

Queensland Government response to

# Queensland Floods Commission of Inquiry Final Report



# Foreword

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The 2010/11 floods were a devastating event for many Queenslanders. The destruction and loss these floods brought to so many Queensland families, homes and businesses will not and should not be quickly forgotten.

Unfortunately, our state will always be subject to climatic extremes. The challenge for governments is to better plan, better prepare and better respond when disasters inevitably occur. In cooperation with local councils, we are determined to do all we can to ensure that Queenslanders don't have to experience such extensive and personal devastation from floods again.

The Queensland Floods Commission of Inquiry forensically examined and reported on the events of the 2010/11 floods. The Commission's final report sets many tasks for governments at all levels to rectify mistakes of the past, and to make sure our disaster resilience and response capacity is as strong as possible.

My government is well aware of the magnitude of the job ahead of us in implementing the Commission's recommendations. We are fully committed to working closely with communities across Queensland to ensure our planning framework, emergency response capacity, building regulations, mining operations, and dam management practices are strengthened to protect our state from natural disasters.

The following Queensland Government response to the Queensland Floods Commission of Inquiry Final Report sets out the plan of action to tackle the job set out for us by the Commission. There are no quick fixes to the many problems identified in the report, but we are determined to deliver the change that is needed for all Queenslanders.

A handwritten signature in blue ink, which appears to read 'Campbell Newman'. The signature is fluid and cursive, with a large initial 'C'.

**Campbell Newman**  
Premier of Queensland

## Introduction

In the past few years, communities across Queensland have been repeatedly hit hard by major floods. The reality is that Queensland will always be prone to flood and storm events. However, the Queensland Government firmly believes that there is much that can be done to plan and protect Queenslanders from preventable flood damage.

As Queensland moves forward with its reconstruction and recovery in the wake of our most recent disasters, it is vitally important that, as a state, we also act decisively and proactively to improve our response and recovery capacity, and engage in better planning and flood mitigation to protect Queensland families and communities from the impacts of major floods.

The final report of the Queensland Floods Commission of Inquiry, released on 16 March 2012, provides a comprehensive roadmap for future work that will improve the way we respond to future floods and enhance the resilience of Queensland communities. This government response is Queensland's action plan for the implementation of the Queensland Floods Commission of Inquiry Final Report recommendations, and documents the government's commitment to ensuring that everything that can possibly be done, is done, to improve the flood readiness of Queensland communities.

## The Queensland Floods Commission of Inquiry

The Commission was established on 17 January 2011 to conduct a forensic examination into the events of the 2010/11 floods. The matters within the Commission's terms of reference included:

- preparation and planning for the floods by governments and the community
- the performance of insurers in meeting their responsibilities
- all aspects of the response to the 2010/11 floods, particularly measures taken to inform the community and protect life and property
- management of essential services
- the adequacy of forecasts and early warning systems
- the operation of dams
- land use planning to minimise flood impacts.

The Commission released its interim report, focusing on matters of disaster preparedness that were a priority for implementation prior to the previous wet season, on 1 August 2011. Details of the range of actions taken to improve Queensland's disaster preparedness prior to the 2011/12 wet season was set out in the *Disaster Readiness Update* available at [www.premiers.qld.gov.au](http://www.premiers.qld.gov.au).

On 16 March 2012, the Commission released its final report into the 2010/11 floods. The report was the result of extensive inquiry by the Commission into the matters within its terms of reference. The Commission's inquiries included considering over 700 written submissions, conducting 68 days of public hearings, taking evidence

from 345 witnesses and convening community consultation sessions and meetings.

The final report contains 177 recommendations directed at a broad range of matters related to the 2010/11 floods, including: floodplain management, planning and building issues, the performance of private insurers, the impact of floods on operational and abandoned mines, the emergency response to the floods and dam management.

The Queensland Government supports all of the final report's recommendations.

Of the report's 177 recommendations, 123 relate to areas of Queensland Government responsibility, 56 relate to local government responsibilities, eight relate to Commonwealth Government responsibilities, and seven recommendations relate to private entities. Many recommendations are directed at both state and local governments or are dependent on action by the state to establish a consistent framework for implementation at a local level.

The Queensland Government acknowledges that effort will therefore be required across the levels of government, and between government, the community and private sector, to fully deliver on the Commission's recommendations. The government is committed to a collaborative approach to achieve greater disaster preparedness and resilience for the state in line with the Commission's recommendations.

## Key improvements

The final report's recommendations cover a variety of complex issues and range from minor changes to administrative procedures to substantial systemic reforms. Many recommendations, such as those requiring that technical flood studies be completed or that planning instruments be revised, will require long-term action by government. A rigorous and consultative approach is needed, to ensure that improvements to legislation, policies and practices provide a robust and effective framework to prevent, prepare for and respond to future disasters.

There are a number of critical actions that will need to be progressed as a matter of high priority, before the start of the 2012/13 wet season. These actions relate to improvements to flood mitigation activities, environmental regulation of mines, emergency response and dam management.

## Implementation framework

This document details how the Queensland Government will address each of the recommendations from the Queensland Floods Commission of Inquiry's Final Report.

The recommendations contained in the final report are wide-ranging and will require focused and collaborative implementation activity across a number of state and local government agencies.

To achieve this, the Queensland Government will put in place an implementation framework that clearly

identifies key areas of work and allocates clear lines of responsibility to ensure that the work gets done.

Implementation groups will be established to deliver the Commission's recommendations along five key streams of delivery:

- planning
- building
- environment and mines
- emergency management
- dams.

These implementation groups will be responsible for ensuring coordinated and focused action is taken over the next 12 months in delivering the Commission's recommendations. Each group will be chaired by a Director-General and will consist of representatives of other key departments and agencies. In addition, to ensure representation of local government interests in the implementation of state responses to those recommendations affecting councils, the Local Government Association of Queensland (LGAQ) or relevant individual councils will be invited to participate in implementation groups.

The progress of these implementation groups will be monitored by a CEO committee chaired by the Director-General of the Department of the Premier and Cabinet and comprising chief executives of key departments and agencies. The governance structure for oversight and implementation of the Commission's recommendations is at **Appendix 1**.

The key areas of work to be undertaken by the implementation groups is outlined below and the terms of reference for all groups is at **Appendix 2**.

### Planning

The Planning Implementation Group, led by the Department of State Development, Infrastructure and Planning will have responsibility for implementing recommendations in chapters 2 to 8 of the final report dealing with floodplain management and the planning framework. Key priorities for this group will include progressing the Brisbane River catchment flood study, developing a new planning policy for natural hazards, prioritising areas across Queensland requiring flood investigations or studies, providing guidance to local governments on the completion of flood risk assessments and flood mapping, establishing a central repository of flood information for publication and developing a new framework for the regulation of levees.

### Building

The Building Implementation Group, led by the Department of Housing and Public Works, will have responsibility for implementing recommendations in chapters 9 and 10 of the final report dealing with building regulations and essential services infrastructure. Key priorities for this group will include considering amendments to the proposed new part of the Queensland Development Code relating to construction of buildings in flood hazard areas and ways to improve the flood resilience of essential services

infrastructure such as sewerage, stormwater drains, electricity and rail networks.

### Environment and mines

The Environment and Mines Implementation Group, led by the Department of Environment and Heritage Protection, will have responsibility for implementing recommendations in chapter 13 of the final report, dealing with the management of operational and abandoned mines. Key priorities for this group will include developing a risk assessment framework for pre-wet season mine inspections, assessing the effects of discharges from flooded mines on freshwater and marine environments and considering options for management of abandoned mines in Queensland.

### Emergency management

The Emergency Management Implementation Group, led by the Department of Community Safety, will have responsibility for implementing recommendations in chapter 15 of the final report dealing with emergency planning and response. Key priorities for this group will include enhancing the operations of the State Emergency Service (SES) and implementing a new formula for distribution of the SES subsidy.

### Dams

The Dams Implementation Group, led by the Department of Energy and Water Supply, will have responsibility for implementing recommendations in chapters 16 and 17 of the final report dealing with dam management. Key priorities for this group will include engaging an independent reviewer to review Seqwater's March 2011 flood event report, the dam optimisation studies and review of flood mitigation manuals for Wivenhoe, Somerset and North Pine dams and implementing new statutory requirements for approval of emergency action plans for referable dams.

### Partnership with local government

The government acknowledges that a collaborative approach with local government will be essential for proper state implementation of the Commission's recommendations.

There are many recommendations in the final report that will be the primary responsibility of either individual councils or councils generally. The government will support councils in this task where possible, by removing legislative or regulatory impediments to implementation of the Commission's recommendations, and through providing support to councils in areas such as conducting flood studies and establishing a consistent planning framework to address flood risks.

In addition, the government will provide funding support for local government projects relevant to the Commission's recommendations through the following programs:

- Local Government Grants and Subsidies Program—\$40 million will be allocated from this program over three years to provide financial support for local governments with limited capacity to self-fund projects to implement Commission recommendations.
- Floodplain Security Scheme—\$40 million will be allocated over four years under the Royalties for the Regions initiative, with an ongoing commitment of \$10 million per year, to provide funding for local government for flood mitigation infrastructure. A funding contribution is being sought from the Commonwealth Government on a 2:2:1 basis, which would provide total funding of \$100 million over four years from the Queensland Government, Commonwealth Government and the relevant council.
- Natural Disaster Resilience Program—approximately \$10 million of shared Queensland and Commonwealth Government funding will be available in 2012/13 for disaster resilience projects including, for example, flood studies and mitigation works.

In addition as noted above, the LGAQ or individual councils will be invited to participate on the government's implementation groups to ensure a close and collaborative working relationship between state and local government and to ensure that local government interests are taken into account during implementation of the Commission's recommendations.

### **Government response**

The following table provides a detailed, line-by-line response to the final report recommendations relevant to the Queensland Government's functions and responsibilities. In addition, the government will provide input and support for implementation of other recommendations by the Commonwealth Government, local governments or private entities as required.

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
1	<b>No recommendations for this chapter</b>			
2.1	The steering committee of the Wivenhoe Dam and Somerset Dam Optimisation Study should consider whether it would be more effective for the floodplain management investigation to be removed from the Wivenhoe Dam and Somerset Dam Optimisation Study.	State	DEWS	<p>The Queensland Government has considered this recommendation and agrees that it would be more effective to remove floodplain management investigations from the Wivenhoe Dam and Somerset Dam Optimisation Study (WSDOS).</p> <p>The Departments of Natural Resources and Mines and State Development, Infrastructure and Planning will jointly lead and coordinate the floodplain management investigations. The Department of Natural Resources and Mines will lead the Brisbane River catchment flood study (see recommendation 2.2) and the Department of State Development, Infrastructure and Planning will lead the floodplain management risk work.</p> <p>This work will occur in parallel with the flood management and dam operations investigations being led by Seqwater and the water supply security investigations being led by the Queensland Water Commission.</p> <p>The Department of Energy and Water Supply will chair the WSDOS, assuming the role from Seqwater.</p>
2.2	<p>Brisbane City Council, Ipswich City Council and Somerset Regional Council and the Queensland Government should ensure that, as soon as practicable, a flood study of the Brisbane River catchment is completed in accordance with the process determined by them under recommendation 2.5 and 2.6. The study should:</p> <ul style="list-style-type: none"> <li>• be comprehensive in terms of the methodologies applied and use different methodologies to corroborate results</li> <li>• involve the collation, and creation where appropriate, of the following data: <ul style="list-style-type: none"> <li>– rainfall data including historical and design data and radar</li> <li>– stream flow data</li> <li>– tide levels</li> <li>– inundation levels and extents</li> <li>– data on the operation of Wivenhoe and Somerset dams</li> <li>– river channel and floodplain characteristics including topography, bathymetry, development and survey data</li> </ul> </li> <li>• involve determining the correlation between any of the data sets above</li> <li>• produce suitable hydrologic models run in a Monte Carlo framework, taking account of</li> </ul>	LG / State	DNRM	<p>The Queensland Government, through the Departments of State Development, Infrastructure and Planning, Natural Resources and Mines and Energy and Water Supply, will work with the Brisbane City Council, Ipswich City Council and Somerset Regional Council on a collaborative approach to progressing the Brisbane River catchment flood study.</p> <p>Terms of Reference are currently being finalised to outline the scope, objectives, methodology, estimated costs and responsibilities for the study which is expected to be completed in several stages over the next two to three years.</p>

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	<p>variability over the following factors:</p> <ul style="list-style-type: none"> <li>– spatial and temporal rainfall patterns</li> <li>– saturation of the catchment</li> <li>– initial water level in dams</li> <li>– effect of operating procedures</li> <li>– physical limitations on the operation of the dams</li> <li>– tidal conditions</li> <li>– closely occurring rainfall events</li> </ul> <ul style="list-style-type: none"> <li>• validate hydrologic models to ensure they reproduce: <ul style="list-style-type: none"> <li>– observed hydrograph attenuation</li> <li>– probability distributions of observed values for total flood volume and peak flow</li> <li>– timing of major tributary flows</li> <li>– observed flood behaviour under no dams conditions and current conditions</li> </ul> </li> <li>• produce a suitable hydraulic model or models that: <ul style="list-style-type: none"> <li>– are able to determine flood heights, extents of inundation, velocities, rate of rise and duration of inundation for floods of different probabilities</li> <li>– are able to deal with movement of sediment and changes in river beds during floods</li> <li>– are able to assess historical changes to river bathymetry</li> <li>– are able to be run in a short time to allow detailed calibration and assessment work</li> <li>– characterise the backwater effect at the confluence of the Brisbane and Bremer rivers and other confluences as appropriate</li> </ul> </li> <li>• involve analysis of the joint probability of floods occurring in the Brisbane and Bremer rivers (and any other pair of rivers if considered appropriate)</li> <li>• be iterative, and obtain a short-term estimate of the characteristics of floods of different probabilities in all significant locations in the catchment (at least Brisbane City, Ipswich City and at Wivenhoe Dam) in order to determine the priorities for the rest of the study.</li> </ul>			
2.3	Ipswich City Council should determine whether the results, models and maps produced by the Brisbane River flood study are sufficient for its floodplain management. If they are not, Ipswich	LG	Ipswich City Council	

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	City Council should ensure appropriate work is done by way of data collection and creation and hydrologic and hydraulic modelling for use in its floodplain management.			
2.4	A recent flood study should be available for use in floodplain management for every urban area in Queensland. Where no recent study exists, one should be initiated.	LG / State	QldRA (DSDIP)	<p>While not legislatively required, local governments have generally undertaken flood studies as relevant to their needs and within available resources.</p> <p>The Queensland Government, through the Queensland Reconstruction Authority, has written to every local government in Queensland seeking details of the extent of existing flood studies. In addition, the Queensland Reconstruction Authority has developed a secure webpage (<a href="http://www.qldreconstruction.org.au/floodstudies">www.qldreconstruction.org.au/floodstudies</a>) which allows councils to provide flood information and upload flood studies/data that exists for their local government area.</p> <p>The Queensland Government will provide support and guidance to councils to undertake flood risk identification and mapping, including:</p> <ul style="list-style-type: none"> <li>• As part of the review of State Planning Policy 1/03: <i>Mitigating the Adverse Impacts of Flood, Bushfire and Landslide</i> (SPP 1/03), the Department of State Development, Infrastructure and Planning will develop guidance for local governments in undertaking flood risk assessments and their transition into planning schemes.</li> <li>• The Queensland Reconstruction Authority will provide assistance to up to 100 priority towns for Level 2 flood investigations (moderate complexity). These studies will be prioritised based on recommendation 2.5 and will generally be targeted at smaller flood-prone towns as identified by the Bureau of Meteorology. The Departments of Natural Resources and Mines and Science, Information Technology, Innovation and the Arts will provide existing data and information to assist the investigations.</li> <li>• Access to funding for local governments will be provided through specific funding of \$40 million from the existing Local Government Grants and Subsidies Program to assist local governments with flood management.</li> </ul>
2.5	The Queensland Government, in consultation with councils, should determine which urban areas in Queensland do not have access to flood information from a current flood study. The Queensland Government should rank those areas in order of priority in accordance with their need for updated flood information by reference to factors including: <ul style="list-style-type: none"> <li>a. population</li> <li>b. sophistication of land use planning and emergency</li> </ul>	State	QldRA (DSDIP)	<p>The Queensland Government, through the Queensland Reconstruction Authority, has written to every local government in Queensland seeking details of the extent of existing flood studies. In addition the Queensland Reconstruction Authority has developed a secure web page (<a href="http://www.qldreconstruction.org.au/floodstudies">www.qldreconstruction.org.au/floodstudies</a>) which allows councils to provide flood information and upload flood studies/data that exists for its local government area.</p> <p>This information will be used to develop a list of priority towns requiring flood investigations, in</p>

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	<p>management measures already in place in those areas</p> <p>c. currency of any flood risk information available to the council</p> <p>d. approximate frequency of damaging floods in the area according to the historical record.</p>			<p>accordance with the factors identified by the Commission. The Queensland Reconstruction Authority, together with the Departments of Natural Resources and Mines and Science, Information Technology, Innovation and the Arts, will undertake up to 100 Level 2 flood investigations (moderate complexity) by the end of 2012 to provide flooding information suitable for land use planning and emergency response purposes.</p>
2.6	<p>By reference to the order of priority determined in accordance with recommendation 2.5, the Queensland Government and councils should together ensure that the council responsible for each urban area in Queensland has access to current flood study information. This will include determining:</p> <p>a. a process or processes by which the flood studies will be completed, including the involvement of the Queensland Government and relevant councils</p> <p>b. how, and from whom, the necessary technical and financial resources will be obtained</p> <p>c. a reasonable timeframe by which all flood studies required will be completed.</p>	State / LG	QldRA (DSDIP)	<p>The Queensland Government will work with local governments to address process, scope and scale, resourcing and timeframe issues associated with completion of flood studies, in accordance with the list of priority towns requiring flood investigations being developed by the Queensland Reconstruction Authority with support from the Departments of Natural Resources and Mines and Science, Information Technology, Innovation and the Arts.</p> <p>As part of the review of SPP 1/03, the Department of State Development, Infrastructure and Planning and the Queensland Reconstruction Authority may also develop guidance for local governments to effectively include the results of flood studies in planning schemes. This work will build upon the guidance already provided within the Queensland Reconstruction Authority's <i>Planning for stronger, more resilient floodplains</i> guideline.</p>
2.7	As far as is practicable, councils should maintain up-to-date flood information.	LG	Councils	
2.8	<p>When commissioning a flood study, the body conducting the study should:</p> <ul style="list-style-type: none"> <li>check whether others, such as surrounding councils which are not involved in the study, dam operators, the Department of Environment and Resource Management, and the Bureau of Meteorology, are doing work that may assist the flood study or whether any significant scientific developments are expected in the near future, and decide whether to delay the study</li> <li>discuss the scope of work with the persons to perform the flood study as well as surrounding councils which are not involved in the study, dam operators, the Department of Environment and Resource Management, and the Bureau of Meteorology.</li> </ul>	LG	Councils	
2.9	Elected representatives from councils should be informed of the results of each flood study relevant to the council's region, and consider the ramifications of the study for land planning and emergency management.	LG	Councils	

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
2.10	Elected representatives from all agencies involved in a flood study should be informed of recommendations made for future work, and determine, on a risk basis, whether that further work is to be completed.	State / LG	Councils	The Queensland Government agrees that elected representatives at state and local levels should be kept informed of the outcomes of flood studies as a matter of practice.
2.11	The Queensland Government and Commonwealth Government should ensure the existence and maintenance of a repository of data of the type used in flood studies. The database should include the types of data which the expert panel specified as needed for a comprehensive flood study. Councils, Queensland and Commonwealth Government agencies and dam operators should be able to deposit and obtain access to data.	State / Cth	QldRA / DNRM (joint)	<p>The Queensland Government is working with the Commonwealth Government on the development of a new national flood risk information portal.</p> <p>The Queensland Reconstruction Authority has developed a secure webpage (<a href="http://www.qldreconstruction.org.au/floodstudies">www.qldreconstruction.org.au/floodstudies</a>) which allows councils to provide flood information and upload flood studies/data that exists for their local government area.</p> <p>This stocktake will provide a comprehensive picture of existing and up-to-date data that exists across the state. This information will then be used to further recommendations 2.4, 2.5 and 2.6. The Queensland Reconstruction Authority, together with the Department of Natural Resources and Mines, will use the stocktake results to develop the Queensland flood portal and ultimately input into the proposed national flood risk information portal.</p> <p>In the interim, floodplain mapping and mapping of recent flood events is available on the Queensland Reconstruction Authority website (<a href="http://www.qldreconstruction.org.au">www.qldreconstruction.org.au</a>) and the Department of Natural Resources and Mines website (<a href="http://www.derm.qld.gov.au">www.derm.qld.gov.au</a>).</p>
2.12	Councils in floodplain areas should, resources allowing, develop comprehensive floodplain management plans that accord as closely as practicable with best practice principles.	LG	Councils	
2.13	For urban areas or areas where development is expected to occur: <ul style="list-style-type: none"> <li>a. councils with the requisite resources should develop a flood map which shows 'zones of risk' (at least three) derived from information about the likelihood and behaviour of flooding</li> <li>b. councils without the requisite resources to produce a flood behaviour map should develop a flood map which shows the extent of floods of a range of likelihoods (at least three).</li> </ul>	LG	Councils	
2.14	For non-urban areas or areas where limited development is expected to occur councils should consider, on a risk basis, what level of information about flood risk is required for the	LG	Councils	

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	<p>area, and undertake the highest ranked of the following options which is appropriate to that need and within the capacities (financial and technical) of the council:</p> <ul style="list-style-type: none"> <li>a. a map showing 'zones of risk' (at least three) derived from information about the likelihood and behaviour of flooding</li> <li>b. a map showing the extent of floods of a range of likelihoods (at least three)</li> <li>c. a flood map based on historic flood levels that have been subjected to a flood frequency analysis to estimate the annual exceedance probability of the selected historical flood</li> <li>d. a historic flood map without flood frequency analysis</li> <li>e. the Queensland Reconstruction Authority Interim Floodplain Assessment Overlay as a way to determine those areas for which further flood studies are required, or</li> <li>f. the Queensland Reconstruction Authority Interim Floodplain Assessment Overlay (preferably refined using local flood information) as a trigger for development assessment.</li> </ul>			
2.15	Councils should ensure that areas for which there has been no assessment of the likelihood of flooding are indicated on a map and that, as part of the development assessment process for these, there is at least some enquiry into whether a site proposed for development could be subject to flooding.	LG	Councils	
2.16	Councils and the Queensland Government should display on their websites all flood mapping they have commissioned or adopted.	LG / State	QldRA / DNRM (joint)	<p>Councils will have responsibility for publishing flood mapping they commission or adopt, within any contractual obligations and technical constraints associated with the display of some flood maps on council websites. In addition a link will be provided to the Queensland Government flood portal.</p> <p>In accordance with recommendation 2.11, the Queensland Government will publish details of flood mapping which it commissions or adopts, within technical constraints associated with the display of some flood maps on websites.</p> <p>Currently, the Queensland Reconstruction Authority administers an interactive floodplain mapping portal which displays floodplain maps for all relevant sub-basins in the state. This portal will be updated progressively as more detailed flood information becomes available.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
2.17	Flood maps, and property specific flooding information intended for use by the general public, should be readily interpretable and should, where necessary, be accompanied by a comprehensible explanatory note.	LG	Councils	
2.18	Councils that do not currently do so should consider offering an online database which allows the public to conduct a search on a parcel of land to find development approvals relevant to that parcel of land.	LG	Councils	
2.19	The Queensland Government should consider implementing a mechanism by which prospective purchasers of property are alerted to the issue of flood risk. To that end, the Queensland Government should consider consulting the Real Estate Institute of Queensland and the Law Society of Queensland as to the appropriateness of amending standard contract conditions so as to include a 'subject to flood search' condition, or other means of achieving the same objective.	State	DJAG	<p>The Queensland Government is undertaking consultation with the Queensland Law Society and the Real Estate Institute of Queensland regarding a mechanism which will alert prospective purchasers of property to flood risk issues.</p> <p>The Department of Justice and Attorney-General, in consultation with the Department of Local Government, will lead this work with advice to be provided to Government on a recommended way forward by July 2012.</p>
2.20	The Queensland Government should endeavour to ensure that Queensland conditions are appropriately considered in the National Flood Risk Advisory Group's review of best practice principles.	State	DSDIP	<p>The Queensland Government, through its representation on the National Flood Risk Advisory Group, will continue to advocate for Queensland's unique local flooding scenarios to be reflected in national best practice principles.</p> <p>Further guidance to address Queensland-specific conditions will be considered as part of the review of SPP 1/03.</p>
2.21	In the event that the review does not adequately account for Queensland conditions, the Queensland Government should produce a document that provides appropriate guidelines for floodplain management in the Queensland context.	State	DSDIP	The Queensland Government will consider the development of appropriate guidelines and other supporting information, taking into account outcomes from the National Flood Risk Advisory Group, as part of the review of SPP 1/03.
2.22	The Queensland Government should determine whether existing guidelines are sufficient for councils to understand best practice in the performance of flood studies and the production of flood maps. If a lack of current guidelines is identified, the government should create and circulate guidance material for councils.	State	DSDIP (QldRA)	<p>The Queensland Government has provided initial policy and technical guidance on floodplain mapping through the Queensland Reconstruction Authority's <i>Planning for stronger, more resilient floodplains</i> guideline.</p> <p>Further consideration will be given to the best means to identify and map flood hazards, and implementation support and guidance to be offered to local governments as part of the review of SPP 1/03 and the finalisation of the Queensland Reconstruction Authority's Part 2 guideline: <i>Measures to support floodplain management in existing planning schemes</i>.</p>
3	<b>No recommendations for this chapter</b>			

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
4.1	<p>The Queensland Government should:</p> <p>a. narrow the definition of 'development commitment' in State Planning Policy 1/03: <i>Mitigating the Adverse Impacts of Flood, Bushfire and Landslide</i> to ensure more development applications are assessed for compatibility with flood, and</p> <p>b. investigate whether the compensation provisions of the <i>Sustainable Planning Act 2009</i> act as a deterrent to the inclusion of flood controls in a planning scheme and consider whether they ought be amended.</p>	State	DSDIP	<p>The Queensland Government, in the review of SPP 1/03, will consider the most appropriate means to address the Commission's findings relating to 'committed development' and make any necessary policy or legislative amendments to ensure natural hazards are appropriately considered regardless of the location or type of development.</p> <p>Consideration is also being given to amendment of the compensation provisions of the <i>Sustainable Planning Act 2009</i>. If considered necessary, legislative amendments will be included in the annual <i>Sustainable Planning Act 2009</i> amendments expected for late 2012.</p> <p>Further, the Queensland Government will investigate, in consultation with councils, the viability of introducing legislation regarding statutory immunity similar to that in section 733 of the <i>Local Government Act 1993</i> (NSW).</p>
4.2	<p>If, as part of a state interest review process, the Department of Local Government and Planning decides that no condition should be imposed requiring a council's proposed planning scheme to incorporate the effect of the Department of Community Safety's comments about State Planning Policy 1/03: <i>Mitigating the Adverse Impacts of Flood, Bushfire and Landslide</i>, it should advise the Department of Community Safety of the reasons for its decision.</p>	State	DSDIP	<p>The Queensland Government has reinforced its operational procedures requiring consultation with all relevant state agencies during the local government planning scheme review process. The Department of State Development, Infrastructure and Planning will ensure that the Department of Community Safety is notified of the outcome of the consideration of its comments as part of any state interest review process.</p> <p>In addition, the Department of State Development, Infrastructure and Planning is developing an electronic portal for State agencies to comment on planning schemes which will facilitate monitoring of state agency comments.</p> <p>The review of SPP 1/03 will include an analysis of the most effective means to ensure SPP 1/03 is considered during planning scheme drafting processes in future, including procedures for ensuring other departments are notified of the outcomes of consideration of their comments.</p>
4.3	<p>The Department of Community Safety should put in place administrative arrangements which ensure it can readily ascertain whether its comments are being reflected in council planning schemes. If the Department of Community Safety becomes aware that its comments are not being adequately addressed, it should take steps to follow this up with the Department of Local Government and Planning.</p>	State	DCS	<p>As noted in recommendation 4.2 above, procedures have been reinforced to ensure that the Department of Community Safety is notified of the outcome of consideration of comments provided as part of a state interest review process.</p> <p>The Department of Community Safety will monitor the consideration of its comments relating to flood-related matters and follow up with the Department of State Development, Infrastructure and Planning where advice on the outcome of the consideration of its comments has not been received, or where other issues are identified.</p>
4.4	<p>The Queensland Government should ensure that the circumstances in which the Department of Community Safety is to consult the Department of</p>	State	DCS	<p>The review of SPP 1/03 will consider the relative responsibilities of state agencies, including the Departments of Community Safety, Natural Resources and Mines, and State Development,</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	Environment and Resource Management about a planning scheme's flood modelling and flood mapping are clear.			Infrastructure and Planning.  New administrative procedures will be implemented to support a clear and common understanding of these responsibilities.
4.5	The Queensland Government should change Temporary State Planning Policy 2/11: <i>Planning for stronger more resilient floodplains</i> to remove the possibility of councils' using the interim floodplain assessment overlay mapping and Model Code as part of a permanent amendment to their existing planning scheme or as part of a new planning scheme.	State	QldRA (DSDIP)	All councils which have utilised the Queensland Reconstruction Authority's Interim Floodplain Assessment Overlay maps for amendments to their planning schemes are also undertaking local verification of the mapping as part of the process.  The Queensland Reconstruction Authority will review Temporary State Planning Policy 2/11: <i>Planning for stronger, more resilient floodplains</i> (TSPP 2/11) to ensure that Ministerial approval for councils to utilise TSPP 2/11 is conditional upon the council undertaking refinement of the interim flood mapping.
4.6	Councils should consider using the limited development (constrained land) zone in their planning schemes for areas that have a very high flood risk.	LG	Councils	
4.7	The Queensland Government should consider amending the <i>Sustainable Planning Act 2009</i> to require that consideration be given to the risk of flooding in the preparation or revision of a regional plan.	State	DSDIP	The Queensland Government, through the Department of State Development, Infrastructure and Planning, is reviewing the processes for development and review of regional plans as part of its review of the Sustainable Planning Instruments program.  If the existing provisions require strengthening, further consideration will be given to amendments to the <i>Sustainable Planning Act 2009</i> to impose more stringent requirements for consideration of flood risk during development of regional plans.
5.1	The Queensland Government should draft model flood planning controls, using a similar format and structure to that in the Queensland Planning Provisions that councils can adapt for local conditions. The Queensland Government should require these controls to be reflected in new planning schemes. This may be achieved by including the controls in either: <ul style="list-style-type: none"> <li>a state planning policy dealing with flood, with an accompanying amendment to the <i>Sustainable Planning Act 2009</i>, or</li> <li>the Queensland Planning Provisions.</li> </ul> <p>The Queensland Government should consult councils to determine which of the two state planning instruments is the more appropriate to include the model flood planning controls.</p>	State	DSDIP (QldRA)	The Queensland Government has provided an initial model flood hazard overlay code through the Queensland Reconstruction Authority's <i>Planning for stronger, more resilient floodplains</i> guideline.  The Queensland Government will further develop model flood planning controls for use by councils in the finalisation of the Queensland Reconstruction Authority's Part 2 guideline: <i>Measures to support floodplain management in existing planning schemes</i> .  The Queensland Government will develop model flood planning controls for use by councils, incorporating relevant provisions of the Queensland Reconstruction Authority's TSPP 2/11 and Interim Floodplain Assessment Overlay maps. It is anticipated that new codes and criteria will be developed and introduced as part of the review of SPP 1/03.

Recom mendati on No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
5.2	<p>The Queensland Government should include in the model flood planning controls a requirement that councils have a flood overlay map in their planning schemes. The map should identify the areas of the council region:</p> <ul style="list-style-type: none"> <li>• that are known not to be affected by flood</li> <li>• that are affected by flood and on which councils impose planning controls (there may be subsets in each area to which different planning controls attach)</li> <li>• for which there is no flood information available to council.</li> </ul>	State	DSDIP (QldRA)	<p>The model flood planning controls will be developed and introduced as part of the review of SPP 1/03. The reviewed SPP 1/03 is likely to incorporate a requirement that planning schemes include a flood overlay map. Until the review of SPP 1/03 is completed, the Queensland Reconstruction Authority, in its review of TSPP 2/11, will include a requirement that new planning schemes require a flood overlay map.</p> <p>In the interim, the Queensland Reconstruction Authority, in consultation with the Department of Natural Resources and Mines, will update the Interim Floodplain Assessment Overlay maps to allow this mapping to be used by councils with local verification where no other flood mapping exists.</p>
5.3	<p>If the Queensland Government does not include a requirement for such an overlay map in the model flood planning controls, councils should include a flood overlay map in their planning schemes. The map should identify the areas of a council region:</p> <ul style="list-style-type: none"> <li>• that are known not to be affected by flood</li> <li>• that are affected by flood and on which councils impose planning controls (there may be subsets in each area to which different planning controls attach)</li> <li>• for which there is no flood information available to council.</li> </ul>	LG	Councils	
5.4	<p>The Queensland Government should include in the model flood planning controls a model flood overlay code that consolidates assessment criteria relating to flood.</p>	State	DSDIP (QldRA)	<p>The Queensland Government has provided an initial model flood hazard overlay code through the Queensland Reconstruction Authority's <i>Planning for stronger, more resilient floodplains</i> guideline.</p> <p>The Queensland Government will further develop model flood planning controls for use by councils in the finalisation of the Queensland Reconstruction Authority's Part 2 guideline: <i>Measures to support floodplain management in existing planning schemes</i> and in the review of SPP 1/03.</p> <p>It is anticipated that new requirements regarding model flood overlay codes will be developed and, if deemed appropriate, introduced as part of the new state planning policy for natural hazards or a more suitable alternative state planning instrument.</p>
5.5	<p>If the Queensland Government does not include such a code in the model flood planning controls, councils should include in their planning schemes a flood overlay code that consolidates assessment criteria relating to flood.</p>	LG	Councils	

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
5.6	<p>The Queensland Government should include in the model flood planning controls a model planning scheme policy that:</p> <ul style="list-style-type: none"> <li>• for development proposed on land susceptible to flooding, outlines what additional information an applicant should provide to the assessment manager as part of the development application, or</li> <li>• for development proposed on land where the potential for flooding is unknown, requires an applicant to provide: <ul style="list-style-type: none"> <li>– as part of the development application, information to enable an assessment of whether the subject land is susceptible to flooding, and</li> <li>– upon a determination the subject land is susceptible to flooding, more detailed information, to allow an assessment of the flood risk.</li> </ul> </li> </ul>	State	DSDIP (QldRA)	<p>The Queensland Government has provided an initial model flood hazard overlay code through the Queensland Reconstruction Authority's <i>Planning for stronger, more resilient floodplains</i> guideline.</p> <p>The Queensland Government will further develop model flood planning controls for use by councils in the finalisation of the Queensland Reconstruction Authority's Part 2 guideline: <i>Measures to support floodplain management in existing planning schemes</i> and in the review of SPP 1/03.</p> <p>It is anticipated that suitable models flood planning controls to address additional information requirements for development applications where land may be susceptible to flooding will be implemented via an appropriate state planning instrument.</p>
5.7	<p>If the Queensland Government does not include such a policy in the model flood planning controls, councils should include in their planning schemes a planning scheme policy that:</p> <ul style="list-style-type: none"> <li>• for development proposed on land susceptible to flooding, outlines what additional information an applicant should provide to the assessment manager as a part of the development application, or</li> <li>• for development proposed on land where potential for flooding is unknown requires an applicant to provide: <ul style="list-style-type: none"> <li>– as part of the development application, information to enable an assessment of whether the subject land is susceptible to flooding, and</li> <li>– upon a determination the subject land is susceptible to flooding, more detailed information to allow an assessment of the flood risk.</li> </ul> </li> </ul>	LG	Councils	
5.8	<p>The Queensland Government should consider amending the <i>Sustainable Planning Act 2009</i> to expressly provide either a power to remake or a power to extend a temporary local planning instrument containing interim flood regulation for a further limited period. The power to remake or extend should:</p> <ol style="list-style-type: none"> <li>a. permit the modification of the temporary local planning instrument to the extent required</li> </ol>	State	DSDIP	<p>The Queensland Government will consider amending Statutory Guideline 1/12: <i>Making and Amending Local Planning Instruments</i> to more clearly articulate when planning instrument amendments are considered to be minor, or when an instrument needs to be remade or extended.</p>

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	<p>to ensure its provisions remain relevant, having regard to any requirement that may have been introduced or any information that may have become available while the original temporary local planning instrument was in force</p> <p>b. be contingent on the Minister's being satisfied that the circumstances listed in section 105 of the <i>Sustainable Planning Act</i> continue to exist and that there are proper grounds for the failure to make a permanent scheme amendment while the original temporary local planning instrument was in force.</p>			
5.9	The Queensland Government should consider allowing councils to amend a planning scheme to update existing flood mapping information by way of the minor amendment process, provided that adequate public consultation has occurred.	State	DSDIP	The Queensland Government has existing processes which allow planning schemes to be amended to update existing flood mapping, through the minor amendment process. The application of this existing process will be clarified with councils as required.
6.1	<p>The Queensland Government should consider amending the <i>Urban Land Development Authority Act 2007</i>, the <i>South Bank Corporation Act 1989</i>, the <i>State Development and Public Works Organisation Act 1971</i> insofar as it governs state development areas, and other legislation which establishes alternative planning systems that operate independently of the <i>Sustainable Planning Act 2009</i>, to require that:</p> <ul style="list-style-type: none"> <li>• any planning scheme, interim or otherwise, appropriately reflects any state planning policy with respect to flood</li> <li>• flood risk be considered in the assessment of any development application.</li> </ul>	State	DSDIP	The Queensland Government will consider possible amendments to the <i>Urban Land Development Authority Act 2007</i> , <i>South Bank Corporation Act 1989</i> and <i>State Development and Public Works Organisation Act 1971</i> to ensure that requirements relating to SPP 1/03 are appropriately dealt with in an administrative, policy or legislative context.
6.2	The Coordinator-General should amend the guideline for preparing an 'initial advice statement' for a significant project under the <i>State Development and Public Works Organisation Act 1971</i> so that it specifically requires an applicant to consider and provide information about the project's flood risk.	State	DSDIP	<p>The <i>Guideline for preparing an initial advice statement</i> under the <i>State Development and Public Works Organisation Act 1971</i> has been amended to specifically require applicants to consider and provide information about flood risk for significant projects.</p> <p>Further amendments to the guideline may be considered following detailed consideration of all satellite planning instruments.</p>
7.1	The Queensland Government should consider extending the application of a state planning policy dealing with flood to the types of community infrastructure which are identified in the <i>Sustainable Planning Regulation 2009</i> and which the community needs to continue functioning, notwithstanding flood.	State	DSDIP	Queensland Government departments involved in the provision or management of community and public infrastructure will work together to consider the best approach to ensuring community infrastructure is resilient to flooding and provides sufficient refuge for communities during natural hazard events.

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
7.2	The Queensland Government should draft assessment criteria to be included in the model flood planning controls that require community infrastructure (including the types of community infrastructure which are identified in the <i>Sustainable Planning Regulation 2009</i> and which the community needs to continue functioning, notwithstanding flood) to be located and designed to function effectively during and immediately after a flood of a specified level of risk.	State	DSDIP	The Queensland Government will consider assessment criteria for community infrastructure in developing the model flood planning controls in accordance with recommendation 5.1.  These new criteria will also be considered as part of the review of SPP 1/03 and new provisions introduced via the most appropriate state planning instrument.
7.3	If the Queensland Government does not include such assessment criteria in model flood planning controls, councils should include assessment criteria in their planning schemes that require community infrastructure (including the types of community infrastructure which are identified in the <i>Sustainable Planning Regulation 2009</i> and which the community needs to continue functioning, notwithstanding flood) to be located and designed to function effectively during and immediately after a flood of a specified level of risk.	LG	Councils	
7.4	The Queensland Government should draft assessment criteria to be included in the model flood planning controls that require the impact of flood on commercial property to be minimised.	State	DSDIP	The Queensland Government, as part of the review of SPP 1/03, will consider the most appropriate means for ensuring planning provisions appropriately address natural hazard impacts on commercial property.  If considered the most effective solution, new criteria will be included in the new state planning policy for natural hazards or via the most appropriate state planning instrument.
7.5	If the Queensland Government does not include such assessment criteria in the model flood planning controls, councils should include assessment criteria in their planning schemes that require the impact of flood on commercial property to be minimised.	LG	Councils	
7.6	The Queensland Government should ensure that the criteria under the <i>Environmental Protection Act 1994</i> that apply to the assessment of development applications for material change of use for environmentally relevant activities include consideration of the risk of flooding at the site on which the activity is proposed to occur.	State	DEHP	The Queensland Government will prepare amendments to the <i>Environmental Protection Regulation 2008</i> to ensure that development applications for environmentally relevant activities include assessment of potential flooding risk.
7.7	The Department of Environment and Resource Management should amend its information sheet about	State	DEHP	<b>Complete</b>  The Queensland Government has amended the

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	applications for a material change of use for environmentally relevant activities so that applicants are prompted to include information (if any) about the risk of flooding at the site where the activity is proposed to occur.			information sheet <i>Information to be provided with an application for a development approval (DA) for an environmentally relevant activity (ERA)</i> (EM2150) to include information regarding potential flooding risk. The amended information sheet is available on the Department of Environment and Heritage Protection website at <a href="http://www.derm.qld.gov.au">www.derm.qld.gov.au</a> by searching for EM2150.
7.8	The Department of Environment and Resource Management should amend the template assessment report used to assess applications for a material change of use for environmentally relevant activities so that it prompts departmental officers to give specific consideration, as part of the assessment process, to the risk of flooding at the site where the activity is proposed to occur.	State	DEHP	<b>Complete</b>  The Queensland Government has amended the template assessment report for applications for material change of use for environmentally relevant activities <i>Assessment Report, Environmental Protection Act 1994, Environmentally relevant activities assessed under IDAS (EM391)</i> to include criteria regarding potential flooding risk.
7.9	The Department of Environment and Resource Management should ensure that, when applications for a material change of use for an environmentally relevant activity are approved by the department, the details of those activities, including their nature and location, are provided to the council within whose area the activity will be conducted.	State	DEHP	The Queensland Government will implement new procedures for approvals where the Department of Environment and Heritage Protection is the assessment manager for development applications for a material change of use for environmentally relevant activities. This procedure will ensure that the relevant local government will receive correspondence notifying it of a development approval and details of the activity.
7.10	Councils should ensure that, when applications for environmentally relevant activities are approved by a council, the details of those activities, including their nature and location, are provided to the Department of Environment and Resource Management.	LG	Councils	
7.11	The Queensland Government should draft assessment criteria to be included in the model flood planning controls that require that: a. the manufacture or storage of bulk hazardous materials (as defined in State Planning Policy 1/03) take place above a certain flood level, determined following an appropriate risk based assessment, or b. structures on land susceptible to flooding and used for the manufacture or storage of bulk hazardous materials (as defined in State Planning Policy 1/03) be designed to prevent the intrusion of floodwaters.	State	DSDIP (QldRA)	The Queensland Government has provided an initial model flood hazard overlay code through the Queensland Reconstruction Authority's <i>Planning for stronger, more resilient floodplains</i> guideline. Performance Outcome 4 (PO4 – <i>Development avoids the release of hazardous materials into floodwaters</i> ) of the model flood hazard overlay code includes provision relating to hazardous materials.  The Queensland Government will further develop model flood planning controls for use by councils in the finalisation of the Queensland Reconstruction Authority's Part 2 guideline: <i>Measures to support floodplain management in existing planning schemes</i> and in the review of SPP1/03. The review of SPP 1/03 will consider the most appropriate means for ensuring planning provisions sufficiently protect people and property from hazardous material contamination during a natural disaster event.  If considered the most effective solution, new

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				criteria will be included in the new state planning policy for natural hazards or via the most appropriate state planning instrument.
7.12	If the Queensland Government does not include such assessment criteria in the model flood planning controls, councils should include assessment criteria in their planning schemes that require that: <ul style="list-style-type: none"> <li>a. the manufacture or storage of bulk hazardous materials (as defined in State Planning Policy 1/03) take place above a certain flood level, determined following an appropriate risk based assessment, or</li> <li>b. structures on land susceptible to flooding and used for the manufacture or storage of bulk hazardous materials (as defined in State Planning Policy 1/03) be designed to prevent the intrusion of floodwaters.</li> </ul>	LG	Councils	
7.13	When approving applications for development which involve the manufacture or storage of hazardous materials, councils should not restrict the conditions imposed to ones which are solely reliant on human intervention to remove the materials in the event of flood.	LG	Councils	
7.14	The Queensland Government should review the code for development applications for prescribed tidal work in the <i>Coastal Protection and Management Regulation 2003</i> to consider whether the design and construction standards should be made more stringent than the existing standards.	State	DEHP	The Queensland Government is reviewing the code for development applications for prescribed tidal work in the <i>Coastal Protection and Management Regulation 2003</i> . Relevant revisions to the design and construction standards in the code will be considered, and, if necessary, amendments to the <i>Coastal Protection and Management Regulation 2003</i> prepared for Governor in Council consideration.
7.15	Councils (particularly Brisbane City Council) should consider including in their planning schemes more stringent standards for the design and construction of prescribed tidal work than those in the code for development applications for prescribed tidal work in the <i>Coastal Protection and Management Regulation 2003</i> .	LG	Councils	
7.16	The Queensland Government should consider drafting assessment criteria to be included in the model flood planning controls which require that works in a floodplain: <ul style="list-style-type: none"> <li>• do not reduce on-site flood storage capacity</li> <li>• counteract any changes the works will cause to flood behaviour of all</li> </ul>	State	DSDIP (QldRA)	The Queensland Government has provided an initial model flood hazard overlay code through the Queensland Reconstruction Authority's <i>Planning for stronger, more resilient floodplains</i> guideline. Performance Outcome 3 (PO3 – <i>Development directly, indirectly and cumulatively avoids any significant increase in water flow, velocity or flood level, and does not increase the potential for flood damage either on site or on</i>

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	<p>floods up to and including the applicable defined flood event by measures taken within the subject site (for example, use of compensatory works, detention basins or other engineering mechanisms)</p> <ul style="list-style-type: none"> <li>• do not change the flood characteristics outside the subject site in ways that result in: <ul style="list-style-type: none"> <li>– loss of flood storage</li> <li>– loss of/changes to flow paths</li> <li>– acceleration or retardation of flows, or</li> <li>– any reduction in flood warning times elsewhere on the floodplain.</li> </ul> </li> </ul>			<p><i>other properties</i>) of the model flood hazard overlay code already includes provision relating to flood storage.</p> <p>The Queensland Government will further develop and review the model flood planning controls for use by councils in the finalisation of the Queensland Reconstruction Authority's Part 2 guideline: <i>Measures to support floodplain management in existing planning schemes</i> and in the review of SPP 1/03. The review of SPP 1/03 will consider the most appropriate means for addressing water storage and flow issues within the planning framework.</p> <p>If considered the most effective solution, new criteria may be included in the new state planning policy for natural hazards or via the most appropriate state planning instrument.</p>
7.17	<p>If the Queensland Government does not include such assessment criteria in the model flood planning controls, councils should consider including assessment criteria in their planning schemes which require that works in a floodplain:</p> <ul style="list-style-type: none"> <li>• do not reduce on-site flood storage capacity</li> <li>• counteract any changes the works will cause to flood behaviour of all floods up to and including the acceptable defined flood event by measures taken within the subject site (for example, use of compensatory works, detention basins or other engineering mechanisms), and</li> <li>• do not change the flood characteristics outside the subject site in ways that result in: <ul style="list-style-type: none"> <li>– loss of flood storage</li> <li>– loss of/changes to flow paths</li> <li>– acceleration or retardation of flows, or</li> <li>– any reduction in flood warning times elsewhere on the floodplain.</li> </ul> </li> </ul>	LG	Councils	
7.18	<p>The Queensland Government should consider amending the <i>Sustainable Planning Regulation 2009</i> so that operational work or plumbing or drainage work (including maintenance and repair work) carried out by or on behalf of a public sector entity authorised under a state law to carry out the work is not exempt development under the <i>Sustainable Planning Act 2009</i> if the development has the potential to reduce floodplain storage.</p>	State	DSDIP	<p>The Queensland Government will consider the most appropriate means for ensuring that plumbing and drainage work carried out by or on behalf of a public sector entity is appropriately assessed in the planning framework.</p> <p>If considered necessary to implement the most effective solution, amendments will be made to the <i>Sustainable Planning Regulation 2009</i>.</p>

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7.19	Levees should be regulated.	State / LG	DSDIP / DNRM (joint)	<p>The Queensland Government, through a working group chaired by the Department of Natural Resources and Mines and comprising representatives of departments including the Department of State Development, Infrastructure and Planning, the Department of Local Government and the Department of the Premier and Cabinet, is currently considering options for the regulation of levee banks.</p> <p>Consultation and collaboration with local government will be essential in determining the most effective means of regulating levees, taking into account the respective roles of both state and local government in development assessment and the necessary technical input required.</p>
7.20	<p>The Queensland Government should consult with councils to determine an effective method for the regulation of the construction of levees in Queensland. In particular, the Queensland Government should consider:</p> <ul style="list-style-type: none"> <li>requiring a development permit for the construction of a levee by designating levees as assessable development in the <i>Sustainable Planning Regulation 2009</i>, or</li> <li>requiring, by way of a state planning policy or mandatory provision in the Queensland Planning Provisions, that councils nominate the construction of a levee as assessable development in their planning schemes.</li> </ul>	State	DSDIP / DNRM (joint)	The Queensland Government will consider the most appropriate planning instrument for the regulation of levees in consultation with local government, in accordance with recommendation 7.19.
7.21	The Queensland Government should consult with councils to formulate a definition of 'levee' to identify what should be regulated.	State	DSDIP / DNRM (joint)	The Queensland Government will consider the most appropriate definition of 'levee' in consultation with local government, in accordance with recommendation 7.19.
7.22	<p>There should be a consistent process for the determination of applications to build levees. That process should include:</p> <ul style="list-style-type: none"> <li>consulting landholders who may be affected by the proposed levee</li> <li>obtaining or commissioning appropriate hydrological and hydraulic studies to assess the impacts of the proposed levee.</li> </ul>	State	DSDIP / DNRM (joint)	The Queensland Government will develop a consistent process for applications to build levees in consultation with local government, in accordance with recommendation 7.19.
7.23	<p>There should be a common set of considerations in the decision whether to approve an application to build a levee, including:</p> <ul style="list-style-type: none"> <li>the impacts of the proposed levee on the catchment as a whole</li> <li>the benefits of the proposed levee to the individual or entity applying to build the levee and to any nearby community as a whole</li> </ul>	State	DSDIP / DNRM (joint)	The Queensland Government will develop a set of factors to be considered in assessing applications to build levees for incorporation into the planning framework, in accordance with recommendation 7.19.

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	<ul style="list-style-type: none"> <li>any adverse impacts on other landholders, including the risk of levee failure</li> <li>the implications of the proposed levee for land planning and emergency management procedures</li> <li>whether any structural, land planning or emergency management measures can be taken to mitigate the adverse impacts of the proposed levee.</li> </ul>			
7.24	<p>The Queensland Government should draft assessment criteria to be included in the model flood planning controls that address:</p> <ul style="list-style-type: none"> <li>the prospect of isolation or hindered evacuation</li> <li>the impact of isolation or hindered evacuation.</li> </ul>	State	DSDIP	<p>The Queensland Government, as part of the review of SPP 1/03, will consider the most appropriate means for addressing isolation or hindered evacuation during a natural hazard event.</p> <p>If considered the most effective solution, new criteria will be included in the new state planning policy for natural hazards or via the most appropriate state planning instrument.</p>
7.25	<p>If the Queensland Government does not include such assessment criteria in the model flood planning controls, councils should consider including assessment criteria in their planning schemes that address:</p> <ul style="list-style-type: none"> <li>the prospect of isolation or hindered evacuation</li> <li>the impact of isolation or hindered evacuation.</li> </ul>	LG	Councils	
8.1	<p>Councils should, resources allowing, maintain flood maps and overland flow path maps for use in development assessment. For urban areas these maps should be based on hydraulic modelling; the model should be designed to allow it to be easily updated as new information (such as information about further development) becomes available.</p>	LG	Councils	
8.2	<p>Councils should make their flood and overland flow maps and models available to applicants for development approvals, and to consultants engaged by applicants.</p>	LG	Councils	
8.3	<p>The Queensland Government should draft a model planning scheme policy to be included in the model flood planning controls that sets out the information to be provided in development applications in relation to stormwater and flooding. The policy should specify:</p> <ul style="list-style-type: none"> <li>the type of models and maps to be provided</li> <li>the substantive information required to be shown in the</li> </ul>	State	DSDIP	<p>The Queensland Government will consider the most appropriate means for ensuring that development application and assessment processes appropriately consider stormwater and flooding.</p> <p>If considered the most effective solution, new criteria will be included in the new state planning policy for natural hazards or via the most appropriate state planning instrument.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	<p>development application</p> <ul style="list-style-type: none"> <li>• how the assumptions and methodologies used in preparing the models and maps should be presented</li> <li>• the form in which the information on stormwater and flooding is to be presented in the application.</li> </ul>			
8.4	<p>If the Queensland Government does not include such a policy in the model flood planning controls, councils should include a planning scheme policy in their planning schemes that sets out the information to be provided in development applications in relation to stormwater and flooding. The policy should specify:</p> <ul style="list-style-type: none"> <li>• the type of models and maps to be provided</li> <li>• the substantive information required to be shown in the development application</li> <li>• how the assumptions and methodologies used in preparing the models and maps should be presented</li> <li>• the form in which the information on stormwater and flooding is to be presented in the application.</li> </ul>	LG	Councils	
8.5	<p>Councils should review their assessment processes to ensure that:</p> <ul style="list-style-type: none"> <li>• the person with primary responsibility for the assessment of the development application considers what expert input is required</li> <li>• where a development application is subject to comment by a number of professionals, the responsibilities and accountability of each contributor are clear</li> <li>• where flood-related information is referred to an expert for advice, the expert is required to comment on the extent of compliance by reference to each relevant assessment criteria and identify and explain any inability to comment.</li> </ul>	LG	Councils	
8.6	<p>Councils should take care when imposing conditions to ensure that each condition has purpose; standardised conditions should not be included where they have no application to the development in question.</p>	LG	Councils	
8.7	<p>Councils should not rely on a condition requiring an evacuation plan as the sole basis for approving a development susceptible to flooding.</p>	LG	Councils	

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8.8	Councils should consider providing advice to development applicants during pre-lodgement meetings, and at the time of receiving a development application, about the way in which the development will be assessed for flood risk and what flood information council will be relying on to make this assessment.	LG	Councils	
9.1	<p>The proposed new part of the Queensland Development Code, Mandatory Part 3.5 'Construction of buildings in flood hazard areas', should be amended so that the performance requirement relating to building design and construction (Performance Requirement P1) for building on a lot will only be triggered where the council has:</p> <ul style="list-style-type: none"> <li>• designated part of its area as a natural hazard management area (flood) under section 13 of the <i>Building Regulation 2006</i>, and</li> <li>• either: <ul style="list-style-type: none"> <li>– declared a height to be the expected flood level under section 13 of the <i>Building Regulation 2006</i>, or</li> <li>– adopted a highest recorded flood level for the lot, and</li> </ul> </li> <li>• either: <ul style="list-style-type: none"> <li>– declared a velocity to be the expected maximum velocity of flood water for the area in which the lot is located, or</li> <li>– designated the area in which the lot is located an inactive flow or backwater area.</li> </ul> </li> </ul>	State	DHPW	<p>The Queensland Government delayed work to progress the new part of the Queensland Development Code dealing with construction of buildings in flood hazard areas, to allow the Commission's recommendations to be taken into consideration.</p> <p>The Queensland Development Code will be revised to reflect the Commission's recommendations, with a focus on providing applicants with practical flexibility in the application of the Code.</p> <p>The Government will undertake community and industry consultation on the revised Queensland Development Code further to the targeted consultation which has already occurred with affected local governments and key building and plumbing industry stakeholders.</p> <p>Implementation training is being considered to support local governments and industry with the adoption of the new Queensland Development Code, which is anticipated to take effect from October 2012.</p> <p>Amendments to the <i>Building Regulation 2006</i> will be required to adopt the Queensland Development Code.</p>
9.2	<p>The proposed new part of the Queensland Development Code, Mandatory Part 3.5 'Construction of buildings in flood hazard areas', should be amended so that the performance requirements about utilities and sanitary drains (Performance Requirement P2 and P3) for building on a lot will only be triggered where the council has:</p> <ul style="list-style-type: none"> <li>• designated part of its area as a natural hazard management area (flood) under section 13 of the <i>Building Regulation 2006</i>, and</li> <li>• either: <ul style="list-style-type: none"> <li>– declared a height to be the expected flood level under section 13 of the <i>Building Regulation 2006</i>, or</li> <li>– adopted a highest recorded flood level for the lot.</li> </ul> </li> </ul>	State	DHPW	<p>The Queensland Development Code will be revised to reflect the Commission's recommendations, with a focus on providing applicants with practical flexibility in the application of the Code.</p> <p>The amendments will be developed and implemented in conjunction with recommendation 9.1. Amendments to the Queensland Plumbing and Wastewater Code will be considered to support requirements to protect backflow of sanitary drains.</p>
9.3	The Queensland Government should consider amending the 'Limitation'	State	DHPW	The Queensland Government will revise the Queensland Development Code to reflect the

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	<p>section of the proposed new part of the Queensland Development Code, Mandatory Part 3.5 'Construction of buildings in flood hazard areas', to allow for the possible application of 'acceptable solution A1' to a building located on a lot if:</p> <ul style="list-style-type: none"> <li>it is reasonable to expect the part of the lot on which the building work is proposed to be subjected to a maximum velocity of less than 1.5 metres per second, or</li> <li>the part of the lot on which the building work is proposed is located in an inactive flow or backwater area.</li> </ul>			<p>Commission's recommendations.</p> <p>The amendments will be developed and implemented in conjunction with recommendation 9.1.</p>
10.1	<p>The Queensland Government should consider including in the criteria in the Queensland Plumbing and Wastewater Code a requirement that the risk of leakage from private on-site sewerage systems during floods be minimised.</p>	State	DHPW	<p>The Queensland Government, through Building Codes Queensland's Plumbing Industry Consultative Group, will consider possible amendments to the Queensland Plumbing and Wastewater Code and the <i>Plumbing and Drainage Act 2002</i> through the current review of the Act.</p> <p>Implementation of new requirements regarding private on-site sewerage systems will also require the development of detailed guidance materials for local governments.</p>
10.2	<p>Authorities responsible for the construction of sewerage infrastructure should, when embarking on new works, undertake risk and cost/benefit assessments to determine the level at which electrical infrastructure that may be vulnerable to inundation should be placed.</p>	LG	Councils	
10.3	<p>Authorities responsible for the management of sewerage infrastructure should conduct a review of their existing infrastructure to identify electrical infrastructure that may be vulnerable to inundation and perform risk and cost/benefit assessments to determine if it should be relocated to a higher level.</p>	LG	Councils	
10.4	<p>Queensland Urban Utilities should make the results of its trials on the use of caps for overflow relief gully grates available to other authorities responsible for sewerage infrastructure. Consideration should be given by those authorities as to how the results can be used to improve the flood resilience of their sewerage networks.</p>	LG	Queensland Urban Utilities	
10.5	<p>If the Queensland Development Code is amended to include provisions requiring homeowners to install sewage reflux valves, the</p>	State	DHPW	<p>The Queensland Government will develop appropriate guidance material regarding the installation of sewage reflux valves, in conjunction with amendments to the Queensland</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	Queensland Government should develop and make available to homeowners appropriate guidance material to assist them in meeting their responsibilities to maintain reflux valves.			Development Code to be implemented in accordance with recommendation 9.1.
10.6	Queensland Urban Utilities, and other distributor-retailers and councils, that have identified a practice of stormwater drains being connected to sewerage infrastructure, should conduct a program of education to raise public awareness that this practice is illegal and impedes the operation of the sewerage infrastructure.	LG	Councils	
10.7	Councils and distributor-retailers should agree to protocols for the exchange of information about suspected illegal connections, the steps being taken to investigate them or the basis for concluding that no investigation is required, and the results of any investigations or enforcement actions.	LG	Councils	
10.8	The Department of Environment and Resource Management should review the Queensland Urban Drainage Manual to determine whether it requires updating or improvement, in particular, to reflect the current law and to take into account insights gained from the 2010/2011 floods.	State	DEWS	The Queensland Government will undertake a review of the Queensland Urban Drainage Manual to determine the necessity for amendments to reflect the impact of the 2010/11 floods and other relevant developments.  This review will involve consultation with relevant stakeholders, including local government.
10.9	All councils should, resources allowing, map the overland flow paths of their urban areas.	LG	Councils	
10.10	Councils should consider amending their planning schemes to include provisions directed to consideration of the flood resilience of basements as a factor in determining the appropriateness of a material change of use.	LG	Councils	
10.11	In assessing and determining development applications for material change of use in areas susceptible to flood, councils should consider whether the new developments locate essential services infrastructure above basement level, or, alternatively, whether essential services infrastructure located at basement level can be constructed so that it can continue to function during a flood.	LG	Councils	
10.12	SunWater and the Central Highlands Regional Council should determine	State / LG	DEWS (SunWater)	SunWater has held meetings with the Central Highlands Regional Council to discuss relative

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	the issues of ownership and responsibility for maintenance of the LN1 drain system in Emerald.			responsibilities in relation to the LN1 drain. These discussions are ongoing and will ensure the future management of the LN1 drain delivers services to the whole Emerald community.  It is expected that an agreement will be reached between the Central Highlands Regional Council and SunWater prior to the 2012/13 wet season.
10.13	The Bundaberg Regional Council should investigate the adequacy of the drain and take reasonable steps to ensure the Moore Park area is effectively served.	LG	Bundaberg Regional Council	
10.14	All councils should periodically conduct risk assessments to identify areas at risk of backflow flooding. In respect of such areas, councils should consider how such risks can be lessened, including in that process consideration of the installation of backflow prevention devices. Backflow devices should not, however, be installed unless and until a full risk based assessment has been undertaken.	LG	Councils	
10.15	Councils should conduct education campaigns directed to ensuring that all residents and property owners in areas identified as being at risk of backflow flooding are aware of the circumstances in which backflow flooding can occur, the hazard it presents and what should be done if it occurs.	LG	Councils	
10.16	The Queensland Government should draft assessment criteria to be included in the model flood planning controls that require critical infrastructure in assessable substation developments is built to remain operational during and immediately after a flood of a particular magnitude. That magnitude should be determined by an appropriate risk assessment.	State	DSDIP	The Queensland Government will consider the most appropriate means to regulate both the design and location of critical infrastructure.
10.17	If the Queensland Government does not include such assessment criteria in the model flood planning controls, councils should include assessment criteria in their planning schemes that require critical infrastructure in assessable substation developments is built to remain operational during and immediately after a flood of a particular magnitude. That magnitude should be determined by an appropriate risk assessment.	LG	Councils	

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
10.18	The Queensland Government should consider measures to ensure that requirements are included in the designation of land for community infrastructure under the <i>Sustainable Planning Act 2009</i> to ensure that critical infrastructure for operating works under the <i>Electricity Act</i> is built to remain operational during and immediately after a flood of a particular magnitude. That magnitude should be determined by an appropriate risk assessment.	State	DSDIP / DEWS (joint)	The Queensland Government is considering a number of options to address this recommendation, including possible amendments to the <i>Sustainable Planning Act 2009</i> , the <i>Electricity Act 1994</i> or the Queensland Development Code and <i>Building Regulation 2006</i> .  Further consideration of the preferred method to address this recommendation will be undertaken in conjunction with implementation of recommendations 5.1 and 9.1.
10.19	Electricity distributors should consider installing connection points for generators to provide electricity supply to non-flooded areas that have had their supply cut during floods.	State	DEWS (ENERGEX and Ergon Energy)	The Queensland Government has consulted distribution entities regarding the most effective mechanism to address this recommendation.  ENERGEX has led a review of this issue and is currently updating its flood plan to include details of dry connection points, so that generators can be used in event of a flood.  Ergon Energy's emergency plans already consider the pre-emptive deployment of generators in areas known to become isolated where it is reasonably practical and appropriate. Ergon is undertaking a further review of its assets in flood-prone areas and developing new procedures and systems to facilitate deployment of generators during flood events.
10.20	The Queensland Government should consider whether there should be a legislative requirement that customer dedicated assets be built at or above the applicable defined flood level and if so, the Queensland Government should consider which legislation should contain such a requirement.	State	DHPW / DEWS (joint)	The Queensland Government will undertake consultation to consider the Commission's recommendation and determine the most effective mechanism for any further action in conjunction with recommendation 10.21.  Amendments to the <i>Building Regulation 2006</i> , the <i>Electricity Act 1994</i> and/or the <i>Electricity Regulation 2006</i> may be required to introduce any new requirements.  Any legislative amendments would require public consultation to be undertaken in order to evaluate possible impacts, including on building owners, resulting from any new requirements for electricity infrastructure to be located above the applicable defined flood level.
10.21	The Queensland Government should consider implementing mandatory requirements to ensure that all conduits for the purpose of providing electrical supply below the applicable defined flood level are sealed to prevent floodwaters from entering them or flowing into them.	State	DHPW / DEWS (joint)	The Queensland Government will undertake consultation to appropriately consider the Commission's recommendation and determine the most effective mechanism for any further action in conjunction with recommendation 10.20.  Amendments to the <i>Building Regulation 2006</i> , the <i>Electricity Act 1994</i> and/or the <i>Electricity Regulation 2006</i> may be required to introduce any new requirements.
10.22	Carriers, councils and the Australian Communications and Media Authority should take into account the risk of	Cth / LG		

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	flooding when considering the placement of telecommunications facilities.			
10.23	Queensland Rail and QR National should continue to investigate opportunities for increasing the flood resilience of their networks, including raising the height of critical equipment.	State entity	DTMR (Queensland Rail and QR National)	Queensland Rail and QR National will consider opportunities to increase flood resilience and raising of critical infrastructure through its network maintenance and infrastructure upgrade programs.
11.1	Councils should consider implementing a property buy-back program in areas that are particularly vulnerable to regular flooding, as part of a broader floodplain management strategy, where possible obtaining funding from the Natural Disaster Resilience Program for this purpose.	LG	Councils	
12.1	When a policy-holder makes a claim, the insurer should ascertain the policy-holder's preferred method of contact and ensure that it is used (with other modes of communication if necessary) to keep the policyholder informed about the progress of the claim. However, important decisions regarding the claim – for example, determinations about the outcome of the claim and settlement sums – should always be confirmed in writing.	Cth / Private		
12.2	Insurers should review their existing systems and processes and implement any improvements necessary to ensure that accurate and complete records of conversations with policy-holders are made.	Cth / Private		
12.3	Letters notifying policy-holders that their claims have been denied should, at a minimum, state the information upon which the insurer has relied in making the decision. These letters should also advise policy-holders that copies of the information will be made available upon request (in accordance with clause 3.4.3 of the General Insurance Code of Practice) and indicate how policy-holders can make a request.	Cth / Private		
12.4	The Insurance Council of Australia should consider an amendment to Part 3 of the code which requires insurers to notify policy-holders of the information on which they relied in assessing claims.	Cth / Private		
12.5	The Insurance Council of Australia should amend clause 3.4.3 of the General Insurance Code of Practice	Cth / Private		

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	so that it requires insurers to inform policy-holders of their right to request a review of an insurer's decision to refuse to provide access to information on which it relied in assessing claims.			
13.1	Mine operators should obtain all public seasonal forecasts issued by the Bureau of Meteorology relevant to the regions in which their operations are located.	Private		
13.2	Any mine operator of a site at high risk of flood should obtain the best forecast information available (seasonal and short term) for the region in which the mine is located.	Private		
13.3	The Department of Environment and Resource Management should prepare a list of relevant considerations to be taken into account in performing a risk assessment to decide which sites to inspect. Bureau of Meteorology forecasts should be one consideration.	State	DEHP	The Queensland Government, through the Department of Environment and Heritage Protection, will develop new administrative procedures and checklists to standardise and consolidate mine risk assessment processes across the state.
13.4	The Department of Environment and Resource Management should conduct risk assessments in time for site inspections, and the implementation of solutions to problems identified at inspections, to take place before 1 November of each year.	State	DEHP	The Queensland Government will develop new administrative procedures to guide compliance inspection activities throughout the year, in accordance with recommendation 13.3. These procedures will be aimed at ensuring mine operators meet their obligations to have adequate water storage and water management systems in place on or by the commencement of the wet season.  The program of inspections will include targeted visits to identified sites on or at the commencement of the wet season to ensure compliance with performance conditions.
13.5	The Queensland Government should work collaboratively with the Commonwealth Government and mine operators to ensure coordinated and effective monitoring of salts, metals and other contaminants in marine environments that may be affected by mine discharges.	State / Cth	DEHP	The Queensland Government will continue to work collaboratively with mine operators and the Commonwealth Government to ensure coordinated and effective monitoring of metals and other contaminants from mine discharges.  In accordance with recommendation 13.6, the Queensland Government will review the results of extensive water quality monitoring undertaken during the 2010/11 floods to determine, as far as possible, the impacts of mine discharges on freshwater and marine water quality and fauna and flora.  The results of that review will assist in identifying any potential gaps in existing programs that monitor salts, metals and other contaminants in marine environments that may be affected by mining discharge.

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
				<p>The newly established Fitzroy Partnership for River Health, which consists of industry, community and all levels of government, has been established to effectively coordinate water quality monitoring for waterways within the Fitzroy Basin. The Commonwealth Government's Great Barrier Reef Marine Park Authority is an associate member and the Department of Environment and Heritage Protection is the co-chair. The Partnership will deliver comprehensive and ongoing reports into the health of the waters associated with the Fitzroy Basin through annual report cards, with the first due in mid-2013.</p>
13.6	<p>The Queensland Government should determine, as far as possible, the impact of mine discharges during the 2010/2011 wet season on freshwater and marine water quality and fauna and flora.</p>	State	DEHP	<p>The Queensland Government, through the Department of Environment and Heritage Protection, will review the results of extensive water quality monitoring undertaken during the 2010/11 floods to determine, as far as possible, the impacts of mine discharges during the 2010/11 wet season on freshwater and marine water quality and fauna and flora.</p> <p>The results of that review will assist in identifying requirements for better event water quality monitoring, including any potential gaps in existing monitoring programs and options for more coordinated and effective monitoring of salts, metals and other contaminants in accordance with recommendation 13.5.</p>
13.7	<p>The Department of Environment and Resource Management should assist mine operators in their applications for amended environmental authorities to ensure, as far as possible, that each environmental authority contains a tailored version of Table 4 of the model conditions. The Department of Environment and Resource Management should provide to mining companies its monitoring data and its suggested values for Table 4 on the basis of an assessment of the catchment which takes into account the cumulative effect of different operators' releases.</p>	State	DEHP	<p>The Queensland Government, through the Department of Environment and Heritage Protection, has commenced a process to assist mine operators in their applications for amended environmental authorities to ensure, as far as possible, that each environmental authority contains a tailored version of Table 4 of the model conditions, which takes into account the cumulative effect of different operators' releases.</p> <p>This includes providing industry training and producing support material in addition to holding pre-lodgement meetings between departmental experts and the mine operators and their consultants.</p> <p>As at 25 May 2012, the department had finalised all 23 properly made amendment applications received from mine operators.</p> <p>The Queensland Government and the Queensland Resources Council have also agreed to assess the feasibility of applying the model water conditions that were developed for the Fitzroy Basin coal mines to other mines across the remainder of the state, as part of a broader review of all model mining conditions.</p>
13.8	<p>Unless the Department of Environment and Resource Management has decided not to permit discharges, it should assist</p>	State	DEHP	<p>The Department of Environment and Heritage Protection is assisting mine operators with applications for environmental authorities through a streamlined assessment process, in</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	each mine operator in its application for an environmental authority to ensure, as far as possible, that each authority includes provisions for discharges during times of heavy rainfall and flood.			accordance with recommendation 13.7. Table 4 of the model conditions includes provisions setting out how much mine operators can discharge during times of heavy rainfall and flood, without reliance on transitional environmental programs or other 'emergency' mechanisms.
13.9	The Queensland Government should legislate to clarify the purposes for which a transitional environmental program can be granted. In particular, if the government considers the transitional environmental program the appropriate regulatory mechanism to deal with the discharge of water from mines during flood, section 330 of the <i>Environmental Protection Act 1994</i> should be clarified to make it clear that it extends to that use.	State	DEHP	The Queensland Government, through the Department of Environment and Heritage Protection, will clarify the use of transitional environmental programs and consult with industry on the most appropriate regulatory mechanism to deal with the discharge of water from mines during flood. Options could include developing a new statutory tool to regulate the discharge of water from mines during floods, which would replace the current use of transitional environmental programs for this purpose.
13.10	The Queensland Government should refine the criteria which must be considered in assessment of applications for relaxation of environmental authority conditions, by transitional environmental program or otherwise, in response to flood.	State	DEHP	The Queensland Government will implement reduced and refined assessment criteria to deal with disaster response scenarios as part of its implementation of recommendation 13.9.
13.11	The Queensland Government should consider amending the <i>Environmental Protection Act 1994</i> so that it allows for the relaxation of environmental authority conditions, by transitional environmental program or otherwise, as to discharge of water: <ul style="list-style-type: none"> <li>pre-emptively, in advance of rainfall or flooding events, or</li> <li>for all mines in a catchment that is flooding.</li> </ul>	State	DEHP	The 2011 model conditions provide an adaptive framework for changing flow conditions that provide a pre-emptive framework for taking advantage of opportunities for mines to release water during floods.  As part of its implementation of recommendation 13.9, the Queensland Government will consider what additional mechanisms may be required to licence a pre-emptive release in advance of rainfall or flooding events, and the ability to licence discharges by all mines in a catchment that is flooding.
13.12	The Queensland Government should prepare a procedural guide for officers deciding whether to grant a relaxation of environmental authority conditions, by transitional environmental program or otherwise, with guidance as to: <ul style="list-style-type: none"> <li>the meaning of each criterion</li> <li>examples of the types of things that may be relevant to each criterion</li> <li>the priority, if any, to be afforded to different criteria.</li> </ul>	State	DEHP	The Queensland Government is amending its existing procedural guide for transitional environmental programs to support decisions on granting relaxation of environmental authority conditions.  The procedural guide will be updated to reflect any amendments to the <i>Environmental Protection Act 1994</i> resulting from implementation of recommendations 13.9, 13.10 and 13.11.
13.13	The Queensland Government should make public the procedural guide used by Department of Environment and Resource Management officers to decide whether to grant a transitional environmental program.	State	DEHP	The existing procedural guide for transitional environmental programs, <i>Guideline: Transitional Environmental Programs (EM287)</i> was published in July 2011 and is available on the Department of Environment and Heritage Protection website at <a href="http://www.derm.qld.gov.au">www.derm.qld.gov.au</a> by searching for EM287.  The amended transitional environmental program

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
				procedural guide will be published on the Department of Environment and Heritage Protection website following its current review, anticipated to be completed by June 2012.
13.14	The Queensland Government should consider amending the <i>Environmental Protection Act 1994</i> to provide a definition of the term 'emergency' for the purposes of section 468 of that Act.	State	DEHP	The Queensland Government will consult with stakeholders to develop an appropriate definition of 'emergency' for inclusion in the <i>Environmental Protection Act 1994</i> .
13.15	The Queensland Government should make public the procedural guide used by Department of Environment and Resource Management officers to decide whether to grant an emergency direction.	State	DEHP	<p>The Queensland Government is currently amending its existing procedural guide on when to issue an emergency direction. It will be available on the Department of Environment and Heritage Protection website by the end of May 2012.</p> <p>The guide will be updated and re-published to reflect any amendments to the <i>Environmental Protection Act 1994</i> dealing with the definition of an emergency and the processes for issuing an emergency direction in accordance with recommendations 13.14 and 13.16.</p>
13.16	The Queensland Government should amend the <i>Environmental Protection Act 1994</i> so as to permit an emergency direction to be given orally where it is not practicable to provide the direction in writing, with provision for its subsequent confirmation in writing.	State	DEHP	The Queensland Government will develop amendments to the <i>Environmental Protection Act 1994</i> to allow an emergency direction to be given orally in suitable circumstances.
13.17	The Queensland Government should determine which of its agencies should take responsibility for the management of all existing and new abandoned mine sites in Queensland.	State	DNRM	<p>The Queensland Government has determined that the Department of Natural Resources and Mines is the agency with responsibility for management of abandoned mine sites in Queensland.</p> <p>The Queensland Government, through its Abandoned Mines Land Program currently manages abandoned mines on state land, and takes management action in respect to abandoned mines on private land on a community risk assessment basis.</p> <p>There are approximately 15,000 abandoned mines in Queensland (including 3,000 on state land), and detailed inspections and rehabilitation of all abandoned mine sites would have significant financial implications for the Government.</p> <p>The Government is currently considering options for the management of abandoned mines, including audits of abandoned mine sites and a risk assessment framework to guide decisions on remediation, recognising potential different approaches for private versus public land.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
13.18	The Department of Employment, Economic Development and Innovation should assemble all information currently available to the abandoned mine land program into a single database. The Queensland Government should ensure, using whatever information is available, that the list of abandoned mines is as complete as possible. This should at least include a review of all information held by the Department of Environment and Resource Management and the Department of Employment, Economic Development and Innovation.	State	DNRM	The Queensland Government has commenced work on developing a new database to consolidate existing data on abandoned mines.
13.19	The Queensland Government should seek information about the size, features and condition of abandoned mines, including whether the mine or its surrounding environment were adversely affected by flood, from private landholders who have abandoned mines on their properties.	State	DNRM	The Queensland Government is considering options for gathering information about abandoned mines, such as through voluntary landholder reporting regimes or a public awareness and information campaign.  These options will be considered in the context of the broader issues associated with the management of abandoned mines being undertaken to address recommendation 13.17.
14	<b>No recommendations for this chapter</b>			
15.1	Councils should support and encourage business owners to develop private flood evacuation plans by providing the following to business owners in areas known to be affected by flood: <ul style="list-style-type: none"> <li>information about the benefits of evacuation plans</li> <li>contact details of relevant council and emergency service personnel for inclusion in evacuation plans.</li> </ul>	LG	Councils	
15.2	Councils should consider making available to business owners locality specific information that would assist them to develop evacuation plans for commercial premises, for example, any evacuation sub-plan created under Emergency Management Queensland's disaster evacuation guidelines.	LG	Councils	
15.3	The fire service should ensure that station officers are familiar with the procedure for contacting management when requesting the calling in of additional staff; and, in particular, that they have available to them the names and current telephone numbers of the officers to be contacted in the first instance, with alternative contact details in the event that those officers prove unavailable.	State	DCS	<b>Complete</b>  The Queensland Fire and Rescue Service has reinforced its administrative practices for contacting management with staff in all regions. In addition, all regional offices have been issued with directions to maintain accurate and up-to-date contact lists for senior officers.

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
15.4	The Queensland Fire and Rescue Service should require that each region records in writing the results of its risk assessment undertaken as part of its annual review of its special operations functional plan.	State	DCS	The Queensland Fire and Rescue Service has developed a written risk analysis section for incorporation into each region's special operations functional plan. This analysis will be implemented from the next planning cycle commencing in July 2012, and will provide a written basis for determining the number of swiftwater technicians required for each region.
15.5	The <i>Disaster Management Act 2003</i> should be amended to give the chief executive of the department administering the Act (or his or her delegate) the authority to appoint an officer of Emergency Management Queensland to direct SES operations in extraordinary circumstances.	State	DCS	<p>The Queensland Government will prepare amendments to the <i>Disaster Management Act 2003</i> which will allow the appointment of an appropriately qualified officer of Emergency Management Queensland to direct State Emergency Service operations in extraordinary circumstances.</p> <p>These amendments, including trigger points for the appointment of the officer and other reforms to the operation of the State Emergency Service, will be developed in consultation with local government, in view of the current principles of shared responsibility between state and local governments under which the State Emergency Service currently operates.</p>
15.6	Emergency Management Queensland, in consultation with councils, should develop a directive that makes clear the authority of an officer of that agency to command a major SES operation. This could be expected to occur when a deployment of additional SES members is made to a region because the response needed is beyond the capacity of its local units. The directive should make clear the powers of the officer and his or her reporting responsibilities to disaster managers in these circumstances. Emergency Management Queensland must also ensure that any officer who assumes such a role has adequate training and skills in the conduct of disaster operations.	State	DCS	The Queensland Government, through Emergency Management Queensland, has developed a draft doctrine for the deployment of State Emergency Service between regions. Emergency Management Queensland will undertake consultation with local governments on this draft doctrine prior to its implementation.
15.7	Emergency Management Queensland should ensure its staff, SES members and disaster managers are familiar with the directive when it is developed.	State	DCS	The Queensland Government will develop a comprehensive program of training for relevant staff of Emergency Management Queensland, other agencies, councils and State Emergency Service members to support the implementation of the new State Emergency Service deployment doctrine. The new doctrine and associated training will be implemented prior to November 2012, for the commencement of the next wet season.
15.8	Emergency Management Queensland, in consultation with councils, should develop clear directives about:	State	DCS	<p>The Queensland Government is developing new or amended doctrines to provide clear direction regarding:</p> <ul style="list-style-type: none"> <li>• arrangements to deliver clear communication</li> </ul>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	<ul style="list-style-type: none"> <li>• the communication and reporting that should take place between the SES and disaster managers, including in relation to task allocation and completion, once disaster management groups have been activated</li> <li>• the communication and reporting that should take place between the SES and disaster managers, including in relation to task allocation and completion, once disaster management groups have been activated</li> <li>• the process for dealing with requests for assistance that exceed an SES unit's capacity to respond them</li> <li>• the process for seeking extra support for an SES unit that has been overwhelmed by a disaster (whether by way of Emergency Management Queensland or the disaster management arrangements or both)</li> <li>• the role of SES liaison officers in communications with disaster managers about SES disaster operations</li> <li>• the role of incident controllers, and their teams, relative to those SES (or Emergency Management Queensland) personnel charged with the command of SES operations.</li> </ul>			<p>and liaison between the State Emergency Service and disaster management groups</p> <ul style="list-style-type: none"> <li>• the process for identifying and progressing assistance when a local group is overwhelmed, and</li> <li>• detailed arrangements and procedures for the establishment and conduct of an incident management team, including scalability.</li> </ul> <p>These new doctrines will be developed in consultation with local government in accordance with the implementation of recommendation 15.6.</p>
<b>15.9</b>	Emergency Management Queensland should ensure its staff, SES members and disaster managers are familiar with the directives it develops in relation to these matters.	State	DCS	<p>The Queensland Government will develop a comprehensive program of training for relevant staff of Emergency Management Queensland, other agencies, councils and State Emergency Service members to support the implementation of the new State Emergency Service doctrines.</p> <p>This training program will be developed in accordance with implementation of recommendation 15.7.</p>
<b>15.10</b>	Emergency Management Queensland should develop and implement a new formula for the distribution of its recurrent SES subsidy, which takes into account relevant factors including the size of a local SES contingent and the population, area and natural hazard risk profile of the local government area concerned.	State	DCS	<p>The Queensland Government will revise the formula for distribution of the State Emergency Service subsidy to councils, with a view to implementing the new formula by the end of 2012.</p> <p>This new formula will require careful consideration and consultation with local governments to ensure the most equitable overall outcome is achieved for councils in funding the ongoing operation of the State Emergency Service.</p>
<b>15.11</b>	Emergency Management Queensland should pursue the execution of the 'Local Arrangements' with councils where a Memorandum of Agreement	State	DCS	The Queensland Government is actively negotiating with local governments to encourage the execution of Memoranda of Agreement, which councils may enter into voluntarily. This includes

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	is in place. The contents of the arrangements should be reviewed and updated regularly.			<p>agreement on the 'Local Arrangements' specific to individual councils.</p> <p>As at 14 May 2012, 16 agreements had been executed with between Emergency Management Queensland and individual councils, with a further 30 agreements currently in progress. Emergency Management Queensland will continue to liaise with the remaining councils to encourage finalisation of their agreements.</p>
<b>15.12</b>	Emergency Management Queensland should simplify the process by which SES members gain recognition for prior qualifications so that unnecessary duplication of training can be avoided.	State	DCS	<p><b>Complete</b></p> <p>The Queensland Government, through Emergency Management Queensland has implemented a range of actions to simplify the process of recognition of prior learning for State Emergency Service members.</p> <p>Emergency Management Queensland has:</p> <ul style="list-style-type: none"> <li>• streamlined the process of recognising industry experience of some State Emergency Service volunteers</li> <li>• undertaken an extensive review of the Emergency Management Queensland Training Policy and Procedures Manual to remove organisational impediment to volunteer trainers</li> <li>• established a web portal to centrally process all applications for recognition of prior learning</li> <li>• educated volunteers on the recognition of prior learning and challenge assessment processes through the volunteer portal, regional training and State Emergency Service roadshows, and</li> <li>• sponsored national State Emergency Service competency mapping through the National State Emergency Service Learning Development Committee to expedite the process of recognising qualifications of members transferring from interstate State Emergency Service.</li> </ul>
<b>16.1</b>	<p>The Crime and Misconduct Commission should investigate whether the conduct of Mr Tibaldi, Mr Ayre and Mr Malone relating to:</p> <ul style="list-style-type: none"> <li>• preparation of documents surrounding the January 2011 flood event, including the 17 January 2011 brief to the Minister, the 2 March 2011 flood event report, and statements provided to the Commission</li> <li>• oral testimony given to the Commission evidences offence/s against the Criminal Code, and/or official misconduct under the <i>Crime and Misconduct Act 2001</i> committed by any, or all, of them.</li> </ul>	State entity	CMC	<p>On 16 March 2012, this matter was referred to the Crime and Misconduct Commission for investigation, in accordance with the recommendation. The Crime and Misconduct Commission has advised that its investigation has commenced.</p>
<b>16.2</b>	Seqwater should ensure that proper support and oversight mechanisms	State entity	DEWS (Seqwater)	Seqwater is currently implementing a range of improvements to its processes for the drafting of

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	<p>are put in place around both the substantive and procedural aspects of drafting flood event reports. Seqwater should consider engaging consultants with expertise in the production of reports following significant events to advise on these mechanisms. Measures to be considered should include:</p> <ul style="list-style-type: none"> <li>• ensuring appropriate systems are in place to ensure the recollections of flood engineers and other parties are recorded immediately after the event, perhaps by engaging an external party to interview the flood engineers and other parties</li> <li>• ensuring that a methodology for writing the report is set out clearly in advance, in writing, and that the final report includes a statement of that methodology</li> <li>• putting in place systems to ensure that members of senior management have sufficient understanding of both the methodology and process by which the report is prepared to allow themselves to be satisfied that these are appropriate.</li> </ul>			<p>flood event reports in accordance with the Commission's recommendations.</p> <p>Seqwater will implement this recommendation prior to the 2012/13 wet season.</p> <p>The Queensland Government will ensure that all recommendations for which Seqwater has primary responsibility are incorporated into a work program, to be developed by Seqwater in consultation with the Department of Energy and Water Supply and Queensland Treasury and Trade, to be submitted for approval by the responsible Ministers.</p>
<b>16.3</b>	<p>The Department of Environment and Resource Management should ensure that an independent and appropriately qualified person immediately starts the task of reviewing the March flood event report to ensure that the review is completed before the start of the 2012/2013 wet season.</p>	State	DEWS	<p>The Queensland Government, through the Department of Energy and Water Supply, has initiated the process of identifying a suitably qualified person to conduct an independent review of Seqwater's March 2011 flood event report for the 2010/11 floods.</p> <p>The department will update standards and guidelines to address any issues raised by the independent review.</p> <p>The independent review will be a priority for completion to ensure that any dam safety matters arising from the review can be identified prior to the 2012/13 wet season.</p>
<b>16.4</b>	<p>Seqwater should ensure that any future peer review process:</p> <ul style="list-style-type: none"> <li>• is co-ordinated by someone independent of those who wrote the report</li> <li>• entails the provision of all relevant information to the peer reviewers</li> <li>• permits sufficient time for the review</li> <li>• documents all contact between those whose actions are under review and the reviewers.</li> </ul>	State entity	DEWS (Seqwater)	<p>Seqwater is currently implementing a range of improvements to its processes for the drafting of flood event reports in accordance with the Commission's recommendations.</p> <p>Seqwater will implement this recommendation prior to the 2012/13 wet season.</p> <p>The Queensland Government will ensure that all recommendations for which Seqwater has primary responsibility are incorporated into a work program, to be developed by Seqwater in consultation with the Department of Energy and Water Supply and Queensland Treasury and Trade, to be submitted for approval by the responsible Ministers.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
16.5	The Queensland Government should resolve the discrepancy in recorded peak river height for the January 2011 flood of the Brisbane River between the Brisbane City and Port Office gauges.	State	DTMR	<p>The Queensland Government, through Maritime Safety Queensland working with Seqwater, has installed a new tide gauge at the Seqwater site and will compare data from the new Seqwater gauge with the Maritime Safety Queensland gauge to check for any natural tidal differences.</p> <p>Maritime Safety Queensland will also consider council survey information, such as high water mark mapping in order to analyse and draw conclusions from the gauge data. This analysis will be undertaken in consultation with Seqwater and the Bureau of Meteorology.</p>
17.1	The steering committees of the Wivenhoe Dam and Somerset Dam Optimisation Study and the North Pine Dam Optimisation Study should consider removing the water supply security investigation from each study.	State	DEWS (Seqwater)	<p><b>Complete</b></p> <p>The Queensland Government has considered this recommendation and decided that it would be more effective to remove water supply security investigations from the WSDOS and the North Pine Dam Optimisation Study (NPDOS).</p> <p>The Queensland Water Commission will lead and coordinate the water supply security investigations for both the WSDOS and NPDOS.</p> <p>This work will occur in parallel with the flood management and dam operations investigation being led by Seqwater.</p> <p>The floodplain management investigations for WDDOS are being led by the Departments of Natural Resources and Mines and State Development, Infrastructure and Planning. The Moreton Bay Regional Council will continue leading the floodplain management investigation for the NPDOS.</p> <p>The Department of Energy and Water Supply will chair the WSDOS, assuming the role from Seqwater.</p>
17.2	The steering committee of the North Pine Dam Optimisation Study should consider whether it would be beneficial for the floodplain management investigation to be removed from the North Pine Dam Optimisation Study.	State	DEWS (Seqwater)	<p><b>Complete</b></p> <p>The Queensland Government has considered this recommendation and decided that it would be more effective to remove floodplain management investigations from the NPDOS. The floodplain management investigation will continue to be led by the Moreton Bay Regional Council.</p>
17.3	The Queensland Government should ensure that, when it considers options for the operational strategies to be employed at Wivenhoe and Somerset dams, and North Pine Dam, it is presented with a wide range of options which prioritise differing objectives. The Queensland Government should determine the operational strategies by considering the implications of each option over a range of flood events for at least: <ul style="list-style-type: none"> <li>inundation of urban and rural</li> </ul>	State	DEWS	<p>The Queensland Government will carefully consider the outcomes of the WSDOS and NPDOS in determining appropriate operational strategies for the Wivenhoe, Somerset and North Pine dams.</p> <p>Implementation of outcomes from the WSDOS and NPDOS will likely result in amendments to a range of plans and strategies such as the South East Queensland Water Strategy, flood mitigation manuals, water resource plans, resource operations plans, state planning policies and local government planning schemes.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	<p>areas</p> <ul style="list-style-type: none"> <li>• water supply security</li> <li>• dam safety</li> <li>• submerging of bridges</li> <li>• bank slumping and erosion</li> <li>• riparian fauna and flora.</li> </ul>			
<b>17.4</b>	<p>Seqwater should, in creating the new Wivenhoe and North Pine flood mitigation manuals, comprehensively consider:</p> <ul style="list-style-type: none"> <li>• the amount of discretion that is able to be exercised by the flood engineers and the senior flood engineers, and the description of the circumstances in which such discretion may be exercised</li> <li>• the circumstances in which it might be appropriate to release water in advance of an impending flood on the basis of forecasts from the Bureau of Meteorology</li> <li>• if strategies of the form of strategy W2 and W3 in Revision 7 are included in the revised manual, or any strategy defined as a 'transition strategy', when and how those strategies should be implemented</li> <li>• if the concept of 'urban inundation' is relevant to the operation of the dam, how it should be defined, and if the definition involves diverse concepts, how those concepts can be related back to the strategies, so that flood engineers can reach a clear understanding of their objectives and primary considerations</li> <li>• if the concept of 'natural peak flow' is relevant, how it should be defined.</li> </ul>	State entity	DEWS (Seqwater)	<p>Seqwater is currently reviewing the Wivenhoe and Somerset dams and North Pine Dam flood mitigation manuals which will include consideration of all issues identified in the recommendation.</p> <p>The Queensland Government will consider the revisions proposed by Seqwater as part of its assessment of the flood mitigation manuals when they are submitted for approval.</p> <p>Revised manuals adopting high priority components of this recommendation will be submitted for approval prior to the 2012/13 wet season. To implement this recommendation in full, the outcomes of the completed WSDOS and NPDOS will need to be considered.</p>
<b>17.5</b>	<p>The conditions for the use of a particular strategy in all flood mitigation manuals should reflect objective standards.</p>	State entity	DEWS (Seqwater)	<p>Seqwater will consider the expression of objective standards for adoption of operating strategies as part of the current reviews of the Wivenhoe and Somerset dams and North Pine Dam flood mitigation manuals being undertaken in accordance with recommendation 17.4.</p>
<b>17.6</b>	<p>The Queensland Government should ensure that all flood mitigation manuals include the requirement that those operating the dam during flood events hold current registrations as professional engineers.</p>	State	DEWS	<p>Seqwater will consider the issue of engineer registration requirements as part of the current review of the Wivenhoe and Somerset dams and North Pine Dam flood mitigation manuals being undertaken in accordance with recommendation 17.4.</p> <p>The Queensland Government will update the procedures and guidelines against which flood mitigation manuals are assessed and approved, to ensure they include requirements for flood engineers to hold registrations as professional engineers.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
17.7	Seqwater should consider engaging a technical writer to develop completely new manuals after the operational strategies for Wivenhoe, Somerset and North Pine dams are set by the Queensland Government.	State entity	DEWS (Seqwater)	<p>Seqwater will engage a technical writer to develop completely new flood mitigation manuals after the operational strategies for Wivenhoe, Somerset and North Pine dams are set by the Queensland Government, following the completion of the WSDOS and NPDOS.</p> <p>Revised manuals addressing urgent matters raised by the independent review of the flood event report will be submitted for approval in October 2012 and will require detailed review by the Department of Energy and Water Supply prior to approval. Seqwater will consider engaging a technical writer to assist in revising the current manuals.</p> <p>The Queensland Government will update the procedures and guidelines against which flood mitigation manuals are assessed and approved, to ensure they include a requirement for technical writers to be engaged to develop new manuals.</p>
17.8	Seqwater should ensure a legal review of the Wivenhoe manual and the North Pine manual is completed before the manual is submitted for approval.	State entity	DEWS (Seqwater)	The Queensland Government will update procedures and guidelines against which flood mitigation manuals are assessed and approved, to ensure they include a requirement that legal reviews of manuals are undertaken.
17.9	The Queensland Government should consider whether North Pine Dam should be operated as a flood mitigation dam when it considers possible operating strategies and full supply levels as part of the longer term review of the Manual of Operational Procedures for Flood Mitigation at North Pine Dam.	State	DEWS	The Queensland Government will consider the outcomes of the NPDOS in determining whether the North Pine Dam should be operated as a flood mitigation dam.
17.10	The Queensland Government should amend the <i>Water Supply (Safety and Reliability) Act 2008</i> to designate the Minister as the person who must approve a flood mitigation manual.	State	DEWS	<p>The Queensland Government will prepare amendments to the <i>Water Supply (Safety and Reliability) Act 2008</i> to provide that the responsible Minister, rather than the chief executive, must approve flood mitigation manuals.</p> <p>This legislation is expected to be introduced to Parliament prior to the 2012/13 wet season.</p>
17.11	The assessment of flood mitigation manuals should be completed by a person with appropriate expertise who has had no involvement in its development, at any stage, and who can be seen to be independent of all individuals who were so involved.	State	DEWS	The Queensland Government will ensure that an independently and appropriately qualified person is engaged to conduct the assessment of the revised Wivenhoe and Somerset dams and North Pine Dam flood mitigation manuals.
17.12	The Queensland Government should continue to assess and review the adequacy of work procedures DS 5.1 and 5.3, having regard to the need for flood mitigation manuals to reflect the will of the executive.	State	DEWS	<p>The Queensland Government, through the Department of Energy and Water Supply, has conducted an initial review of the work procedures applying to the assessment of new or revised flood mitigation manuals.</p> <p>The department will undertake a further review of</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
				these procedures to ensure they reflect all changes being adopted to implement the Commission's recommendations and in accordance with the government's policy on the purposes of the flood mitigation manuals.
17.13	Prior to approving a flood mitigation manual, the Queensland Government should be satisfied that its terms are expressed in a manner that allows a determination of compliance with it to be made by reference to objective standards.	State	DEWS	<p>The Queensland Government will update the procedures and guidelines against which flood mitigation manuals are assessed and approved, to ensure they include assessment of whether compliance may be determined by reference to objective standards.</p> <p>These procedures will be applied in the assessment of the revised Wivenhoe and Somerset dams and North Pine Dam flood mitigation manuals.</p>
17.14	<p>The Department of Environment and Resource Management should prepare formal work procedures for the review of flood event reports created under emergency action plans and flood mitigation manuals. These should include procedures for:</p> <ul style="list-style-type: none"> <li>• making enquiries with the owners of referable dams that have catchments that have been subject to heavy rainfall (or where there is other reason to believe the emergency action plan has been triggered) as to whether the emergency action plans have been triggered</li> <li>• reminding owners of referable dams that have had emergency action plans triggered of their obligation to submit a flood event report</li> <li>• upon receipt of a flood event report, reviewing it, identifying any dam safety or other issues or areas where insufficient detail has been provided, raising those matters with the dam owner or other affected party and identifying appropriate remedial steps</li> <li>• raising any issues identified in the report that are beyond the expertise of the Department of Environment and Resource Management, or are likely to be of particular interest to another body, with the appropriate body</li> <li>• keeping a record of the process and results of the review of the flood event report</li> <li>• fixing an appropriate timeline for the completion of each of the above steps: the time required may depend on specific circumstances, but must allow for any potential safety issues to be identified and remedied efficiently.</li> </ul>	State	DEWS	<p>The Queensland Government will develop new work procedure and guidelines against which flood event reports, prepared under both emergency action plans and flood mitigation manuals are assessed. These new work procedures and guidelines will address the specific matters identified in the recommendation.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
17.15	As part of the longer term review of the Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam and Somerset Dam the Queensland Government should consider whether the dam operators should be able to extend the drawdown of the lake beyond seven days in order to reduce downstream bank slumping.	State entity	DEWS (Seqwater)	Seqwater will consider the issue of extended drawdowns to reduce downstream bank slumping as part of the current review of the Wivenhoe and Somerset dams flood mitigation manual as outlined in the response to recommendation 17.4.
17.16	CS Energy should supplement physical monitoring of Splityard Creek Dam with visual monitoring by installing surveillance cameras or similar devices.	State entity	DEWS (CS Energy)	CS Energy is currently assessing the technical options available for the visual monitoring of Splityard Creek Dam, including investigating the types of surveillance cameras available and the most effective placement of the equipment. At the same time, CS Energy is investigating potential alternatives to surveillance cameras which would enhance the monitoring of Splityard Creek Dam and therefore fulfil the requirements of the recommendation.
17.17	CS Energy and Seqwater should agree upon and adhere to a formal communication protocol that requires CS Energy personnel to advise Seqwater, through the Flood Operations Centre, of water movements between Splityard Creek Dam and Wivenhoe Dam or Pryde Creek once a flood event is declared under the Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam and Somerset Dam. The protocol should ensure that a direct line of communication is established between CS Energy personnel physically located at the power station and the Flood Operations Centre.	State entity	DEWS (CS Energy / Seqwater)	<p>CS Energy and Seqwater have agreed to a formal communication protocol in relation to water movements between Splityard Creek Dam and Wivenhoe Dam or Pryde Creek.</p> <p>CS Energy has updated its procedures to reflect the agreed communication protocol.</p> <p>CS Energy's trigger to advise Seqwater of water movements between Splityard Creek Dam and Wivenhoe Dam or Pryde Creek commences when the Wivenhoe Dam reaches full supply level or EL64m. This is more conservative than the Commission's recommendation of triggering communications once a flood event is declared.</p>
17.18	The protocol should make provision for the use of telephone and/or radio where communication by email is not possible. Where necessary, CS Energy and Seqwater should make additional radio equipment available to relevant personnel.	State entity	DEWS (CS Energy / Seqwater)	<p>The agreed communication protocol will make provision for communication by telephone and/or radio where communication by email is not possible. CS Energy has purchased additional radios to be placed in Seqwater's Wivenhoe Dam offices.</p> <p>In addition, CS Energy is working to ensure satellite telephones at the site are able to be used to communicate with Seqwater's flood operations centre.</p>
17.19	CS Energy should put in place contingency measures to ensure email and telephone communications at Wivenhoe Power Station are not entirely dependent on a network located off-site.	State entity	DEWS (CS Energy)	Tarong Energy Corporation's Brisbane office which provided network support during the 2010/11 floods is no longer the corporate head office for Wivenhoe Power Station. CS Energy, the new owner of Wivenhoe Power Station, has established alternative disaster recovery facilities in accordance with the recommendation.

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
17.20	CS Energy should review its emergency action plan and business procedures to ensure they are wholly consistent and give appropriate consideration to flooding as a possible emergency event.	State entity	DEWS (CS Energy)	<b>Complete</b> CS Energy has updated and re-issued the Splityard Creek Dam emergency action plan in accordance with this recommendation to ensure appropriate consideration is given to flooding as a possible emergency event.
17.21	CS Energy should amend its business procedure to remove any ambiguity as to the establishment of communications with Seqwater and to acknowledge the formal communications protocol regarding releases.	State entity	DEWS (CS Energy)	CS Energy has reviewed its business procedure, and will install a new control system by July 2012. This new control system will provide an automatic alert which is activated when Wivenhoe Dam reaches flood level. This alerts both the personnel physically located at the power station as well as the trading and operations staff based at CS Energy's Brisbane office, and triggers the emergency protocols established with Seqwater.
17.22	The Queensland Government should consider whether to empower Seqwater, through the flood operations centre, to direct CS Energy to stop or delay releases from Splityard Creek Dam where a flood event is declared under the Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam and Somerset Dam.	State	DEWS	The Queensland Government is considering possible legislative and non-legislative mechanisms by which Seqwater may be empowered to give direction in relation to releases from Splityard Creek Dam in emergency situations.  However, consideration of possible legislative amendments will need to include evaluation of possible commercial impacts on CS Energy and the expected impacts of releases from Splityard Creek Dam on the overall level of Wivenhoe Dam and broader electricity emergency powers in the National Electricity Market.
17.23	Seqwater should consider commissioning an investigation into the extent of cracking below the level of the upper gallery of Somerset Dam and the impact of any such cracking on the dam's stability and, in turn, its operation.	State entity	DEWS (Seqwater)	The Queensland Government will ensure that all recommendations for which Seqwater has primary responsibility are incorporated into a work program, to be developed by Seqwater in consultation with Department of Energy and Water Supply and Queensland Treasury and Trade, to be submitted for approval by the responsible Ministers.
17.24	Seqwater should ensure that the Somerset Dam gallery is not susceptible to flooding during overtopping events.	State entity	DEWS (Seqwater)	The Queensland Government will ensure that all recommendations for which Seqwater has primary responsibility are incorporated into a work program, to be developed by Seqwater in consultation with Department of Energy and Water Supply and Queensland Treasury and Trade, to be submitted for approval by the responsible Ministers.
17.25	The Department of Transport and Main Roads, in conjunction with Brisbane City Council and Somerset Regional Council, should investigate options for the upgrade of Brisbane River crossings between Wivenhoe Dam and Colleges Crossing and undertake a cost-benefit analysis of these to determine the outcome which best serves the public interest.	State / LG	DTMR	The Queensland Government, through the Department of Transport and Main Roads, will consider the feasibility of upgrading bridges and crossings on the section of the Brisbane River between the weir upstream of Colleges Crossing and the Moggill Ferry.  The options to be considered will need to balance possible significant financial implications with regional and local needs. The department will work with the Brisbane City Council and Somerset Regional Council to ensure these implications and needs are taken into account.

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
17.26	As part of the longer term review of the Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam and Somerset Dam, the Queensland Government should consider the impact of possible upgrades of bridges downstream of Wivenhoe Dam on different operating strategies for the dam.	State entity	DEWS (Seqwater)	The Queensland Government will consider the impact of possible upgrades of bridges downstream of Wivenhoe Dam as part of the WSDOS. The arrangements for this study are currently being revised to take account of the Commission's recommendations. Any relevant findings from the study will be reflected in the Wivenhoe and Somerset dams flood mitigation manual.
17.27	Wide Bay Water should, in addition to its usual wet season preparations and maintenance, undertake the following activities in advance of each wet season: <ul style="list-style-type: none"> <li>conduct training for personnel on dam operation, including contingency plans for the situation in which one or more of the gates is inoperable</li> <li>hold meetings of key personnel of Wide Bay Water involved in the operation of the dam during floods, which: <ul style="list-style-type: none"> <li>in addition to any other matters, inform staff about the current status of the gates, dam operation strategies and contingency plans for the situation in which one or more of the gates is inoperable</li> <li>are recorded in minutes which document the information provided and are made available to all operational staff.</li> </ul> </li> </ul>	LG	Wide Bay Water	
17.28	The Department of Environment and Resource Management should require Wide Bay Water, in advance of every wet season, to provide details of its expectation as to the operability of the crest gates if a flood occurs, until such time as all gates have been demonstrated to work as designed.	State	DEWS	The Queensland Government will introduce a formal requirement for Wide Bay Water to provide details of operability of crest gates at Lenthalls Dam as a dam safety condition under the <i>Water Supply (Safety and Reliability) Act 2008</i> .
17.29	Toowoomba Regional Council should engage external consultants to carry out failure impact assessments on the detention basins along East Creek.	LG	Toowoomba Regional Council	
17.30	Toowoomba Regional Council and the Department of Environment and Resource Management should continue to co-operate to assess the referable dam status of existing detention basins and any future detention basins constructed in the West Creek and East Creek catchment areas.	LG / State	Toowoomba Regional Council / DEWS	The Queensland Government, through the Department of Energy and Water Supply, will continue to work with the Toowoomba Regional Council to assess the referable dam status of detention basins in the West Creek and East Creek catchment areas.
17.31	The Queensland Government should legislate to oblige each owner of a referable dam to have an emergency	State	DEWS	The Queensland Government will prepare amendments to the <i>Water Supply (Safety and Reliability) Act 2008</i> to implement legislative

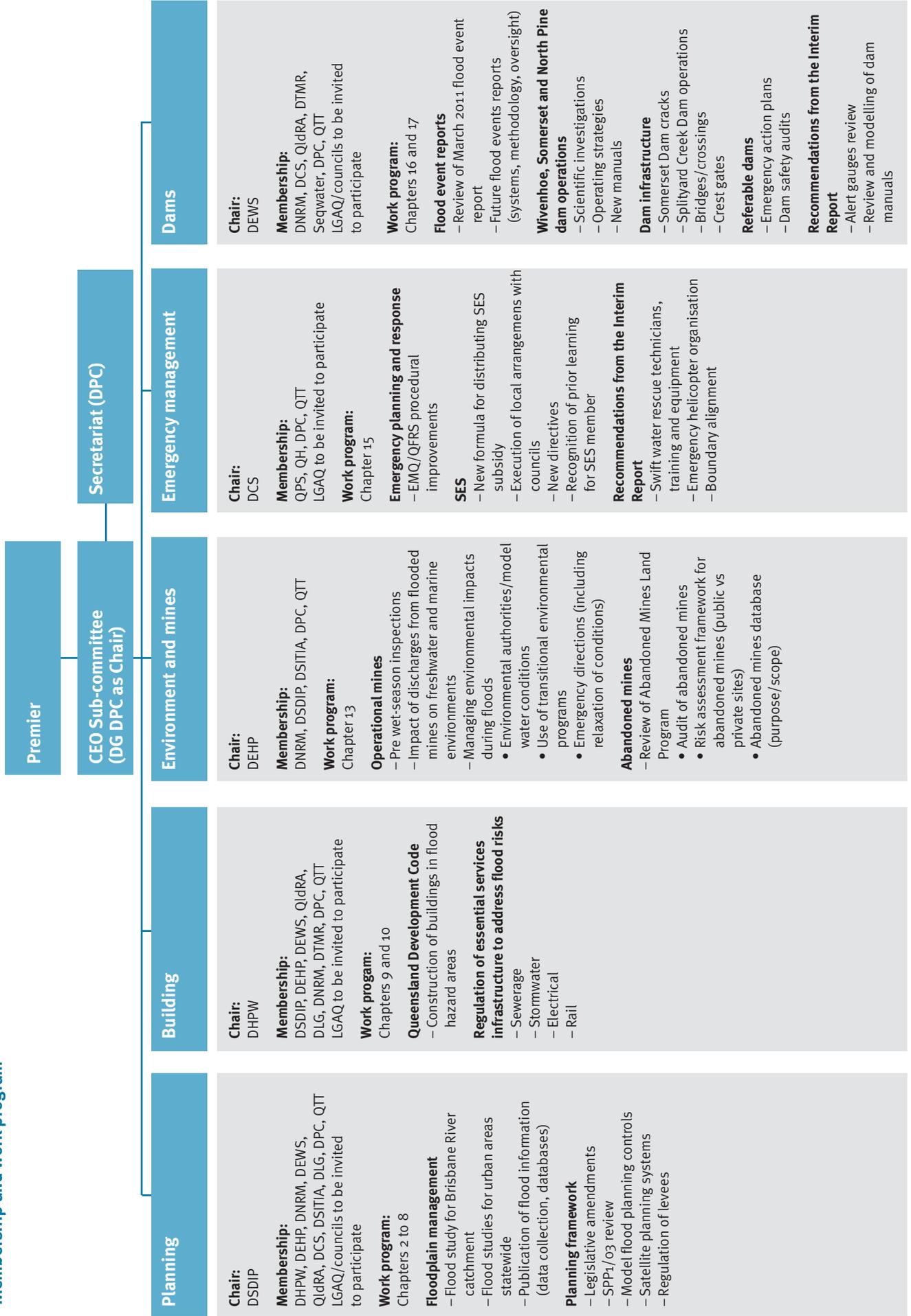
Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	action plan approved by the appropriate Queensland Government agency. Such plans should be reviewed periodically.			<p>requirements for emergency action plans to be submitted and approved.</p> <p>The implementation of these new requirements will involve development of new regulatory guidelines and work procedures, as well as consultation with the owners of referable dams and disaster management groups.</p> <p>Relevant legislative amendments are expected to be introduced to Parliament prior to the 2012/13 wet season.</p>
<b>17.32</b>	The Queensland Government should, in consultation with the Department of Environment and Resource Management and Emergency Management Queensland, determine which agency is appropriate to review and approve emergency action plans for referable dams.	State	DEWS	<p>The Queensland Government has determined that the Department of Energy and Water Supply is the appropriate agency to review and approve emergency action plans for referable dams.</p> <p>However, this process will involve review of the plans by Emergency Management Queensland and local disaster management groups to ensure that emergency processes are integrated in disaster management arrangements at a local level.</p> <p>The Department of Energy and Water Supply, in consultation with Emergency Management Queensland, will develop regulatory guidelines and work procedures to support the new process for review and approval of emergency action plans.</p>
<b>17.33</b>	Prior to each wet season, the Department of Environment and Resource Management should audit the compliance of each owner of a referable dam with the obligation to have an emergency action plan approved by the Queensland Government.	State	DEWS	<p>The Queensland Government, through the Department of Energy and Water Supply, will establish an annual audit program for assessing, prior to each wet season, compliance with the proposed new emergency action plan requirements following the initial review and approval of plans.</p> <p>The Department of Energy and Water Supply currently regulates 106 referable dams in Queensland, of which 62 are owned by the Queensland Government. The department will prioritise the approval of emergency action plans for Queensland Government-owned dams prior to the next wet season as these dams have the greatest risk to local residents if the dams were to fail.</p>
<b>17.34</b>	<p>The Department of Environment and Resource Management should prioritise dam safety audits according to risk. The risk assessment should be informed by criteria including:</p> <ul style="list-style-type: none"> <li>• structure and materials used in construction</li> <li>• age of the dam</li> <li>• time since last inspection</li> <li>• occurrence of a flood event since last audit and the size of that flood event</li> <li>• population at risk if the dam were to fail</li> </ul>	State	DEWS	<p>The Queensland Government, through the Department of Energy and Water Supply, will review its existing program for dam safety audits to ensure it addresses all factors identified by the Commission.</p>

Recommendation No.	Recommendation	Primary responsibility	Lead Queensland Government agency	Government response
	<ul style="list-style-type: none"> <li>experience and capability of dam owner</li> <li>dam owner compliance history</li> <li>time since last audit.</li> </ul>			
17.35	The Department of Environment and Resource Management and Emergency Management Queensland should ensure that each has copies of current emergency action plans for all dams in Queensland.	State	DEWS	<p>The Queensland Government, through the Department of Energy and Water Supply, will ensure that copies of all current emergency action plans for referable dams are provided to Emergency Management Queensland.</p> <p>The new regulatory guidelines and work procedures to be developed to support the process of review and approval of emergency action plans will incorporate requirements for copies of plans to be provided to Emergency Management Queensland as a matter of practice.</p>
17.36	The Department of Environment and Resource Management should conduct periodic dam safety information and education sessions with emergency management personnel including those from Emergency Management Queensland, local and district disaster management groups and local councils. Priority should be given to sessions if the Bureau of Meteorology forecasts a wet season with a greater than 50 per cent chance of above median rainfall.	State	DEWS	<p>The Queensland Government, through the Department of Energy and Water Supply in conjunction with the Department of Community Safety and relevant dam owners, will design and implement an educational program on dam safety.</p> <p>This program will be implemented prior to the next wet season.</p>

<p><b>LG = Local government</b></p> <p><b>Cth = Commonwealth</b></p> <p><b>Private = private entities</b></p>	<p>DSDIP = Department of State Development, Infrastructure and Planning</p> <p>DNRM = Department of Natural Resources and Mines</p> <p>DEWS = Department of Energy and Water Supply</p> <p>QldRA = Queensland Reconstruction Authority</p> <p>DHPW = Department of Housing and Public Works</p> <p>DEHP = Department of Environment and Heritage Protection</p> <p>DCS = Department of Community Safety</p> <p>DJAG = Department of Justice and Attorney-General</p> <p>DLG = Department of Local Government</p> <p>DSITIA = Department of Science, Information Technology, Innovation and the Arts</p> <p>DTMR = Department of Transport and Main Roads</p>
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# Queensland Floods Commission of Inquiry implementation

## Membership and work program



Category	Chair	Membership	Work program
Planning	DSDIP	DHPW, DEHP, DNRM, DEWS, QldRA, DCS, DSITA, DLG, DPC, QTT	<ul style="list-style-type: none"> <li>LGAQ/councils to be invited to participate</li> <li>Chapters 2 to 8</li> <li><b>Floodplain management</b> <ul style="list-style-type: none"> <li>Flood study for Brisbane River catchment</li> <li>Flood studies for urban areas statewide</li> <li>Publication of flood information (data collection, databases)</li> </ul> </li> <li><b>Planning framework</b> <ul style="list-style-type: none"> <li>Legislative amendments</li> <li>SPP1/03 review</li> <li>Model flood planning controls</li> <li>Satellite planning systems</li> <li>Regulation of levees</li> </ul> </li> </ul>
Building	DHPW	DSDIP, DEHP, DEWS, QldRA, DLG, DNRM, DTMR, DPC, QTT	<ul style="list-style-type: none"> <li>LGAQ to be invited to participate</li> <li>Chapters 9 and 10</li> <li><b>Queensland Development Code</b> <ul style="list-style-type: none"> <li>Construction of buildings in flood hazard areas</li> </ul> </li> <li><b>Regulation of essential services infrastructure to address flood risks</b> <ul style="list-style-type: none"> <li>Sewerage</li> <li>Stormwater</li> <li>Electrical</li> <li>Rail</li> </ul> </li> </ul>
Environment and mines	DEHP	DNRM, DSDIP, DSITA, DPC, QTT	<ul style="list-style-type: none"> <li>Chapters 13</li> <li><b>Operational mines</b> <ul style="list-style-type: none"> <li>Pre wet-season inspections</li> <li>Impact of discharges from flooded mines on freshwater and marine environments</li> <li>Managing environmental impacts during floods</li> <li>Environmental authorities/model water conditions</li> <li>Use of transitional environmental programs</li> <li>Emergency directions (including relaxation of conditions)</li> </ul> </li> <li><b>Abandoned mines</b> <ul style="list-style-type: none"> <li>Review of Abandoned Mines Land Program</li> <li>Audit of abandoned mines</li> <li>Risk assessment framework for abandoned mines (public vs private sites)</li> <li>Abandoned mines database (purpose/scope)</li> </ul> </li> </ul>
Emergency management	DCS	QPS, QH, DPC, QTT	<ul style="list-style-type: none"> <li>LGAQ to be invited to participate</li> <li>Chapter 15</li> <li><b>Emergency planning and response</b> <ul style="list-style-type: none"> <li>EMQ/QFRS procedural improvements</li> </ul> </li> <li><b>SES</b> <ul style="list-style-type: none"> <li>New formula for distributing SES subsidy</li> <li>Execution of local arrangements with councils</li> <li>New directives</li> <li>Recognition of prior learning for SES member</li> </ul> </li> <li><b>Recommendations from the Interim Report</b> <ul style="list-style-type: none"> <li>Swift water rescue technicians, training and equipment</li> <li>Emergency helicopter organisation</li> <li>Boundary alignment</li> </ul> </li> </ul>
Dams	DEWS	DNRM, DCS, QldRA, DTMR, Seqwater, DPC, QTT	<ul style="list-style-type: none"> <li>LGAQ/councils to be invited to participate</li> <li>Chapters 16 and 17</li> <li><b>Flood event reports</b> <ul style="list-style-type: none"> <li>Review of March 2011 flood event report</li> <li>Future flood events reports (systems, methodology, oversight)</li> </ul> </li> <li><b>Wivenhoe, Somerset and North Pine dam operations</b> <ul style="list-style-type: none"> <li>Scientific investigations</li> <li>Operating strategies</li> <li>New manuals</li> </ul> </li> <li><b>Dam infrastructure</b> <ul style="list-style-type: none"> <li>Somerset Dam cracks</li> <li>Splityard Creek Dam operations</li> <li>Bridges/crossings</li> <li>Crest gates</li> </ul> </li> <li><b>Referable dams</b> <ul style="list-style-type: none"> <li>Emergency action plans</li> <li>Dam safety audits</li> </ul> </li> <li><b>Recommendations from the Interim Report</b> <ul style="list-style-type: none"> <li>Alert gauges review</li> <li>Review and modelling of dam manuals</li> </ul> </li> </ul>

## Appendix 2.

### QUEENSLAND FLOODS COMMISSION OF INQUIRY FINAL REPORT TERMS OF REFERENCE FOR IMPLEMENTATION GROUPS

#### BACKGROUND

The Queensland Floods Commission of Inquiry (the Commission) released its final report on 16 March 2012. The report included 177 recommendations covering a range of matters including land use planning, building, mining, emergency management and dam management issues.

The Queensland Government is committed to implementing all of the Commission's recommendations.

Five implementation groups have been established to deliver the Commission's recommendations, with a focus on the following key streams of work:

- Planning
- Building
- Environment and mines
- Emergency management
- Dams

A CEO subcommittee, chaired by the Director-General of the Department of the Premier and Cabinet and comprising relevant Directors-General and the Queensland Reconstruction Authority will have oversight responsibility for the work of the implementation groups.

The role of the chairing agency for each implementation group will be to lead, coordinate and monitor implementation in conjunction with other responsible agencies. The chairing agency will not necessarily have lead responsibility for implementation of all recommendations within the group's terms of reference, and responsible agencies will be required to lead implementation of relevant recommendations in conjunction with other relevant agencies.

#### REPORTS

Implementation groups will be required to provide monthly reports to the CEO subcommittee, through the Department of the Premier and Cabinet. The monthly report is to provide:

- an update on the progress of each recommendation assigned to the implementation group
- notice of completion of any recommendations
- advice of any issues impacting on the delivery of recommendations.

#### TERMS OF REFERENCE

##### Planning Implementation Group

###### *Purpose*

The role of the Planning Implementation Group is to oversee the implementation of the final report recommendations relevant to the Queensland Government contained in:

- chapter 2 – Floodplain management
- chapter 4 – State planning instruments
- chapter 5 – Local planning instruments
- chapter 6 – Satellite planning systems
- chapter 7 – Development and flood considerations
- chapter 8 – Development assessment in practice.

The responsibilities of the Planning Implementation Group will be to ensure the effective and timely implementation of the Commission's recommendations applicable to the group, and coordinate, monitor and report on the progress of implementation of the recommendations.

###### *Membership*

The Planning Implementation Group will be chaired by the Director-General of the Department of State Development, Infrastructure and Planning and will include representation from the following agencies:

- Department of Housing and Public Works
- Department of Natural Resources and Mines
- Department of Environment and Heritage Protection
- Department of Energy and Water Supply
- Department of Community Safety
- Queensland Reconstruction Authority

- Department of Science, Information Technology, Innovation and the Arts
- Department of Local Government.

The Local Government Association of Queensland / councils will also be invited to participate. In addition, representatives of the Department of the Premier and Cabinet and Queensland Treasury and Trade will participate in meetings of the implementation group as required.

#### Key Responsibilities

The Planning Implementation Group will be responsible for implementing the recommendations contained in chapters 2 to 8 of the Commission's final report, encompassing a range of floodplain management and land use planning matters.

Priority projects to be completed by the Planning Implementation Group include:

- **Brisbane River catchment flood study**

The Planning Implementation Group will be responsible for working with the Brisbane City Council, Ipswich City Council and Somerset Regional Council to progress the Brisbane River catchment flood study, and to coordinate State Government agency involvement in progressing the flood study.

<b>Lead agency</b>	Department of Natural Resources and Mines
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Secure agreement on governance, funding and terms of reference for the flood study (May 2012).</li> <li>• Commence conduct of the flood study (31 August 2012).</li> <li>• Complete the flood study (end of 2015).</li> </ul>
<b>Completion date</b>	End of 2015

- **Flood studies for urban areas**

The Planning Implementation Group will have responsibility for establishing a framework for the completion of flood investigations in accordance with a priority list targeted at low growth flood risk towns as identified by the Bureau of Meteorology. In addition, the group will consider appropriate mechanisms to provide guidance for local governments on the completion of flood risk assessments and flood mapping.

<b>Lead agency</b>	Queensland Reconstruction Authority
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Understand and prioritise areas where further flood investigations or studies need to be carried out (30 July 2012).</li> <li>• Establish a governance framework and business plan for flood study prioritisation and completion including proposed financial and resourcing support (30 October 2012).</li> <li>• Finalise flood investigations for Bureau of Meteorology identified flood prone towns, based on priorities as identified through recommendation 2.5 (30 January 2013).</li> </ul>
<b>Completion date</b>	30 January 2013 (studies to be ongoing)

- **Review of State Planning Policy 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide(SPP 1/03)**

The Planning Implementation Group will have responsibility for oversight of the review of SPP 1/03 to examine the issues identified by the Commission including the analysis and policy development to guide both planning and development decisions to mitigate the impact of flood, bushfire and landslide.

<b>Lead agency</b>	Department of State Development, Infrastructure and Planning
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Release of draft State planning instrument for public consultation (March 2013).</li> <li>• Adopt a new State planning instrument for natural hazards to replace SPP 1/03 (September 2013).</li> </ul>
<b>Completion date</b>	September 2013

- **Publication of flood information (data collection and databases)**

The Planning Implementation Group will have responsibility for examining options for the establishment and maintenance of a central repository of data used in flood studies (in consultation with the Commonwealth Government) and publication of flood mapping.

<b>Lead agency</b>	Queensland Reconstruction Authority / Department of Natural Resources and Mines
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Complete stocktake of existing flood information held by councils (1 July 2012).</li> <li>• Incorporate additional flood information identified through stocktake onto the floodcheck website and the Australian National Flood Information Database (1 October 2012).</li> <li>• Integrate floodcheck website inputs into the national flood risk information portal (1 January 2013).</li> </ul>
<b>Completion date</b>	1 January 2013 (ongoing maintenance)

- **Amendments to Sustainable Planning Act 2009 and other legislation**

The Planning Implementation Group will consider issues arising from the Commission's recommendations in relation to the operation of the *Sustainable Planning Act 2009* and other planning instruments, and assessment of applications under the *Environmental Protection Act 1994* and the *Coastal Protection and Management Regulation 2003*.

<b>Lead agency</b>	Department of State Development, Infrastructure and Planning / Department of Environment and Heritage Protection (joint)
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Identify and consider recommendations in relation to the operation of the <i>Sustainable Planning Act 2009</i>, the <i>Environmental Protection Act 1994</i> and the <i>Coastal Protection and Management Regulation 2003</i> (1 July 2012).</li> <li>• Consider possible legislative amendments associated with the recommendations (December 2012).</li> <li>• Implement relevant legislative amendments (30 June 2013).</li> </ul>
<b>Completion date</b>	30 June 2013

- **Model flood planning controls**

The Planning Implementation Group will have responsibility for the development of new model flood planning controls, following consultation with local governments to determine the most appropriate planning instrument by which the controls should be given effect. The model flood planning controls will address the issues raised by the Commission including the use of flood overlay maps in council planning schemes, assessment criteria for community infrastructure and commercial property and storage of hazardous materials.

<b>Lead agency</b>	Queensland Reconstruction Authority
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Finalise the Queensland Reconstruction Authority's Part 2 floodplain guideline including flood hazard overlay code (incorporating recommendations regarding commercial property and flood storage) and discussion on expectations for new planning schemes (30 June 2012).</li> <li>• Develop model flood planning controls addressing assessment criteria for community infrastructure and commercial property, and storage of hazardous materials for consultation with local governments (30 October 2012).</li> <li>• Finalise proposed model flood planning controls and provide guidance on most appropriate planning instrument by which the controls will take effect (30 January 2013).</li> </ul>
<b>Completion date</b>	30 January 2013

- **Satellite planning systems**

The Planning Implementation Group will have responsibility for considering possible amendments to 'satellite planning' legislation which operates outside the *Sustainable Planning Act 2009* (the *Urban Land Development Authority Act 2007*, the *South Bank Corporation Act 1989*, the *State Development and Public Works Organisation Act 1971*) to incorporate requirements relating to SPP 1/03 and for implementing amendments to the Coordinator-General's Initial Advice Statement guidelines to incorporate requirements regarding projects' flood risks.

<b>Lead agency</b>	Department of State Development, Infrastructure and Planning
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Identify and consider how the satellite planning systems currently address requirements related to SPP 1/03 (1 July 2012).</li> <li>• Consider the appropriate mechanism to ensure that due regard is given to SPP 1/03 within an administrative, policy or legislative context (December 2012).</li> </ul>

	<ul style="list-style-type: none"> <li>Implement any relevant amendments to administrative, policy (including the Initial Advice Statement guidelines) or legislation, as required (30 June 2013).</li> </ul>
<b>Completion date</b>	30 June 2013

- Regulation of levees**

The Planning Implementation Group will have responsibility for establishing a framework for the regulation of levees, in consultation with local governments. This will include determining the most appropriate planning instrument for the regulation of levees and developing a consistent process for applications to build levees and a set of factors to be considered in assessing applications to build levees.

<b>Lead agency</b>	Department of Natural Resources and Mines / Department of State Development, Infrastructure and Planning (joint)
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>Government consideration of possible regulatory framework for levees (1 July 2012).</li> <li>Consider and complete regulatory and policy amendments associated with the regulatory framework for levees (31 March 2013).</li> <li>Implement, consult and build capacity (including training) for new framework (31 December 2013).</li> </ul>
<b>Completion date</b>	31 December 2013

## Building Implementation Group

### Purpose

The role of the Building Implementation Group is to oversee the implementation of the final report recommendations relevant to the Queensland Government contained in :

- chapter 9 – Building controls
- chapter 10 – Essential Services

The responsibilities of the Building Implementation Group will be to ensure the effective and timely implementation of the Commission's recommendations applicable to the group, and to coordinate, monitor and report on the progress of implementation of the recommendations.

### Membership

The Building Implementation Group will be chaired by the Director-General of the Department of Housing and Public Works and will include representation from the following agencies:

- Department of State Development, Infrastructure and Planning
- Department of Environment and Heritage Protection
- Department of Energy and Water Supply
- Department of Natural Resources and Mines
- Queensland Reconstruction Authority
- Department of Local Government
- Department of Transport and Main Roads.

The Local Government Association of Queensland will also be invited to participate. In addition, representatives of the Department of the Premier and Cabinet and Queensland Treasury and Trade will participate in meetings of the implementation group as required.

### Key Responsibilities

The Building Implementation Group will be responsible for implementing the recommendations contained in chapters 9 and 10 of the Commission's final report, encompassing a range of matters relating to the building and location of essential services to address flood risks.

Priority projects to be completed by the Building implementation Group include:

- Queensland Development Code – construction of buildings in flood hazard areas**  
The Building Implementation Group will have responsibility for considering amendments to the Queensland Development Code's proposed new mandatory part 'Construction of buildings in flood hazard areas' to reflect the Commission's recommendations.

<b>Lead agency</b>	Department of Housing and Public Works
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>Conduct consultation on amendments to the Queensland</li> </ul>

	Development Code to address the Commission's recommendations. <ul style="list-style-type: none"> <li>Adopt Queensland Development Code: construction of buildings in flood hazard areas.</li> </ul>
<b>Completion date</b>	October 2012

- Essential services infrastructure to address flood risks**

The Building Implementation Group will have responsibility for considering possible amendments to legislation, regulations, codes and procedures in relation to the placement of essential services infrastructure including:

- Sewerage (on-site sewerage systems, sewage reflux valves)

<b>Lead agency</b>	Department of Housing and Public Works
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>Sewage reflux valves – consider in conjunction with Queensland Development Code amendments</li> <li>On-site sewerage systems – consider amendments to the Queensland Plumbing and Wastewater Code for on-site sewerage systems as part of the review of the <i>Plumbing and Drainage Act 2002</i>.</li> </ul>
<b>Completion date</b>	Review of the <i>Plumbing and Drainage Act 2002</i> – end of 2012

- Stormwater (Queensland Urban Drainage Manual, LN1 drain system in Emerald)

<b>Lead agency</b>	Department of Energy and Water Supply
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>Review the Queensland Urban Drainage Manual to : <ul style="list-style-type: none"> <li>reassess recommended design Average Recurrence Intervals (ARI)</li> <li>reassess current public safety recommendations in the light of stormwater infrastructure potentially being required to handle higher ARI events</li> <li>consider stormwater systems and backflow flooding issues</li> <li>determine the changes required to Section 3 of the QUDM.</li> </ul> </li> <li>LN1 Drain System: Reach agreement between Sunwater and Central Highlands Regional Council on: <ul style="list-style-type: none"> <li>the purpose of the drain, and</li> <li>who is responsible for maintenance.</li> </ul> </li> </ul>
<b>Completion date</b>	Queensland Urban Drainage Manual – January 2013 LN1 Drain System – September 2012

- Electrical (model assessment criteria for sub-station developments, community infrastructure requirements, location of customer assets above defined flood level, sealing of electrical supply conduits)

<b>Lead agency</b>	Department of Energy and Water Supply
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>Electricity distributors to review and update procedures for installing connection points for generators to provide electricity supply to non-flooded areas that have had their supply cut during floods and report back to Government.</li> <li>Consider amendments to the Queensland Development Code and the <i>Electricity Act 1994</i> and <i>Electricity Regulation 2006</i>.</li> </ul>
<b>Completion date</b>	September 2012

- Rail (opportunities to increase flood resilience of rail networks)

<b>Lead agency</b>	Department of Transport and Main Roads
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>Establish current practices for flood immunity planning for new rail infrastructure.</li> </ul>
<b>Completion date</b>	September 2012

## Environment and Mines Implementation Group

### Purpose

The role of the Environment and Mines Implementation Group is to oversee the implementation of the final report recommendations relevant to the Queensland Government contained in chapter 13 – Mining.

The responsibilities of the Environment and Mines Implementation Group will be to ensure the effective and timely implementation of the Commission's recommendations applicable to the group, and to coordinate, monitor and report on the progress of implementation of the recommendations.

### Membership

The Environment and Mines Implementation Group will be chaired by the Director-General of the Department of Environment and Heritage Protection and will include representation from the following agencies:

- Department of Natural Resources and Mines
- Department of State Development, Infrastructure and Planning
- Department of Science, Information Technology, Innovation and the Arts.

In addition, representatives of the Department of the Premier and Cabinet and Queensland Treasury and Trade will participate in meetings of the implementation group as required.

### Key Responsibilities

The Environment and Mines Implementation Group will be responsible for implementing the recommendations contained in chapter 13 of the Commission's final report, encompassing a range of matters relating to operational and abandoned mines.

Priority projects to be completed by the Environment and Mines implementation Group include:

- ***Pre-wet season mine inspections***

The Environment and Mines Implementation Group will have responsibility for developing a risk assessment framework for the conduct of pre-wet season mine inspections across the State.

<b>Lead agency</b>	Department of Environment and Heritage Protection
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Conduct desktop review of existing procedures (complete).</li> <li>• Undertake workshops with regional management team (underway).</li> <li>• Finalise risk assessment checklist.</li> <li>• Conduct training and awareness as required.</li> <li>• Implement new standardised assessment process.</li> </ul>
<b>Completion date</b>	30 June 2012

- ***Impact of discharges from flooded mines on freshwater and marine environments***

The Environment and Mines Implementation Group will have responsibility for considering mechanisms to monitor the effects of mine discharges on marine environments and continuing to assess the impact of mine discharges from the 2010-11 floods on freshwater and marine environments.

<b>Lead agency</b>	Department of Environment and Heritage Protection
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Review data from the 2010/11 floods to assess the impacts of mine discharges on freshwater and marine water quality and fauna and flora.</li> <li>• Identify gaps in existing monitoring programs using results of the review.</li> <li>• Consult with relevant water quality data owners (State, Commonwealth and private) on options to improve monitoring, as required.</li> <li>• Provide advice to Government on any mechanisms necessary to improve monitoring programs, including resource requirements.</li> </ul>
<b>Completion date</b>	End of 2012

- ***Managing environmental impacts during floods***

The Environment and Mines Implementation Group will have responsibility for:

- assisting mine operators with application of model water schedule conditions as part of environmental authorities

- developing a new statutory mechanism to address discharges of water from mines during flood, including refining the criteria to be considered
- examining procedures for granting decisions on relaxation of emergency directions to allow discharges of water from mines.

<b>Lead agency</b>	Department of Environment and Heritage Protection
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Provide ongoing assistance to mine operators in their applications for amended environmental authorities to ensure, as far as possible, that each environmental authority contains a tailored version of Table 4 of the model conditions (underway).</li> <li>• Undertake industry consultation on the most appropriate regulatory mechanism to address discharges of water from mines during flood and emergency directions processes.</li> <li>• Prepare legislative amendments.</li> <li>• Amend internal guidance material and procedures.</li> </ul>
<b>Completion date</b>	Late 2012, subject to legislative timetable

- **Review of Abandoned Mines Land Program**

The Environment and Mines Implementation Group will have responsibility for consideration of options for the future management of the Abandoned Mines Land Program, including audits of abandoned mine sites and a risk assessment framework for future inspections. This implementation group will also be responsible for developing a database containing as complete a list of abandoned mines as possible.

<b>Lead agency</b>	Department of Natural Resources and Mines
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Review processes for managing abandoned mines in Queensland and for funding works on abandoned mines.</li> <li>• Develop a proposal for scope of the program and funding options, which will include an update on the development of a dedicated abandoned mines database.</li> <li>• Consider options obtaining information on abandoned mines from landholders.</li> </ul>
<b>Completion date</b>	<ul style="list-style-type: none"> <li>• Consideration of options for management of abandoned mines – July 2012.</li> <li>• Initial database design and prototype – end of 2012.</li> <li>• Full database implementation – 2013, following prototype evaluation and assessment of linkages with other government data sets.</li> </ul>

## Emergency Management Implementation Group

### Purpose

The role of the Emergency Management Implementation Group is to oversee the implementation of the final report recommendations relevant to the Queensland Government contained in chapter 15 – Emergency response and other interim report issues.

The responsibilities of the Emergency Management Implementation Group will be to ensure the effective and timely implementation of the Commission's recommendations applicable to the group, and to coordinate, monitor and report on the progress of implementation of the recommendations.

### Membership

The Emergency Management Implementation Group will be chaired by the Director-General of the Department of Community Safety and will include representation from the following agencies:

- Queensland Police Service
- Queensland Health.

The Local Government Association of Queensland will also be invited to participate. In addition, representatives of the Department of the Premier and Cabinet and Queensland Treasury and Trade will participate in meetings of the implementation group as required.

### Key Responsibilities

The Emergency Management Implementation Group will be responsible for implementing the recommendations contained in chapter 15 of the Commission's final report, encompassing a range of emergency planning and response issues.

Priority projects to be completed by the Emergency Management Implementation Group include:

- **Emergency response**

The Emergency Management Implementation Group will have responsibility for ensuring implementation of revised work procedures in regional offices of the Queensland Fire and Rescue Service regarding communications protocols and risk assessment analyses for swiftwater plans.

<b>Lead agency</b>	Department of Community Safety
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Instruct regions to maintain accuracy of telephone contacts on intranet and process for maintenance of these contacts (complete).</li> <li>• Develop risk analysis and incorporate into regional swiftwater plans.</li> </ul>
<b>Completion date</b>	<ul style="list-style-type: none"> <li>• Communications to regions – completed April 2012.</li> <li>• Risk analysis – completed April 2012.</li> <li>• Risk analysis and revised swiftwater plans in regions – August 2012.</li> </ul>

- **State Emergency Service (SES)**

The Emergency Management Implementation Group will have responsibility for considering a range of issues related to the operation of the SES, including:

- developing a new formula for the SES subsidy in consultation with local governments
- considering amendments to the *Disaster Management Act 2003* to allow an officer of Emergency Management Queensland (EMQ) to be appointed to direct SES operations in extraordinary circumstances
- pursuing the execution of 'Local Arrangements' with councils
- developing new directives or amending existing directives for SES operations and ensuring relevant staff are familiar with their operation
- simplifying the process of recognition of prior learning for SES members.

<b>Lead agency</b>	Department of Community Safety
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• SES subsidy: <ul style="list-style-type: none"> <li>– Consult with local government regarding new formula for SES subsidy</li> <li>– Implement new formula.</li> </ul> </li> <li>• Consider possible amendments to <i>Disaster Management Act 2003</i>.</li> <li>• Local Arrangements with councils: <ul style="list-style-type: none"> <li>– Continue to negotiate finalisation of Memorandum of Agreement</li> <li>– Liaise with councils regarding the execution of Local Arrangements.</li> </ul> </li> <li>• Develop new SES directives: <ul style="list-style-type: none"> <li>– Draft directives for consultation</li> <li>– Issue directives.</li> </ul> </li> <li>• Recognition of prior learning <ul style="list-style-type: none"> <li>– Streamline process of recognising industry experience of SES volunteers</li> <li>– Review EMQ Training Policy and Procedures Manual</li> <li>– Establish web portal.</li> </ul> </li> </ul>
<b>Completion date</b>	<ul style="list-style-type: none"> <li>• SES subsidy implementation – end of 2012.</li> <li>• Local Arrangements with councils – EMQ to continue to negotiate with councils.</li> <li>• New Directives – November 2012.</li> <li>• Recognition of prior learning – completed 30 April 2012.</li> </ul>

- **Recommendations from the Interim Report**

The Emergency Management Implementation Group will have responsibility for implementing remaining recommendations of the Commission's Interim Report, including swiftwater rescue training and equipment issues, consideration of possibilities for alignment of police, disaster district and local government boundaries, indemnity issues for makeshift evacuation centres, and emergency helicopter tasking.

## Dams Implementation Group

### Purpose

The role of the Dams Implementation Group is to oversee the implementation of the final report recommendations relevant to the Queensland Government contained in:

- chapter 16 – Operation of Wivenhoe and Somerset Dams
- chapter 17 – Other dam issues.

The responsibilities of the Dams Implementation Group will be to ensure the effective and timely implementation of the Commission's recommendations applicable to the group, and coordinate, monitor and report on the progress of implementation of the recommendations.

### Membership

The Dams Implementation Group will be chaired by the Director-General of the Department of Energy and Water Supply and will include representation from the following agencies:

- Department of Natural Resources and Mines
- Department of Community Safety
- Queensland Reconstruction Authority
- Department of Transport and Main Roads
- Seqwater.

The Local Government Association of Queensland/councils will also be invited to participate. In addition, representatives of the Department of the Premier and Cabinet and Queensland Treasury and Trade will participate in meetings of the implementation group as required.

### Key Responsibilities

The Dams Implementation Group will be responsible for implementing the recommendations contained in chapters 16 and 17 of the Commission's final report, encompassing a range of matters relating to past and future operation of the dams.

Priority projects to be completed by the Dams Implementation Group include:

- **Flood event reports**  
The Dams Implementation Group will have responsibility for oversight of improvements to the drafting and review of flood event reports, including the engagement of a suitably qualified independent reviewer to undertake a review of Seqwater's March 2011 report of the January 2011 flood event and development of work procedures for future reviews of flood event reports.

<b>Lead agency</b>	Department of Energy and Water Supply
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Engage independent reviewer to report on Seqwater's March 2011 flood event report. <ul style="list-style-type: none"> <li>- Interim Report (September 2012)</li> <li>- Final Report (October 2012).</li> </ul> </li> <li>• Flood Event Report Guidelines: <ul style="list-style-type: none"> <li>- Amended guidelines for Dam owners to develop flood event reports for dams with emergency action plans (October 2012)</li> <li>- Interim Flood Event Report Guidelines for regulatory assessment of flood event reports for dams with emergency actions plans (October 2012)</li> <li>- Finalised Flood Event Report Guidelines for regulatory assessment of flood event reports for dams with a flood mitigation manual (May 2013)</li> <li>- Finalised Flood Event Report Guidelines for regulatory assessment of flood event reports for dams with emergency action plans (May 2013).</li> </ul> </li> <li>• Amended <i>Water Supply (Safety and Reliability) Act 2008</i> to include new provisions for: <ul style="list-style-type: none"> <li>- Emergency action plans (November 2012)</li> <li>- Flood mitigation manuals (May 2013).</li> </ul> </li> </ul>
<b>Completion date</b>	Independent review of Seqwater's March 2011 flood event report – October 2012. Flood Event Report Guidelines – May 2013. Amendments to <i>Water Supply (Safety and Reliability) Act 2008</i> – November 2012 and further amendments by May 2013.

- **Wivenhoe, Somerset and North Pine dam operations**

The Dams Implementation Group will have responsibility for a range of issues associated with the future operation of the Wivenhoe, Somerset and North Pine dams, including:

- development of revised governance arrangements for the Wivenhoe Dam and Somerset Dam Optimisation Study and North Pine Dam Optimisation Study
- consideration of issues relevant to the adoption of operational strategies for the dams
- oversight of the development of new flood mitigation manuals for the dams, including appropriate drafting, review, assessment and approval processes
- consideration of the possible operation of North Pine Dam as a flood mitigation dam.

<b>Lead agency</b>	Department of Energy and Water Supply
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Prepare a report to the Government detailing the following options for consideration in the long term management of the Wivenhoe, Somerset and North Pine Dams: <ul style="list-style-type: none"> <li>- Flood management and dam operations – structural / augmentation</li> <li>- Flood management and dam operations – operational options</li> <li>- Water supply system security – structural/augmentation options</li> <li>- Water supply system security – operational options</li> <li>- Floodplain management – strategic non-structural</li> <li>- Floodplain management – strategic structural</li> </ul> </li> <li>• Amendments to <i>Water Supply (Safety and Reliability) Act 2008</i> to include provisions for: <ul style="list-style-type: none"> <li>- Criteria for determining a flood mitigation dam (November 2012)</li> <li>- Ministerial approval of flood mitigation manuals (November 2012).</li> </ul> </li> <li>• Development and implementation of new guidelines for the independent assessment of flood mitigation manuals (June 2013).</li> <li>• Develop revised flood mitigation manuals for the Wivenhoe, Somerset and North Pine Dams.</li> <li>• Update guidelines and work procedures for developing flood mitigation manuals.</li> <li>• Update guidelines and work procedures for regulatory review and assessment of flood mitigation manuals.</li> <li>• Amend water resource plans and resource operations plans where necessary for South East Queensland catchments.</li> <li>• Amend South East Queensland Water Supply Strategy where necessary.</li> </ul>
<b>Completion date</b>	<p>North Pine Dam Optimisation Study completion - 2012.  Wivenhoe and Somerset Dam Optimisation Study completion – 2013/14.  Revised flood mitigation manuals:</p> <ul style="list-style-type: none"> <li>• Urgent issues identified, as a result of the review of 2011 flood event report and findings from the optimisation studies – December 2012</li> <li>• Revised manual to reflect legislative changes made as a result of flood event report review findings and findings from optimisation studies – December 2013</li> <li>• Revised manuals completed on completion of optimisation studies – 2014/15</li> <li>• Amended <i>Water Supply (Safety and Reliability) Act 2008</i> – November 2012</li> <li>• Guidelines and work procedures – June 2013 and as required</li> <li>• Amended South East Queensland Water Strategy – 2015/16</li> <li>• Amended Water Resource Plans and Resource Operations Plans – 2017.</li> </ul>

- **Dam infrastructure**

The Dams Implementation Group will have responsibility for issues relating to dam infrastructure, including the operation of Splyard Creek Dam, cracking of Somerset Dam and possible upgrades to crossing, bridges and crest gates.

<b>Lead agency</b>	Department of Energy and Water Supply
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Prepare report detailing the impact of cracking in Somerset Dam submitted to the Dam Safety Regulator.</li> <li>• Prepare final report to the Government detailing the following options for consideration in the long term management of the Wivenhoe, Somerset and North Pine Dams: <ul style="list-style-type: none"> <li>– Flood management and dam operations – structural/augmentation</li> <li>– Flood management and dam operations – operational options</li> <li>– Water supply system security – structural/augmentation options</li> <li>– Water supply system security – operational options</li> <li>– Floodplain management – strategic non-structural</li> <li>– Floodplain management – strategic structural.</li> </ul> </li> <li>• Splityard Creek Dam operations: <ul style="list-style-type: none"> <li>– New control system installation to provide automatic triggers – July 2012</li> <li>– Determine mechanisms by which Seqwater may be empowered to direct releases from Splityard Creek Dam in emergency situations – September 2012.</li> </ul> </li> </ul>
<b>Completion date</b>	<ul style="list-style-type: none"> <li>• Somerset Dam Cracking Report submitted by Seqwater – November 2012.</li> <li>• North Pine Dam Optimisation Study completion – 2012.</li> <li>• Wivenhoe Dam and Somerset Dam Optimisation Study completion – 2013/14.</li> </ul>

- **Referable dams**

The Dams Implementation Group will have responsibility for developing new requirements and procedures for approval, review and audits of dam emergency action plans and conduct of dam safety audits.

<b>Lead agency</b>	Department of Energy and Water Supply
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Develop amendments to the <i>Water Supply (Safety and Reliability) Act 2008</i> (November 2012).</li> <li>• Prepare educational program on emergency action plans in conjunction with DCS and relevant dam owners (December 2012).</li> <li>• Draft guidelines setting new standards for emergency action plans as an approval document for voluntary implementation by dam owners with a referable dam (October 2012).</li> <li>• Work procedures that formalise the risk priority process to determine which referable dams are to be audited (September 2012).</li> <li>• Finalised guidelines and regulatory practices for reviewing, approving and auditing dam emergency action plans (June 2013).</li> <li>• Finalised guidelines setting new standards for emergency action plans as an approval document for mandatory implementation by dam owners with a referable dam (June 2013).</li> <li>• Development of an assessment and approval process for EAPs that operates across relevant agencies (late 2013).</li> </ul>
<b>Completion date</b>	Late 2013

- **Recommendations from the Interim Report**

The Dams Implementation Group will have responsibility for implementing the remaining recommendations of the Commission's Interim Report (as required, taking into account the recommendations of the final report) including the long-term reviews of the Wivenhoe and Somerset Dams and North Pine Dam flood mitigation manuals and the scientific investigations and modelling to be undertaken to support the review, and the review of ALERT gauges in the Wivenhoe and Somerset catchments.

- Long-Term Review of Flood Mitigation Manuals

<b>Lead agency</b>	Department of Energy and Water Supply and Seqwater
<b>Key milestones</b>	Refer to the Wivenhoe, Somerset and North Pine dam operations

	priority project above.
<b>Completion date</b>	As above.

- Review of ALERT gauges in the Wivenhoe and Somerset catchments

<b>Lead agency</b>	Department of Energy and Water Supply / Department of Natural Resources and Mines / Department of Community Safety
<b>Key milestones</b>	<ul style="list-style-type: none"> <li>• Include standards for the assessment of proposed additional ALERT gauging stations.</li> <li>• Include asset management arrangements.</li> <li>• Consider the design of rainfall gauge networks including engineering input to the correct design parameters.</li> <li>• Develop installation and maintenance standards.</li> <li>• Establish protocols for standards of service and reporting on compliance.</li> <li>• Develop standards for appropriate levels of redundancy in the network.</li> </ul>
<b>Completion date</b>	Late 2013