

Water Legislation (Dam Safety) Amendment Bill 2016

Explanatory Notes

Short title

The short title of the Bill is the Water Legislation (Dam Safety) Amendment Bill 2016 (the Bill).

Policy objectives

The policy objectives of the Bill are to amend the *Water Act 2000* (Water Act) and the *Water Supply (Safety and Reliability) Act 2008* (Water Supply Act) to:

- improve the integration of dam safety and disaster management
- improve the way dam owners manage dam safety
- simplify process and reduce regulatory burden.

Reasons for the policy objectives

Background

The safety of water supply dams that pose a risk to more than two or more people, known as referable dams, is regulated through the Water Supply Act. Before the floods in 2011, there was limited integration between dam safety emergency planning and broader community emergency management planning, and the planning that existed focussed almost exclusively on hazards relating to the potential failure of dams.

In 2012, the Water Supply Act was amended to require all dam owners to have an emergency action plan for their dams approved by the Department of Energy and Water Supply, and to enable the chairs of local disaster management groups to review those emergency plans. These amendments implemented recommendations of the Queensland Flood Commission of Inquiry, and introduced the requirement for dam owners to notify the community about downstream release hazards – such as gate or spillway releases.

These provisions were largely untested until two events in 2015. These events were flooding in Callide Creek in February 2015 during Tropical Cyclone Marcia, and releases from Wivenhoe Dam into the Brisbane River in May 2015. Both of these events gave rise to criticisms from downstream residents and local disaster management groups.

Improve the integration of dam safety and disaster management

The Minister for Energy, Biofuels and Water Supply requested that the Inspector-General of Emergency Management (IGEM) review SunWater and Seqwater's flood release notification and communication, following community criticism of SunWater and Seqwater's flood releases from Callide Dam in February 2015 and Wivenhoe Dam in May 2015.

The IGEM Review of Seqwater and SunWater Warnings Communications (IGEM Review) made a number of recommendations about:

- improving warnings for the community
- emergency planning for dams
- better integration of dam safety and disaster management.

A key recommendation of the IGEM Review (Recommendation 3) was that the Department of Energy and Water Supply: 'Review the *Water Supply (Safety and Reliability) Act 2008* and the Emergency Action Planning for Referable Dams guideline to enhance effective communication'. IGEM recommended that this review needed to consider:

- consistency between legislation, policy, guidelines and plans
- the provision of definitions for key terms to eliminate inter-changeable use
- that the guideline has the appropriate status
- that the approval process the regulator applies to ensure emergency action plans comply with legislation and guideline requirements is strengthened and transparent. This includes the establishment of criteria for effectiveness and the requirement for testing of plans.

The improvements proposed in the Bill are a result of this review, with some additional administrative improvements separately identified by the Department of Energy and Water Supply. Although the IGEM Review exclusively considered SunWater and Seqwater, the findings are considered applicable to all dam owners – recognising that SunWater and Seqwater together own 48 of the 105 referable dams in Queensland.

Notification and warnings

The IGEM Review found that the community expects dam owners to notify and warn the community as soon as possible when issues emerge. The community also expects that they will be warned about the likely effects of dam releases and how they should respond – not merely notified that water is being released (naturally or as a result of deliberate decisions).

The IGEM Review also found that responsibility for the provision of notifications and warnings to the community must be location specific and agreed between the dam owner, disaster management groups, and the local government. Not all dam owners and local governments had clearly identified who was responsible for notifications and warnings, which led to a lack of clarity when an emergency action plan was activated.

Emergency action plan, purpose and approval

The IGEM Review found that there was some confusion about the purpose of an emergency action plan. Some dam owners believed that they had an obligation to comply strictly with their emergency action plan regardless of the situation. Dam owners also questioned whether the Emergency Action Planning for Referable Dams guideline should have statutory force so that they would have to comply with it in preparing their plans. These matters needed to be clarified.

An emergency action plan must be given to the Local Disaster Management Group (LDMG). However, there is no obligation for the LDMG to review the plan. Some dam owners have reported that the LDMG has declined to review emergency action plans. This is possibly because the LDMG meets infrequently or is not concerned about the failure of a small dam that would not trigger a disaster declaration. This has brought about a situation where fewer than one in five of the current emergency action plans have been reviewed by the local disaster management authorities, which is a critical weakness in the plans and the regulatory framework.

Improve the way dam owners manage dam safety

Full supply level

The full supply levels of larger dams are set under the Water Act – currently through Resource Operations Plan, but to be transitioned to the Resource Operation Licence for the dam when the remaining provisions of the *Water Reform and Other Legislation Act 2014* commence on 6 December 2016.

The amended Water Act generally provides dam owners more flexibility to manage the operation of their infrastructure than the former arrangements, but there is no express power for a dam owner to reduce the full supply level of the dam to lower the likelihood of a dam failure emergency eventuating, without prior negotiation with the Department of Natural Resources and Mines. An express power would empower dam owners to better manage the safety of their asset.

This is not intended to enable, or require, dam owners to manage the full supply level of dams purely to make space to absorb floods – that is not possible with most dams in Queensland, and can be managed through the temporary full supply level provisions if cost-benefit analysis suggests that the flood mitigation benefits outweigh the water security costs. The policy objective is purely to allow dam owners to respond to engineering concerns about the integrity of the dam under extreme conditions by reducing the risk of failure to a tolerable level by reducing the supply level – so reducing the impacts of extreme events. The decision to adopt a reduced supply level does not imply any imminent danger, as often the risk reduction is in the order of moving from a 10 in 1000 risk of failure in any given year down to a 1 in 1000 risk.

Warning signs on public land

The Coroner recommended that an agreement be established to allow SunWater to place warning signs in appropriate areas downstream of the weirs and dams that they operate. This recommendation was made following an inquest into an inflatable dam collapse at Bedford Weir.

Simplify process and reduce regulatory burden

In addition to the IGEM Review, the Department of Energy and Water Supply has separately identified a number of administrative simplifications that will improve regulatory processes for dam owners, reduce regulatory overlap, and better align regulation the risk posed by dam failure compared to other sources of risk

Temporary full supply level for flood mitigation dam

The prescribed process for the Minister to make a temporary full supply level for a flood mitigation dam (currently only Wivenhoe Dam, Somerset Dam, and North Pine Dam) has proven time consuming and onerous to implement.

Reduce overlap with work health and safety regulation

Dams are implicitly regulated as ‘structures’ that store ‘substances’ that pose a risk to workers at a workplace under the *Work Health and Safety Act 2011* (Work Health and Safety Act) and larger dams are captured as referable dams that pose a risk to public safety under the Water Supply Act.

The dam safety framework under the Water Supply Act is mainly based on dam safety conditions imposed by the chief executive. Conditions are aligned with the potential consequences, which means that the only condition generally applied to small dams is a requirement to provide notification if the dam is decommissioned. Therefore, in these cases, the only practical consequence of the dam being referable is that the dam is covered by an emergency action plan, which is similar to general obligations under the Work Health and Safety Act that already apply to dams at workplaces.

The same rationale applies to dams at mines, which are covered by either the *Mining and Quarrying Safety and Health Act 1999* or the *Coal Mining Safety and Health Act 1999* (the Mining Acts). These two Acts operate to provide more prescriptive safety frameworks for mining workplaces, and the sites and operations they cover are excluded from the operation of the Work Health and Safety Act.

The existing regulatory overlap could be removed by ensuring the Water Supply Act only captures and regulates those dams that pose a risk to public safety and does not duplicate existing workplace protections.

Streamlined failure impact assessment process for certain dams

The dam safety framework relies on triggers in the Water Supply Act. For example, a dam must be failure impact assessed if, after construction, the dam will be more than 10 metres high and hold more than 750ML of water or 1500ML depending on catchment size. The chief executive can also require a failure impact assessment for smaller dams based on reasonable belief that the dam poses a risk to two or more people if it fails.

The Department of Energy and Water Supply identified and assessed dams across the state, which had not previously been failure impact assessed, using satellite imagery and modelling to determine those that might pose a risk and therefore be referable. Over 27,000 dams were assessed, of which about a third were physically inspected. From these inspections, about 300 dams were identified as worthy of more detailed modelling. That modelling is still progressing, but around 100 dams have been identified as potentially being 'referable', with most potentially posing a risk to just one or two dwellings. Additionally, around 60 per cent of the dams identified as potentially being 'referable' had their dwellings only on the same property as the dam. A number of dams are yet to be assessed and more dams may be identified as potentially referable in the future.

This assessment was undertaken to determine whether the chief executive might have sufficient 'reasonable belief' to give a notice requiring the dam owner to have the dam failure impact assessed, under section 345(5) of the Water Supply Act. However, these assessments by the Department are broadly the same as the failure impact assessment process the dam owner would be required to undertake. A failure impact assessment must be completed by a registered engineer and can cost between \$15 000 and \$30 000. This would be a significant cost to impose on a dam owner when the chief executive has already identified and assessed each dam to form a reasonable belief that the dam is referable. Most of the dams that have been identified and assessed appear to pose a low or very low risk to the public, so there is little public benefit in forcing the dam owner to undertake a costly assessment to confirm the work the Department has already undertaken.

Achievement of the policy objectives

Improve the integration of dam safety and disaster management

Notification and warnings

The Bill will make it clear that dam owners are responsible for warning the community as soon as possible when issues start to emerge. This includes telling the community if and when they need to act to protect people or property.

Emergency action plan, purpose and approval

The Bill will insert a purpose statement for emergency action planning into the Water Supply Act. This purpose statement will reinforce that an emergency action plan exists to reduce risk to the community by planning for appropriate notification and warnings, which are integrated into the local disaster management framework.

The purpose statement will also make it clear that the implementation of an emergency action plan needs to be flexible to achieve the overarching objective (of reducing risk and improving safety) if unforeseen issues arise during an event. The definitions for emergency action planning have been clarified to align better with the wider disaster management usage, and to allow for better differentiation between low-consequence events and emergency events.

The Emergency Action Planning for Referable Dam guideline will not be given statutory force as that would make it more difficult for dam owners to adapt planning to suit the particular hazards of their individual dams, and because it is more important that plans are consistent with local disaster management plans than that they are consistent with one another across the state.

The Bill will amend the approval process for an emergency action plan. The new process will require local government consideration of the emergency action plan, rather than simply allowing for consideration by the LDMG, and will allow for review by district disaster management groups as well. It will also explicitly link to disaster management standards issued by the IGEM under the *Disaster Management Act 2003* as being relevant to the approval process to ensure that the plans are better integrated into all-hazards disaster management.

Improve the way dam owners manage dam safety

Full supply level

The Bill will give dam owners the express power to reduce the full supply level of their dam in response to emerging engineering issues, before the situation becomes an emergency, without contravening the resource operations licence conditions under the Water Act. The dam owner's decision will have a similar effect on the resource operations licence as the current temporary full supply level provisions.

Warning signs on public land

The Bill will provide a power for dam owners (which are registered as a service provider) to place warning signs on public land in appropriate areas immediately downstream of weirs and dams. This was agreed with the Local Government Association of Queensland and SunWater as the most effective way to implement the Coroner's recommendation for large dam owners across the State.

Simplify process and reduce regulatory burden

Temporary full supply level for flood mitigation dam

The Bill will streamline the process for the Minister to make a temporary full supply level for a flood mitigation dam. The new provisions will not change the criteria for the Minister to make a temporary full supply level and how it would be announced.

Reduce overlap with work health and safety regulation

The Bill will focus the dam safety regulatory framework on public safety issues by reducing overlap with the Work Health and Safety Act framework and Mining Acts for dams that pose no threat beyond their immediate workplace, such as smaller farm and mining dams.

The risk management framework in the Work Health and Safety Act is an appropriate level of treatment for the remote risk that a dam poses (compared to other occupational risks at farms and other workplaces), as are the more stringent mining safety frameworks.

Streamlined failure impact assessment process for certain dams

The Bill will provide dam owners with the option to avoid completing a failure impact assessment, unless they object to the chief executive's reasonable belief that their dam is referable and has a category 1 or category 2 failure impact rating. This will be achieved by enabling the chief executive to give a dam owner a notice that their dam is believed to be referable, supported by the safety conditions intended to be applied to the dam.

This change does not extend the scope of the regulatory framework. The chief executive can already issue a notice that requires a dam owner to complete a failure impact assessment, if the chief executive reasonably believes the dam would have a category 1 or category 2 failure impact rating. This amendment simply streamlines the process and remove a significant regulatory burden by avoiding the need for the dam owner to undertake their own a failure impact assessment. That said, the dam owner has the right to respond and can still undertake their own failure impact assessment, if they do not believe that their dam is referable.

If the dam owner opts to undertake a failure impact assessment, then the process is the same as for any new dam above the statutory size limits. The only change is that the current provisions for the chief executive to cover the reasonable cost of an assessment in certain circumstances will be extended to circumstances where a failure impact assessment is completed in response to a notice that the dam is considered referable.

Alternative ways of achieving policy objective

The policy objectives can only be achieved through primary legislation. This is because it is necessary to change the existing legislation that relates to the policy objectives.

Estimated cost for government implementation

The State Government will not incur any additional costs to implement the Bill.

The combination of removing the regulatory overlap with the Work Health and Safety Act and the streamlined failure impact assessment process will save approximately \$3.3 million for dam owners and the Department of Energy and Water Supply (noting that the department savings are avoidance of unfunded future costs, rather than savings from the current budget).

Consistency with fundamental legislative principles

The Bill is generally consistent with fundamental legislative principles. Potential breaches of fundamental legislative principles are addressed below.

Whether legislation has sufficient regard to the rights and liberties of individuals

Clause 6 of the Bill inserts a new power for an authorised person to enter a place to erect a warning sign on public land. This power is consistent with the existing entry powers for an authorised person. This power is also appropriately limited. The power only relates to public land, rather than privately owned or residential land, and it does not include the power to enter a building or structure used for residential purposes. If the public land is occupied, the authorised person must give the occupier notice of the entry and the purpose of the entry, and seek their consent to the entry.

Clause 8 of the Bill establishes a new streamlined process for dams to become referable.

A dam owner can currently be required to undertake a failure impact assessment, if the chief executive forms the reasonable belief that the dam poses a risk to two or more people, should it fail. This ensures the framework applies to dams that poses a risk, but are not caught by the size and volume criteria that trigger the requirement for a failure impact assessment. Should the dam owner complete a failure impact assessment that shows the dam does not pose a risk to two or more people, which is accepted by the chief executive, then the chief executive must compensate the owner the reasonable cost of the assessment.

The Bill will establish a new process that allows the chief executive to give the owner of a dam a notice (a referable dam notice) stating that the chief executive has formed the reasonable belief that the dam is referable and has a category 1 or category 2 failure impact rating.

The dam owner can accept the chief executive's assessment and the dam will be regulated as a referable dam with the failure impact rating stated in the notice. If the dam owner does not agree with the failure impact rating stated in the notice (or that the dam is referable), then the dam owner can undertake their own failure impact assessment. As per the existing process, the chief executive bears the reasonable cost of the failure impact assessment completed by the dam owner if the assessment shows that the dam does not pose a risk to two or more people and it is accepted by the chief executive.

In addition, the dam owner will receive an information notice with the referable dam notice, which makes review and appeal available under chapter 7 of the Water Supply Act.

This streamlined process does not create a new obligation or extend who is captured by the regulatory framework. Rather, this process is simply intended to reduce the regulatory burden on dam owners by giving them the opportunity to accept a failure impact rating, rather than compelling them to complete their own failure impact assessment.

Clause 10 of the Bill replaces section 345 of the Water Supply Act and consequently aligns the existing executive liability offence for noncompliance with section 345 with the new process for a dam to become referable under new section 342A. This is not considered to be a new offence. It is also noted that section 487 of the Water Supply Act provides protections for an executive officer where they have taken reasonable steps to ensure the corporation did not engage in the conduct constituting the offence.

Clause 27 of the Bill streamlines the process for the Minister to declare a temporary full supply level for dams prescribed as flood mitigation dams under the Water Supply Act – currently only includes Wivenhoe, Somerset and North Pine Dams which are all owned by Seqwater. The streamlined process removes the prescription that the Minister must ask the chief executive to require the dam owner to provide impact information before declaring a temporary full supply level. Although the streamlined process curtails formal consultation with the dam owner, it does incorporate administrative consultation between the chief executive and the dam owner, and the Minister is one of the two responsible ministers for Seqwater under the *South-East Queensland Water (Restructuring) Act 2007*. The criteria for the decision are unchanged, as is the current arrangement that no compensation is payable to any person because of the operation of that part of the Water Supply Act. All of these checks and balances mitigate any possible infringement on the rights or liberties of Seqwater as the dam owner.

Consultation

The Department has consulted with the 35 local governments with referable dams in their local government areas, as well as the Local Government Association of Queensland, and peak bodies representing dam owners. Local governments support the improved integration of dam safety and disaster management, and the more efficient approach to local review of emergency action plans.

Large dam owners have been consulted, and their feedback has been incorporated into the Bill. The community was largely consulted through the IGEM Review's engagement with communities affected by the 2015 flooding events.

Consistency with legislation of other jurisdictions

The Bill is specific to the State of Queensland.

Notes on provisions

Part 1 Preliminary

Short title

Clause 1 establishes the short title of the Act as the *Water Legislation (Dam Safety) Amendment Act 2016* (the Act).

Commencement

Clause 2 provides that the Act commences on 1 July 2017.

Part 2 Amendment of Water Act 2000

Act amended

Clause 3 provides that this part amends the *Water Act 2000* (Water Act).

Amendment of s 813 (Contravening licence condition)

Clause 4 replaces section 813(3)(c) and (d) and 813(4).

Under the Water Act, the full supply level of a dam operated under a resource operations licence is specified in that licence.

Currently, if a temporary full supply level is declared by the Minister responsible for the administration of the *Water Supply (Safety and Reliability) Act 2008* (Water Supply Act), then a reference in the relevant resource operations licence to the full supply level is taken to be a reference to the temporary full supply level.

The new subsections also provide for the effect of a dam owner deciding to lower the full supply level for engineering safety reasons, under the new chapter 4, part 4 of the Water Supply Act. In this case, a reference in the resource operations licence to the full supply level is taken to be a reference to the reduced full supply level.

If a temporary full supply level is in force and the dam owner has reduced the full supply level, then a reference to the full supply level is taken to be a reference to the lower of the temporary full supply level or the reduced full supply level.

Part 3 Amendment of Water Supply (Safety and Reliability) Act 2008

Act amended

Clause 5 provides that this part amends the *Water Supply (Safety and Reliability) Act 2008*.

Amendment of s 36 (Power to enter places for restricted purposes)

Clause 6 amends section 36 to provide that an authorised person of a service provider (such as a dam owner) may enter a place to erect a sign on public land to warn people about the risks of entering an area downstream of a dam or weir. Most of the referable dams in Queensland are owned by service providers registered under the Water Supply Act, and the use of this existing power is the most efficient way to achieve the policy intent without introducing new categories of authorised persons.

A sign can be erected on public land that adjoins a watercourse or lake downstream of the service provider's dam or weir. If the public land is not occupied, then the authorised person does not need to provide advanced notice or seek consent to enter the public land under the existing subsection (2). Subsection (2) is also amended to make it clear that the existing entry power for taking urgent action under subsection (2)(c) does not apply in the case of erecting a sign on public land.

A new definition for 'public land' is inserted into section 36. Public land means land that is under the management or control of the State or a 'statutory body' under the *Statutory Bodies Financial Arrangements Act 1982*, which includes a local government.

The subsections are consequently renumbered.

Amendment of s 341 (What is a referable dam)

Clause 7 amends section 341 to provide that a dam is a referable dam if the dam becomes a referable dam under the new section 342B and the chief executive has not accepted a failure impact assessment under section 349. This allows for a dam to become referable if the owner chooses to accept that their dam is referable and avoid the formal failure impact assessment process.

The existing subsection (1) is also amended to remove the words 'required to be'. This change recognises that a dam owner may not be required to complete a failure impact assessment, but may choose to complete a failure impact assessment in response to receiving a referable dam notice under new section 342A.

The subsections are consequently renumbered.

Insertion of new ch 4, pt 1, div 1A

Clause 8 inserts new division 1A into chapter 4, part 1 of the Water Supply Act.

New Division 1A Referable dam notices

New division 1A provides that the chief executive may give the owner of a dam a notice stating that the chief executive has formed the reasonable belief that the dam is referable and has a category 1 or category 2 failure impact rating.

The dam owner can accept the failure impact rating stated in the notice, and the dam will be regulated as a referable dam with the failure impact rating stated in the notice. If the dam owner does not agree with the failure impact rating stated in the notice (or that the dam is referable), then the dam owner can undertake their own failure impact assessment.

This process is intended to reduce the regulatory burden on dam owners by giving them the opportunity to accept a failure impact rating, rather than compelling them to complete their own failure impact assessment (with all of the associated costs).

By comparison, the existing process does not give the dam owner the opportunity to accept the chief executive's reasonable belief about a dam's failure impact rating. Rather the dam owner must undertake their own failure impact assessment, even when the dam owner agrees with the chief executive's reasonable belief.

New section 342A – Chief executive may give referable dam notice to particular dam owners

New section 342A provides that the chief executive may give the owner of a dam a notice (a *referable dam notice*) if the chief executive reasonably believes that the dam would have a category 1 or category 2 failure impact rating (were it to be failure impact assessed). To be clear, this new section does not apply to a dam that must otherwise be failure impact assessed under section 343 of the Water Supply Act.

The referable dam notice must state:

- the failure impact rating the chief executive believes the dam would have if it were failure impact assessed
- the reasons why the chief executive believes the dam would have that failure impact rating
- the period (of at least five years) within which the next failure impact assessment for the dam must be completed
- any safety conditions the chief executive proposes to apply to the dam under the process in chapter 4, part 1, division 3 of the Water Supply Act.

The notice must also state the 'effective day' from which the dam will be a referable dam, with the stated failure impact rating, unless, before the effective day, the owner gives the chief executive a failure impact assessment. Subsection (3) provides that the effective day must be at least 60 business days after the notice is given.

The notice must also include or be accompanied by an information notice, which makes review and appeal available under chapter 7 of the Water Supply Act.

The proposed safety conditions are included with the notice in order to enable the dam owner to make an informed decision about the likely effects of the dam being referable, and so whether to challenge the notice or not. They will not be binding on the chief executive's later

decision under the existing chapter 4, part 1 division 3 powers, although the conditions are unlikely to vary significantly from the notice.

New section 342B – Effect of referable dam notice if dam is not failure impact assessed

New section 343B provides for the effect of a referable dam notice.

If the dam owner does not submit a failure impact assessment to the chief executive before the effective day stated in the notice, then the dam becomes a referable dam, with the stated fail impact rating, from the effective day.

If the dam owner submits a failure impact assessment to the chief executive before the effective day, then the dam will not become referable unless the chief executive accepts a failure impact assessment that states the dam has a category 1 or 2 failure impact rating. The existing provisions for submitting, reviewing, and accepting or rejecting any such failure impact assessment apply unchanged.

Amendment of s 344 (Process for failure impact assessment)

Clause 9 amends the heading of section 344 to more closely align with the content of the section.

Subsection (3) is amended to refer to a failure impact assessment given to the chief executive under chapter 4, part 1 of the Water Supply Act. This means that, if a dam owner decides to submit a failure impact assessment to the chief executive after receiving a referable dam notice under new section 342A, then the fee prescribed under subsection (3) would apply. To date, no fee for assessing failure impact assessment has been prescribed under this section.

Replacement of s 345 (Requirement for other failure impact assessments)

Clause 10 replaces section 345 to include dams that are made referable through the effect of a referable dam notice. The requirement for the owner of a referable dam to complete another, future failure impact assessment is an existing requirement and it remains unchanged. This is an important means of ensuring the referable status of dams is kept under periodic review.

New section 345 – Obligation to complete later failure impact assessment

New section 345 provides for when the owner of a dam must complete another, future failure impact assessment. This requirement applies if:

- the dam is made referable through the effect of a referable dam notice; or
- the dam has been failure impact assessed.

If the dam is made referable through the effect of a referable dam notice, then the owner must ensure that another, future failure impact assessment is completed and given to the chief executive within the period stated in the referable dam notice under new section 342A.

If the dam has been failure impact assessed under existing provisions, or as a response to a referable dam notice, then the owner must ensure that another, future failure impact assessment is completed and given to the chief executive within the period stated in the notice accepting the failure impact assessment. This merely replicates the effect of the existing section 345.

An executive liability offence for noncompliance with this section already exists with a maximum penalty of 1665 penalty units. This amendment does not introduce a new offence, but aligns the existing offence provision with the new pathway to a dam becoming referable offered by the new section 342A.

Replacement of s 346 (Failure impact ratings for dams)

Clause 11 replaces section 346.

New section 346 – Failure impact rating for dams

New section 346 provides for the meaning of category 1 failure impact rating and category 2 failure impact rating. The new subsection (1) and (2) replace the existing subsection (1) to make the provision easier to understand, but the effect is otherwise unchanged.

New subsection (3) replaces the definition of ‘population at risk’ in the existing subsection (2). Population at risk means the number of people whose safety will be at risk if the dam, or the proposed dam after its construction, fails. The population at risk is calculated under the failure impact assessment guidelines issued by the chief executive, but these important exclusions merit treatment in primary legislation.

The new definition excludes:

- a resident on the parcel of land on which the dam is situated;
- a person at a workplace (under the *Work Health and Safety Act 2011*), if the dam is situated at that workplace; or
- a person at a mine or a coal mine, if the dam is situated at a mine under the *Mining and Quarrying Safety and Health Act 1999* or a coal mine under the *Coal Mining Safety and Health Act 1999*.

The intent of these exclusions is to ensure that the dam safety framework in the Water Supply Act does not apply to a dam if the dam is regulated by the framework in the:

- *Work Health and Safety Act 2011*;
- *Mining and Quarrying Safety and Health Act 1999*; or
- *Coal Mining Safety and Health Act 1999*.

These risk management frameworks are an appropriate level of treatment for the remote risks that a dam poses (compared to other occupational risks at farms and other workplaces).

This amendment will allow managers to focus their efforts on more pressing risks, and the dam safety framework to focus on dams that pose a high-consequence (but remote likelihood) risk to the general public and which are not covered by other frameworks.

It should be noted that the dam safety framework in the Water Supply Act currently does not apply to a dam if the dam stores waste or contaminants, and so is regulated under the *Environment Protection Act 1994*.

A small number of dams which are currently referable may no longer need to be under these exclusions. This will be addressed by dam owners submitting updated failure impact assessments, at their discretion.

Amendment of s 348 (Cost of failure impact assessment)

Clause 12 amends section 348 to provide for who must pay the cost of a failure impact assessment, in certain situations where the owner of a dam is given a referable dam notice under new section 342A. This extends the existing protection on dam owners to cover this new process.

For a failure impact assessment that is completed in response to a referable dam notice, given under new section 342A, the chief executive must pay the reasonable cost of preparing and certifying the assessment if:

- the dam is assessed as having neither a category 1 nor category 2 failure impact rating; and
- the chief executive accepts the assessment.

Otherwise, the owner of the dam must pay the cost of preparing and certifying the assessment.

Amendment of s 352A (Definitions for div 2A)

Clause 13 amends section 352A to change certain definitions for chapter 4, part 1, division 2A of the Water Supply Act. These reflect amendments made by the Bill to clarify the terminology and operation of emergency action planning.

The IGEM Review recommended a review of key defined terms to eliminate interchangeable use. The Bill responds to this recommendation. Key terms have been replaced or redefined to improve clarity and ensure emergency action planning meets the new purpose stated in amended section 352E. The new definitions also better align with disaster management terminology, and allow for better differentiation between low-consequence events and emergency events.

In particular, the term ‘emergency condition’ has been omitted and replaced with the terms ‘dam hazard’, ‘dam hazard event’, and ‘emergency event’.

Under the new definition, ‘dam hazard’ means a reasonable foreseeable situation or condition that may:

- cause or contribute to the failure of the dam, if the failure of the dam may cause harm to people or property; or
- require an automatic or controlled release of water from the dam, if the release of water from the dam may cause harm to people or property.

A ‘dam hazard event’ is an event arising from a dam hazard if:

- the dam owner plans to warn people who may be harmed, or whose property may be harmed, about the event under the dam owner’s emergency action plan; but
- a coordinated response with one or more relevant entities is unlikely to be required.

In other words, a dam hazard event is an event or a point in time, related to a dam hazard, when the dam owner plans to respond under the dam owner’s emergency action plan.

An ‘emergency event’, for a dam, means an event arising from a dam hazard if:

- the dam owner plans to warn people who may be harmed, or whose property may be harmed, about the event under the dam owner’s emergency action plan; and
- a coordinated response with one or more relevant entities is likely to be required.

In other words, an emergency event is an event or a point in time, related to a dam hazard, when the dam owner plans to respond with other relevant entities under the dam owner's emergency action plan.

The difference between a 'dam hazard event' and an 'emergency event' will relate to the scale and severity of an event. The dam owner and the local government will need to agree on what is a dam hazard event and an emergency event under the plan. The terms are intended to align with the disaster management definition of 'emergency'

Separate terms provide a number of benefits, in addition to clarity. Separate terms allow for the response to an event to escalate in line with the event. An event can be treated as a dam hazard event but can also be treated as emergency event if, and as, the situation escalates. Other events can be treated immediately as an emergency event. This means that a dam owner can plan when to 'notify' the community (including leading up to and when there is a dam hazard event or emergency event) and when to 'warn' the community (including leading up to and when there is a dam hazard event or emergency event). This also means that the community is not provided with excessive warnings in routine events – which could lead to the community becoming complacent about warnings and so fail to react during an emergency.

More severe emergency events will trigger the existing reporting requirement after the event, under chapter 4, division 2A, subdivision 9 of the Water Supply Act. Less severe dam hazard events will not trigger this reporting requirement.

The definition for 'disaster management plan' has been simplified, but the effect is otherwise unchanged.

The definition for 'district group' has been redefined to make it clear which groups are referred to in the context of an emergency action plan. The new definition captures each district group whose disaster district could be affected by a dam hazard under the emergency action plan. This allows for all district groups to be engaged where the dam hazards for some large dams (such as Wivenhoe and Somerset Dams) may affect more than one district.

The definition for 'local group' has been redefined to make it clear which groups are referred to in the context of an emergency action plan. The new definition captures each local group whose local government area could be affected by a dam hazard under the emergency action plan.

A new definition for 'relevant entities' is provided in section 352A. Except for consequential changes, this definition is the same as the definition currently provided in the existing section 352H.

Because of these changes to key terms, and the process for reviewing and approving emergency action plans, a number of terms were no longer needed and have been omitted entirely. These include: 'dam failure hazard'; 'disaster management review report'; 'disaster management review response'; 'downstream release hazard'; 'emergency condition'; 'local disaster management plan'; 'relevant disaster management group'; 'relevant district group'; and 'relevant local group'.

Other terms are consequently amended.

Omission of ss 352B–352D

Clause 14 omits section 352B to 352D.

Section 352B provided an explanation of the term ‘dam failure hazard’. Section 352C provided an explanation of the term ‘downstream release hazard’. Section 352D provided an explanation for the term ‘relevant disaster management group’. These concepts have been incorporated into the new definitions for section 352A and separate sections are no longer needed.

Replacement of s 352E (Requirement for approved emergency action plan)

Clause 15 replaces section 352E to provide for an overarching purpose of an emergency action plan, in addition to the requirement for a referable dam to have an approved plan.

New section 352E – Requirement for, and main purpose of, emergency action plan

New section 352E requires that an owner of a referable dam must have an approved emergency action plan for the dam.

In addition, new section 352E describes the main purpose of an emergency action plan which is to minimise the risk of harm to persons and property if a dam hazard event or an emergency event for the dam happens. The plan will also ensure that there are agreed arrangements for warnings and notifications. No plan will ever accurately foresee every possible combination of circumstances that might arise during an emergency. There will continue to be a degree of residual risk, despite effective planning, and the response to an event is likely to be based on planning as well as the best information available at the time and the sound judgement of all involved.

Amendment of s 352F (Requirement to prepare emergency action plan)

Clause 16 amends section 352F to provide for when an emergency action plan is required in certain circumstances. If the dam becomes a referable dam under new section 342B, then the owner must (unless the owner has a reasonable excuse) prepare an emergency action plan and give it to the chief executive for approval within four months after the day the dam becomes a referable dam. This aligns with the existing arrangements for dams which become referable through a failure impact assessment.

Omission of s 352G (Disaster management review of plan)

Clause 17 removes section 352G which dealt with review of the emergency action plan by the chairperson of the relevant disaster management group. Instead of this requirement, the emergency action plan will be given to each relevant local government under new section 352HA and assessed by each local government under new section 352HB. It will also be provided to each affected district group for optional review under new section 352HC.

Replacement of s 352H (Content of plan)

Clause 18 replaces section 352H which provided for the contents of an emergency action plan.

New section 352H – Requirements for plan

New section 352H outlines the requirements for an emergency action plan.

The emergency action plan must identify each dam hazard for the dam. The term ‘dam hazard’ replaces the term ‘emergency condition’ (see the changes to section 352A).

For each dam hazard, the emergency action plan must do each of the following:

- Identify the area likely to be affected by a dam hazard event or emergency event, which may happen because of a dam hazard. A map can also be attached to the plan to show the areas that are most vulnerable to flooding during the event. This requirement is largely unchanged, except to reflect the new terms defined in section 352A.
- Identify the circumstance that indicate a dam hazard event or emergency event is more likely to happen.
- State when and how the dam owner plans to notify the relevant entities about a dam hazard event or emergency event, or an increase in the likelihood of a dam hazard event or emergency event, including the order of priority in which the relevant entities will be notified.
- State when and how the dam owner plans to warn people about a dam hazard event or emergency event or an increase in the likelihood of a dam hazard event or emergency event, where those people may be harmed, or their property harmed, by the event. A warning involves more than notifying people about, for example, the technical nature of a release of water from the dam. A warning includes telling people if, when, and potentially even how, they need to act to protect life or property.
- State the actions that the dam owner plans to take in response to a dam hazard event or emergency event. This is generally unchanged from the existing requirement. Although, in addition to replacing the term ‘emergency condition’ with the new terms, the revised wording emphasises that the plan provides for the actions a dam owner plans to take rather than suggesting that it will be explicitly be followed in all circumstances. This change recognises that a plan will not necessarily cover every scenario or every response. In an event, dam owners may need to adapt their response to manage unforeseen circumstances in the way that best meets the objective for the plan.

The emergency action plan must be accompanied by each notice given to the dam owner by a local government or district group, under section 352HB or 352HC, as well as any responses to these notice by the dam owner.

The emergency action plan must also include any other relevant matter prescribed by regulation.

The new subsection (2) provides that the emergency action plan may provide for warnings to be given by a relevant entity in appropriate circumstances, on behalf of the dam owner, if the relevant entity agrees to provide the warnings in those circumstances.

New section 352HA – Requirement to give emergency action plan to local governments and district groups

New section 352HA provides that a dam owner must give a copy of their emergency action plan to each local government and district group who may be affected by a dam hazard identified in the plan. This must happen before the plan is given to the chief executive.

New section 352HB – Assessment by local government

New section 352HB provides for assessment of an emergency action plan by each local government that is given a copy of the plan under new section 352HA. If given a copy of an emergency action plan, the local government must assess the plan for consistency with its disaster management plan. In making this assessment, the local government must consult with its local group.

The local government must give the dam owner a notice within 30 business days after receiving the emergency action plan. The notice must state:

- whether the local government considers the plan is consistent with its disaster management plan; and
- if the local government considers that the plan is not consistent, the reasons why it considers the plan is not consistent.

The dam owner may prepare a written response to a notice from a local government, which will be submitted with emergency action plan to the chief executive.

New section 352HC – Review by district group

New section 352HC provides for review of an emergency plan by each district group that is given a copy of the plan under new section 352HA. If given a copy of an emergency action plan, the chairperson of the group may review the plan for consistency with its disaster management plan. This discretion aligns with the role of the district groups under the *Disaster Management Act 2003* and recognises that some dams may be too small to have consequences which require a district level disaster management response.

The chairperson may give the dam owner a notice within 30 business days after receiving the emergency action plan, which states:

- whether the group considers the plan is consistent with its disaster management plan; and
- if the group considers that the plan is not consistent, the reasons why it considers the plan is not consistent.

The dam owner may prepare a written response to a notice received from a chairperson, which will be submitted with the emergency action plan to the chief executive.

Amendment of s 352I (Chief executive to consider plan)

Clause 19 amends section 352I which provides for the consideration of an emergency action plan by the chief executive.

The existing subsection (1) is amended to provide that the chief executive must consider and decide to approve or refuse to approve an emergency action plan within 30 business days after receiving the plan.

The existing subsection (2) is replaced and the new subsection (2) states that the chief executive must have regard to:

- each notice given by a local government under new section 352HB;
- each notice given by the chairperson of a district group under new section 352HC;
- any notice responses prepared by the dam owner; and
- any disaster management standards under the *Disaster Management Act 2003*.

The reference to the disaster management standards provides for the chief executive to have regard to the Emergency Management Assurance Framework, which incorporates the Standard for Disaster Management made by IGEM under section 16N of the *Disaster Management Act 2003*, in considering the plan, as well as any future disaster management standards. That framework provides ‘the structure and mechanism for reviewing and assessing the effectiveness of Queensland’s disaster management arrangements’. Many elements of the framework are directly relevant to judging the effectiveness of emergency action plans required under chapter 4, part 1, division 2A of the Water Supply Act.

If a local government has failed to provide a notice, then the dam owner is not precluded from submitting the plan for consideration.

Amendment of s 352J (Criteria for approving plan)

Clause 20 amends section 352J to replace the term ‘emergency condition’ with the term ‘dam hazard’.

Amendment of s 352K (Approval of plan)

Clause 21 amends section 352K, which provides for the approval of an emergency action plan.

The Bill inserts a new deemed approval process into section 352K in order to provide greater certainty to dam owners.

If the chief executive has not approved an emergency action plan within 30 business days after the plan was given to the chief executive, under section 352F, then the chief executive is taken to have approved the plan on the day (the deemed approval day) that is 30 business days after the plan was given to the chief executive. If this happens, the approval period is:

- two years from the deemed approval day; or
- a longer period, if a longer period (which cannot be more than five years after the deemed approval date) is stated by the chief executive in a notice.

For the longer period to apply, the chief executive must give the notice within two years after the deemed approval day.

The approval period determines when the emergency action plan must be renewed under existing section 352S of the Water Supply Act. The short deemed approval period, combined with the chief executive's existing power to require review of a plan under s352O and the annual requirement for the dam owner to review a plan, provide a substantial set of balances to offset any risk arising from a deemed approval.

If an emergency action plan receives deemed approval, the chief executive must comply with the existing subsection (1) as soon as practicable after the deemed approval day.

The term 'approval period' is removed from the existing subsection (2) as it is provided for in new subsection (7).

Amendment of s 352N (Dam owner must ensure particular individuals have access to plan)

Clause 22 amends section 352N to replace the 'emergency condition' with 'a dam hazard event or emergency event'.

Amendment of s 352O (Review by chief executive and direction to prepare and submit new plan)

Clause 23 amends section 352O to replace the term 'emergency condition' with the term 'dam hazard' in subsection (1) and (2), and to replace the reference to 'the relevant disaster management group' to a 'local group or district group' in example 2 of subsection (1).

Replacement of s 352Q (Amending plan by agreement)

Clause 24 replaces section 352Q to provide more clearly for what happens if a dam owner seeks approval of certain minor changes to their emergency action plan.

New section 352Q – Amending plan by agreement

New section 352Q allows for a dam owner to seek approval from the chief executive to amend the approved emergency action plan to:

- correct a minor error; or
- make another change that is not a change of substance.

The request must be in writing and accompanied by a copy of the plan showing the proposed amendment.

The chief executive may decide to approve or refuse the amendment, and decide to give the owner notice of the decision.

Subsection (4) provides that the chief executive is taken to approve the amendment, if the chief executive has not given the dam owner notice of a decision within 10 business days after the request is made.

Subsection (5) provides that, if the amendment is approved under this section, the plan as amended is taken to be the approved emergency action plan.

Substantive amendments to an emergency action plan are managed under the existing section 352R in the Water Supply Act.

Amendment of s 352T (Preparation and submission of emergency event report)

Clause 25 amends section 352T to replace the definition of ‘end’ in subsection (3) which is used in the context of reporting after an emergency event.

The term ‘end’, in relation to an emergency event, means when the dam hazard, which gave rise to the event, is no longer a risk to people or property. This is a consequential change related to the changes to the defined terms in section 352A.

It should also be noted that, the changes to section 352A mean that a dam owner only has to prepare an emergency event report if an emergency event (which is defined in section 352A) related to the dam has happened. A dam hazard event does not trigger the requirement to prepare an event report after the end of the event.

Amendment of s 354 (Deciding safety conditions)

Clause 26 amends section 354 to replace subsection (4) – effectively removing the existing subsection (4)(b).

The existing subsection (4)(b) states that safety conditions may include requirements about giving information to the local community situated immediately downstream of the dam about the likely or actual release of water, or flow of water through, from the dam as a result of flooding. This provision was inserted into the Water Supply Act in 2011 to facilitate introduction of emergency action plans through dam safety conditions, before the requirement to have an emergency action plan was expressed in primary legislation in 2012. Subsection (4)(b) is no longer needed and has given rise to confusion.

Replacement of ch 4, pt 3, divs 1–3

Clause 27 replaces chapter 4, part 3, divisions 1 to 3 of the Water Supply Act. The new provisions provide a streamlined process for the Minister to make a temporary full supply level for a flood mitigation dam.

Although the process is streamlined, the criteria for the Minister to make a declaration, and the public announcement of the declaration, have not been changed. These provisions only apply to dams prescribed as flood mitigation dams under the Water Supply Act. That currently only includes Wivenhoe, Somerset and North Pine Dams which are all owned by Seqwater. Although the streamlined process curtails formal consultation with the dam owner, it does incorporate administrative consultation between the chief executive and the dam owner.

New Division 1 Preliminary

New section 388 – Definition for part

New section 388 provides definitions for chapter 4, part 3 of the Water Supply Act.

New section 389 – Application of part

New section 389 provides that this part applies to a dam for which an approved flood mitigation manual is in force. At present, the dams that meet this requirement are Wivenhoe Dam, Somerset Dam and North Pine Dam.

New Division 2 Declaring temporary full supply level

New section 390 – Minister may declare temporary full supply level

New section 390 provides the process for the Minister to declare a temporary full supply level for a flood mitigation dam.

This section applies if the Minister considers the impacts of a potential flood or drought may be mitigated by having a full supply level for a dam that is different to the full supply level stated in the resource operations licence.

The Minister declares a new full supply level (a temporary full supply level) for the dam by giving a notice to the owner of the dam.

In making a decision to declare a temporary full supply level, subsection (3) provides that the Minister must have regard to:

- the outcome of any consultation between the chief executive and the owner of the dam about the full supply level for the dam;
- the extent to which the proposed temporary full supply level is likely to mitigate the impacts of a potential flood or drought;
- impacts the proposed temporary full supply level will have on the water security of the dam;
- whether the proposed temporary full supply level would affect the safety of the dam; and
- any other positive or negative impacts of the temporary full supply level the Minister considers relevant.

These criteria are the same as the criteria that were provided under the existing section 393. In short, the criteria that the Minister must have regard to in making a temporary full supply level declaration have not changed.

The Minister may also have regard to any other matter the Minister considers is appropriate, including meteorological forecasts and the public interest. This is the same consideration provided in the existing section 390(2).

Subsection (4) provides that the temporary full supply level declaration takes effect on the day stated in the declaration. The declaration ceases to have an effect on the earlier of the following:

- the day stated in the declaration;

- the day that is 6 months after the declaration is made; or
- the day the declaration is revoked.

This has the same effect as the existing section 395(3).

A copy of the notice given to the owner of the dam about the temporary full supply level must be published in the gazette as soon as practicable after it is given. This is the same effect as the existing section 395(5).

Subsection (6) provides that the Minister may declare a temporary full supply level more than once for a particular dam. This is the same effect as the existing section 395(4).

Subsection (7) provides a definition for ‘water security’ which is the same as the definition provided in the existing section 388.

Insertion of new ch 4, pt 4

Clause 28 inserts a new part 4 into chapter 4 of the Water Supply Act. The new part 4 provides dam owners the power to reduce the full supply level of their dam in certain circumstances.

New Part 4 Reducing full supply level for safety purposes

New section 399A – Application of part

New section 399A provides that this part applies to a dam where a resource operations licences applies to the dam.

New section 399B – Dam owner may reduce full supply level in certain circumstances

New section 399B provides that a dam owner may reduce the fully supply level of a referable dam if the owner believes, based on the advice of a registered professional engineer, that there is an unacceptable risk that the dam will fail if it operates at the full supply level stated in the resource operations licence for the dam. This does not imply an imminent risk of failure.

The owner may reduce the full supply level of the dam to the level that lowers the risk of a failure of the dam to a level acceptable to the owner, having regard to the advice of the registered professional engineer.

The owner must notify the chief executive that administers section 813 of the Water Act and the chief executive that administers the Water Supply Act about the reduced full supply level as soon as practicable after reducing the full supply level. The notice must include:

- the reasons why it is necessary to operate the dam at the reduced full supply level;
- the period for which it necessary to operate the dam at the reduced full supply level; and
- a copy of the registered professional engineer’s advice about the reduced full supply level

Section 813 of the Water Act, as amended by this Act, provides for the effect of the reduced full supply level.

New section 399C – Reporting requirements while full supply level reduced

New section 399C provides for reporting arrangements if the full supply level for a dam remains reduced under section 399B for more than one year.

The dam owner must provide a report to the chief executive that administers section 813 of the Water Act and the chief executive that administers the Water Supply Act within 1 month after the end of each 1 year period. The report must state when the dam owner intends to allow the dam to return to its original full supply level. If the owner is a service provider, the report must also state:

- the impacts the reduced full supply level has had on the provider's customers;
- the likely future impacts on customers for the period the owner intends to keep the dam at a reduced full supply level; and
- the impacts the reduced full supply level has had or is likely to have on achieving the water plan outcomes for a water plan under the Water Act.

Insertion of new ch 10, pt 11

Clause 29 inserts a new chapter 10, part 11 into the Water Supply Act, which provides for the transitional arrangements of the Bill.

New Part 11 Transitional provision for Water Legislation (Dam Safety) Amendment Act 2016

New section 674 – Application of s 352K for emergency action plans given to chief executive before commence

New section 674 provides a transitional arrangement for dam owners where they had given the chief executive an emergency action plan, before the commencement of this Bill, but the chief executive had not decided to approve or refuse to approve the plan under the previous section 352I. In this case, the plan is taken to have been given to the chief executive on commencement for the purposes of section 352K (as amended by the Bill).

This means that an undecided plan is taken to have been submitted on the commencement day. From the commencement day, the chief executive has 30 business days to consider the plan and approve it or refuse to approve it under section 352I (as amended by the Bill) before it receives deemed approval under section 352K (as amended by the Bill).

Amendment of sch 3 (Dictionary)

Clause 30 amends schedule 3 (Dictionary) of the Water Supply Act for the purposes of the Bill.