January 2011 Floods
Debrief Forum

Communique

15th – 16th March 2011

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Summary

A Forum, convened by Engineers Australia, supported by the Institute of Public Works Engineering Australia (IPWEA) and Consult Australia, has reviewed the experience of the January 2011 floods in Victoria and developed a seven-point plan to be considered for the improvement of future flood planning and management in Victoria.

The Forum noted that the performance of Government agencies, Local Government, community groups, and private bodies during the floods had been very good, overall, with a low level of injury and only one lost life. This was despite the unprecedented scale of the floods, which meant there were few benchmarks by which to frame the management response.

Nevertheless, such a massive event provides many opportunities to learn and prepare for future events. The Forum's seven-point plan was prepared with this in mind, and comprises:

1. Improvements to risk-based planning for disaster management at State, Catchment and Local Government levels, including planning flood pathways through communities and particularly new subdivisions, that minimise damage;
2. A communication strategy during flood events that delivers timely, more relevant, and better targeted information to the community, by more effective use of technology; that gives more relevance in flood level prediction reporting;
3. A streamlined, upskilled chain-of-command, with clearer team accountabilities and increased resources and training for both professional and volunteer staff;
4. Infrastructure improvements to the warning systems, especially to the network of flood gauges;
5. More flexibility for Councils to respond to the needs of recovery, including in procurement of goods and services during both the disaster and the recovery and options for 'building back better' rather than simply replacing assets with like infrastructure that proved inadequate during the flood; an appreciation that in many Rural Councils, contractors are not available and Councils have the resources to rapidly restore community infrastructure;
6. Better knowledge resources including better catchment flood models for flood planning and clearer responsibilities for, ownership and operation of, water assets and particularly levees; and flood control infrastructure; and
7. Improving public understanding of disaster risk management and factoring potential flood liabilities into any assessment of approvals for land use, especially for urban development and farm settlements.

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Background

The purpose of the Forum was to review the recent experience of the unprecedented 2011 Victorian floods and draw out lessons for the future. Participants included Council Engineers, Asset Managers. and Agency Representatives

While Council Engineers do not always have lead responsibility for disaster planning and response, they do manage engineering works and public assets and advise Councils on planning and development issues for private assets. Engineers therefore, have a major stake in the effectiveness of the response to floods and other natural disasters and make key inputs to the planning, management and recovery of disaster events

The Echuca Forum, held 15-16 March was attended by 50 participants from 16 Councils and other involved Agencies. The Program for the Forum, provided in Appendix A, comprised presentations from all Councils represented, Government Agencies and relevant Consultants. The presentations will be available at a later date.

Following the presentations, discussions at the Forum identified seven key areas for action. These are outlined below.

Action 1: Improving risk-based planning for floods

The Forum noted that, unlike bushfires, floods had a high degree of predictability of areas likely to be affected. The response to floods should, in principle, therefore be far better planned. Yet, floods still cause far more damage than bushfires.

The Forum concluded that planning for future floods should be risk-based, with assets identified both in terms of their exposure to the extent of flooding and the value of the asset. This would facilitate planning for protection of key assets and minimisation of total economic, environmental and/or community loss.

Specifically, the Forum recommended that:

1.1 *The State Government should review the broad, State-wide flood management plan to provide more detailed plans prepared by Catchment Management Authorities (CMAs). The plans developed by CMAs should be audited, with the risk-based flood plan developed by Melbourne Water used as the 'best-practice' model.*

1.2 *This flood plan should also identify 'flood pathways' that provide known-volume capacities for taking floodwaters. Best practice approaches are available in the Netherlands, where 30% of land is subject to flooding. Commercial, industrial or residential development on these flood pathways should only be undertaken if the benefits outweigh, and can finance, the flood risk that the development incurs.(see Action 7).*

1.3 *All existing levees should be identified the historical purpose of the levee should be reviewed and then a long term associated plan developed for the maintenance and/or re-engineering of the levee system within a catchment to optimise overall water management, including future floods. The responsibility for this infrastructure should be clearly defined.*

Action 2: More effective communication during flood events

The Forum noted that while communication problems could be expected in a disaster situation, many towns had good notice of the impending floods but many in the community were uninformed both on the progress of the flood and on the measures they should take for defending against or evacuating from the flood.

There were also many instances of misinformation, either because of misinterpretation of information provided or rumours that started in the absence of definitive information.

The Forum identified measures for better targeting of information in language that gave clear instructions to affected people, as well as better use of communication technologies, including:

2.1 *More precise geographic targeting of information - using the risk-based plan developed under Action 1 to target specific neighbourhoods rather than simply broadcasting about whole towns being under threat. This would also facilitate more direct and relevant advice to individuals.*

2.2 State Emergency Service {SES }staff should practice greater use of local knowledge in formulating communication plans, including targeting not only neighbourhoods at risk but also identifying special needs households such as the elderly or socially-isolated.

2.3 Using the Internet to provide real-time information on the progression of the floods, including updates from the VicRoads website on the status and threats to roads. The websites provided in North-eastern NSW provide a best-practice model for this. Responsibility for information provided to the VicRoads site should be shared with the SES and CFA, as the underlying geographic data can be shared. A more relevant Map Based Reporting system should be developed, to enable the Public to more easily plan safe routes of long distance travel in times of flood.

Action 3: Clearer chain of command and organisational co-ordination and capacity

Although the overall flood response had been good, many Councils felt that the current divide between the Incident Control Centre, Divisional Command and the Municipal Emergency Coordination Centre (MECC) that coordinates municipal resources could be improved. Community capacity to respond to the disaster had been patchy, with skills and systems less well-developed than for bushfires.

3.1 A Local Government Liaison Officer should be automatically represented at the Incident Control Centre, Divisional Command to ensure efficient and effective use of municipal resources and knowledge during operations.

3.2 Streamline decision-making and communication. Processes between the MECC and the Incident Control Centre {ICC} to ensure that limited Local government and Agency resources, are used effectively and effort is not duplicated.

3.3 SES should be resourced to provide enhanced training of key individuals in disaster response, including Agency staff, elected officials (especially Mayors) and volunteers. SES and Councils, where flooding is an identified risk, should be audited to ensure that they hold regular exercises/ drills in responding to flood disasters. The availability of training through the Australian Emergency Management Institute, Mt Macedon Civil Defence Training College should be made more accessible and affordable, to Local government staff.

3.4 SES and CFA should collaborate on flood exercises, especially in smaller municipalities where limited personnel may be common for many disasters.

Action 4: Maintaining Flood Warning Infrastructure

The Forum noted that some flood gauges had failed during the flood.

Communities also had difficulty extrapolating flood level warnings to their local neighbourhoods - it wasn't clear, for example, how for example, a 2m flood level at the gauge (vs AHD) would translate to individual households well distant from this measuring point. The use of AHD level reporting for all flood reporting would be more relevant . Households in potential flood areas, should have clearly identified AHD levels for floor levels . There is also some confusion over where responsibility for water assets (levees, channels etc) and 'orphan assets' were among the first to fail during the floods.

4.1 CMAs should be responsible for ensuring a network of appropriate flood gauges is maintained and functional - where third party gauges with multiple uses are included in the Network, CMAs should have responsibility for ensuring their operability to AHD standard.

4.2 Flood levels should be indicated at neighbourhood level - eg 2m flood could be indicated on a local power pole - to allow householders and local businesses to relate the threat directly to their properties. This has been implemented successfully in some areas.

4.3 Ownership of all water assets should be made clear - either via legislation covering different classes of assets or audited registers of assets, with responsibility for those assets agreed between State agencies, CMAs, Councils and private owners.

Action 5: Flexibility during response and recovery and building back better

During the disaster and the recovery, sometimes the easiest way to respond is for Councils to use their own staff and equipment rather than external contractors. But this is currently discouraged because State and Federal government grants do not fund work undertaken by Council staff, even if it is clearly disaster related. They fear Councils are 'double-dipping', although it usually means that other Council work is delayed and so contractors will subsequently be needed to make up the lag on routine work. In many local Government Areas, contract options may not be available, delaying reinstatement and significantly increasing costs.

5.5 Councils and State/Federal authorities should develop procedures that allow Council resources to be used and funded for disaster-related work where this leads to the best long term community outcomes, with safeguards against Councils using this to their own financial benefit. State and Federal funding bodies also usually only provide funding for the replacement of an asset with an equivalent asset destroyed during a flood. But the failure of these assets during a flood may mean that it makes more economic or environmental sense to upgrade rather than just replace them. The possibility of 'building back better' should be available. Consequently, the Forum recommended that:

5.6 Councils and State/Federal agencies should develop guidelines to allow for destroyed assets to be 'built back better' where this makes economic or environmental sense, with an equitable sharing of additional costs.

Action 6: Developing the knowledge base

Given that floods are far more predictable in terms of the area likely to be affected than other natural disasters, their impact could be significantly reduced through the capture and application of knowledge on flood behaviour. The Forum recommended that the knowledge base could be upgraded by the following measures:

6.6 CMAs should be funded by the Sate Government to upgrade flood models to provide enhanced prediction of flood behaviour.

6.7 The Department of Sustainability and Environment should produce a reference document or web resource on best practice flood management for use by all responsible bodies.

Action 7: Public understanding and responsibility for flood liabilities

As floods occur with irregular frequency, including long periods without flooding, the community soon forgets the experiences and effects. The continued building and development on flood plains means that economic loss is inevitable. Many households and businesses do not take out flood insurance but expect government and community support when disaster strikes. This undermines those who do go to the expense of flood insurance.

To provide more systematic assessment of flood impacts in the planning and development process, the Forum recommended that:

7.7 The risk-weighted costs of floods be included in the economic, environmental and social assessment of development proposals and that where these are significant, the developer/proponent should be required to contribute to future flood damage liabilities.

7.8 Owners of public and private assets identified as at-risk in the flood management plan should be required either, to knowingly accept the risk, either by implementing their own mitigation measures, or to take out flood insurance.

Appendix 1: January 2011 Floods Debrief Forum Program

Engineers Australia

JANUARY 2011 FLOODS DEBRIEF FORUM

Echuca, Tuesday 15 - Wednesday 16 March 2011

Supported by: Institute of Public Works Australia & Consult Australia

Engineers Australia, supported by IPWEA, are convening a 1 ½ day debriefing session to enable Local Government Engineers and other Regional Operatives to discuss the events of the January floods.

This event will be an opportunity for Engineers to come together to share common experiences and will also allow for preparation and planning strategies for future natural disaster events in order to prevent similar incidents.

A Communiqué capturing lessons learnt will be developed at the end of the Forum.

Venue
Port of Echuca Motel and Conference Centre
465 High Street, Echuca T (03) 5482 5666
info@qualityinnechuca.com.au www.qualityinnechuca.com.au

PROGRAM DAY 1 : TUESDAY 15 MARCH

12pm – 2pm: Welcome and Registration

Meet and greet over a light luncheon

2pm – 5pm: Open Forum

"Share your January, 2011, flood management experiences with like minded engineers and operatives."

An opportunity for each Municipality to outline their experience – what worked, what did not. Presentations will be made by:

- Campaspe Shire
- Hindmarsh
- City of Geelong
- Central Goldfields Shire
- Horsham Rural City
- Pyrenees Shire
- Gunnawarra
- VicRoads\
- Followed by a presentation by the Department of Treasury and Finance on Funding and Disaster claims issues and processes (with Q&A).

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JANUARY 2011 FLOODS DEBRIEF FORUM

Echuca, Tuesday 15 - Wednesday 16 March 2011

Supported by: Institute of Public Works Australia & Consult Australia

6:30pm: Forum Dinner

Guest Speakers: John Forrest MP, Mr Mal Kersting

Semi casual dinner, allowing for further networking and consideration of issues. Guest speaker John Forrest, Federal Member for Mallee and Fellow of Engineers Australia, will present on the implications of the January 2011 Flood Events. A second guest speaker will be Mr Mal Kersting, Regional Director, VicRoads Northern Victoria.

PROGRAM DAY 2 : WEDNESDAY 16 MARCH

8:30am – 10.30am: Emergency Management Issues

Andrew Gissing, Director of Emergency Management and Communication, SES, Dr Andrew Barton, GM Water and Dan Midford, North Central Catchment Management Authority will present. Information on emergency plans and flood planning will be discussed.

"Find out what worked and what did not work in the Flood Events."

10:30am – 11:15am: State Flood Management Strategy

Nick Ronan will present on the Department of Sustainability.

11:15am – 12:30pm: Open Forum (Part 1)

"What do we all have to do for better preparedness and management, next flood or storm event."

12:30pm – 1:30pm: Lunch

1:30pm – 3pm: Open Forum

"What do we all have to do for better preparedness and management, next flood or storm event."

3pm – 3:30pm: Communiqué

Preparation for Communiqué capturing lessons learnt for release by Engineers Australia, IPWEA and Consult Australia.

3:30pm: Close

Enjoy afternoon tea and prepare to conclude the trip.

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