonable ground for doing so.
16. The preferred dam size threshold has been selected on the basis that it provides a better coverage of high potential impact dams - it provides two definitions for the purpose of the Scheme to take into consideration that dams can be large due to their high height or their high capacity.
17. The proposed size threshold reduces the number of dams captured by the Scheme from 1,150 to 712 (approximately 40 percent fewer dams than the status quo, compared to 55 percent fewer dams as recommended by the Review), while capturing the majority of high risk dams. This option provides the best balance between compliance costs versus risk management. The preferred option captures the majority of higher risk dams (high and medium potential impact) and excludes a greater number of low risk dams than the current scheme. This is demonstrated in the table below:

Potential Impact Classification (PIC)	Large dams (as defined by the Building Act)	Classifiable dams (proposed amendment)
High PIC	166	149
Medium PIC	275	235
Low PIC	709	329
Total	1,150	712

18. It is estimated 10 percent of high potential impact and 15 percent of medium potential impact dams would be excluded from the Scheme due to the higher size threshold. If these dams are referred for classification, approximately 70 additional dams would then be in the Scheme. Although these additional dams will become subject to the requirements of the Scheme, this still results in 33 percent fewer dams than compared to the current size threshold. This results in a total saving of \$1,140,000 for dam owners.
19. This option provides the best balance between compliance costs versus risk management.
20. As with the first option, there is a risk that regional authorities will consider themselves obliged to survey all dams to assess risk therefore increasing compliance costs. However, under this option, this risk is mitigated through defining the ‘reasonable grounds’ on which regional authorities can investigate dams in their regions.

Costs and benefits of preferred option

Costs

- There is a risk some dams, that are medium or high impact dams, may not be classified under the Scheme.
- Additional costs on regional authorities in investigating whether to require large dams, which are not automatically captured by the

Benefits

- A significant reduction in the number of low impact dam owners that have to incur the cost of classifying their dam.
- Lower compliance costs for dam owners generally for example, more flexible compliance obligations and

Scheme, to be classified.

less frequent need to review their DSAPs.

- Lowered costs to Regional Authorities in relation to identification of flood or earthquake prone dams (which they would no longer need to do).
- Less risk to public from a failure to notify potentially dangerous dams.

21. It is estimated that the classification of a dam costs an average of \$3,000 per dam. This estimation was provided by the independent reviewer of the Scheme and is based on the fees for the engineer's assessment of the dam. Based on this estimated costs, this option should save an estimated \$1,314,000 in compliance costs. This is the result of approximately 438 less dams being subject to the Scheme.
22. In giving regional authorities the discretion to refer dams for classification under the Scheme, there is an additional cost to the regional authorities to undertake their investigations. This concern has been addressed by limiting a regional authority's discretion to investigate a referable dam for classification, by narrowly defining the 'reasonable grounds' on which they can investigate.
23. Because the cost of dam assessment falls on the regional authorities, this should provide an additional discipline on them to ensure they use their discretion in a balanced and moderate manner.
24. If regional authorities do assess more dams than anticipated, the costs will still be significantly less than the current approach requiring all dams to be classified. However, assessment costs are not likely to be ongoing; they are more likely to be apparent early after the Scheme starts operating due to regional authorities developing an inventory of dams in their regions.
25. On balance, it is considered that the benefits of the preferred option outweigh the costs, and a high level of risk management is maintained.

Consultation

Review of the Dam Safety Scheme

26. On 5 February 2010, Cabinet agreed to appoint an independent and suitably qualified and experienced person to review the Scheme [EGI Min (10) 1/12 refers]. The reviewer consulted with sector industry stakeholders, including Federated Farmers, local government, central government agencies, and corporate owners of large dams.
27. The Department subsequently undertook two rounds of consultation with stakeholders and interested parties, to seek feedback on the Review's recommendations and how they would apply in practice to the management and operation of dams in New Zealand. The second round of consultation was more specifically around the application of classifiable and referable dams; where there had been a wide variation of views in the original consultation.

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28. Officials from the Ministry of Economic Development, The Treasury, Ministry of Agriculture and Forestry, Ministry for the Environment, Department of Internal

Affairs, Ministry for Culture and Heritage and Ministry of Civil Defence and Emergency Management were consulted in the preparation of this paper and support the proposals. Feedback received has been addressed in this paper.

29. The Department of Prime Minister and Cabinet has been informed.

Conclusion and recommendations

30. Both options meet the objectives of amending the Scheme – to improve the efficiency and effectiveness of the Scheme, whilst reducing compliance costs. Following analysis on the practical application of the options and the impacts on business, the option recommended by the Department provides the best balance between the Scheme’s risk management approach and the minimisation of compliance costs.

Implementation

31. The proposed changes to the Scheme need to be implemented through amendments to the Building Act 2004 and the Building (Dam Safety) Regulations 2008.

32. While the Scheme does not come into affect until 1 July 2012, it is desirable to implement the changes to the Scheme well before then, so large dam owners know whether they will come under the Scheme or not, and have as much time as possible to comply with the revised requirements.

33. The timeline for legislative change is outlined below:

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|-------------------------|-------------------------------|
| a. Mid 2011 | Parliamentary process; |
| b. Late 2011 | Act and Regulations amended; |
| c. Late 2011/early 2012 | Guidance notes developed; and |
| d. 1 July 2012 | Scheme takes effect. |

Monitoring, evaluation and review

34. Following the commencement of the Scheme, the Department will closely monitor the operation of the Scheme to ensure it meets its objectives.