

SUBMISSION - REVIEW OF THE DAM SAFETY SCHEME

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Overview

INZ (Irrigation New Zealand) is a national body that promotes excellence in irrigation development and efficient water management throughout NZ (New Zealand), based on the principles of responsible and sustainable management of water resources. INZ represents the interests of 3,500 irrigators totaling 350,000ha of irrigation (approximately 50% of NZ's irrigated area). All the key irrigation service providers (trade and consultants) are also members.

Recommendation 2: Dam Definition

INZ recognises that dams smaller than 50,000m³ or 8m dam wall can pose a potential albeit limited risk, but only if they are located upstream of urban conurbations. However, in NZ the overwhelming majority of dams under 50,000m³ or 8m dam wall are located in remote rural areas and therefore pose negligible risk to both people and the environment.

To ensure compliance costs are minimised (to both dam owners and the wider public) it would be logical for the dam safety scheme to exclude this majority, and instead provide guidelines (to ensure consistency of interpretation) and regulatory powers to the scheme management authority, for the 'reclassification' of exceptions. The Queensland state government: Dam Safety Management guidelines contain a potential way forward for 'reclassification' based on risk to people.

The size of the dams covered by the dam safety scheme should therefore be increased in line with the recommendations.

Recommendation 3: Dam Description

INZ recommends that the dam description be changed from 'large dam' to 'referable dam' as this wording is consistent with other international dam safety programs, for example, the Queensland state government. A 'referable dam' would also better manage the wider public's perception of risk, as it is less emotive.

Recommendation 4: Dam Measurement

The new dam height measurement definition is far clearer than the previous. However, INZ recommends that the dam height measurement definition needs further simplification. The current terminology 'from the top (crest) of the dam' will create ambiguity, particularly for a number of farm dams. A far clearer definition would be -

'The dam height shall be measured using the vertical distance from either the natural bed of the watercourse or the lowest point on the toe of the dam (whichever is lower) to the maximum water storage elevation'.

The maximum water storage elevation is easily determined, i.e. the height of the spill way. This proposed definition is also consistent with the US Federal Guidelines for Dam Safety (FEMA 93).

Recommendation 5: Authority to Classify any Dam

Refer to the comments made in Recommendation 2. It is imperative that guidelines are drawn up for the 'reclassification' of a dam. This is particularly important if the scheme management remains at the regional level, as consistency of its application is essential.

Recommendation 6: Appurtenant Structures

INZ agrees with the recommendation - the classification of appurtenant structures should be determined by the recognised engineer responsible for certifying the dam safety assurance program. However, as in recommendation 5 it is essential guidelines are developed to ensure consistency.

Recommendation 8: Dam Classification Start Date

Provided that recommendation 2 is implemented INZ agrees with this recommendation. However, if the definition of large dams reverts to the previous definition then a longer timeframe will be required.

Recommendation 12: Recognised Engineer Availability Monitoring

INZ agrees with the monitoring recommendation. This 'check function' is essential otherwise dam owners may be penalised for non-compliance through no fault of their own. Such a function also lends much weight to the need for the implementation of recommendation 13 – creation of a central government authority.

INZ is unable to comment accurately on whether there are sufficient Category A recognised engineers to service the dam safety scheme. However, INZ have been reliably informed that there are limited numbers of these engineers in NZ.

Recommendation 13: Central Government Authority

INZ agrees with the recommendation that a new centralised body should be created to administer the scheme and also to regulate building control laws. This is a logical step for NZ as there is limited technical capability and capacity with respect to dam construction and safety and it would also streamline costs. This step has partially occurred already with both north and south island Regional Council's delegating responsibilities to one Regional Council in each island. However, there is much potential to further streamline this system.

There will still be a limited need for local input and knowledge, however, this can be adequately catered for through the centralised body developing and maintaining working relationships (regional annual meetings are suggested) with local government and other key stakeholders.

Recommendation 14: Charging Regime

INZ agrees with recommendation 14 in part. INZ acknowledges there is private benefit in owning a dam, however, it must also be recognised that the dam safety scheme has arisen predominantly to satisfy public concern and therefore has a large public good component. There has only been one significant dam failure (during construction) in NZ with no loss of life. Dam owners (particularly irrigators) already undertake regular 'safety' inspections to minimise the risk of infrastructure failure, this is part of business risk management - if your livelihood is based upon an asset you ensure that asset is functional.

If there is to be a charge, a cost-benefit analysis must be undertaken to better determine the public / private split.

Recommendation 16: Review Period

INZ agrees with this recommendation as it is consistent with NZSOLD guidelines.

Recommendation 17: Dam Compliance Certificate

INZ agrees with this recommendation – both the wording of the annual Dam Compliance Certificate and the amendment of the form to include any area of non-compliance that warrants corrective action.

The enforcement of corrective action should be based upon the level of risk posed. Ranging from the provision of evidence to demonstrate the non-compliance has been suitably addressed through the following bi-annual compliance certification process, through to immediate enforcement of remedial action and requirement to follow up with compliance certification in very high risk scenarios.

Recommendation 18: Bi-Annual Compliance Certificate

INZ agrees with this recommendation.

Recommendation 19: Dangerous Dam Notification

INZ agrees with this recommendation except for the notification should be to the new central body responsible for administering and monitoring the dam safety scheme not to the regional authority.

Recommendation 20: Earthquake and Flood Prone References Removed

INZ agrees with this recommendation – the 'prone' policies should be removed from the act. The Dam Safety Scheme effectively replaces sections 153A and 146 (2) (b) of the Building Act 2004, so any duplication must be removed. Also, if a new centralised body is to be created then section 146 (2) (b) may present an opportunity for inconsistency between the centralised body and regional authorities, alongside unnecessary cost and complexities for dam owners.

Recommendation 22: Portfolio of Dams

INZ agrees with this recommendation. There are a number of rural land owners and irrigation schemes that own multiple dams, it is therefore optimal, from both a cost and integrated management approach, that they are assessed as a 'portfolio' rather than individually.

Recommendation 23: Review Other Legislation

INZ strongly supports this recommendation. It is paramount that all legislation in relation to dams is reviewed as soon as possible. The current system, where consents from both district and regional authorities are often required, frequently

results in much confusion and delay. It is essential all processes for the construction and safety of dams are centralised and streamlined.

INZ Submission Ends