

## SOME THOUGHTS ON WHAT COULD/SHOULD HAVE BEEN DONE TO BETTER MANAGE THE FLOOD OF 31 MARCH 2017

### **Early Advice/Information**

From Friday 24 March to Wednesday 29 March the development of Cyclone Debbie and its movement was well reported in media weather reports and on local ABC radio commentary by Steve Symonds. A timely Floodwatch was issued in the afternoon of Tuesday 28 March.

On Wednesday the Floodwatch could have been updated to an appropriately worded PRELIMINARY FLOOD WARNING (or a new FLOOD ALERT) given the southward movement of the ex-tropical cyclone (a rain depression) and associated heavy rainfall which was predicted. Why a Preliminary Flood Warning or Flood Alert? – The situation had changed from a few days earlier when a flood was possible (hence the Floodwatch). By Wednesday a flood was a clear probability not just a possibility.

### **The Flood Event (from early Thursday morning)**

Heavy rain began to fall in the catchment at 2-3am Thursday and was widespread across the catchment by 6am. At 7.10am the local ABC radio, in its regular weather segment, broadcast details of extremely heavy falls of more than 100mm in the catchment. One listener and regular reporter said he had measured 150mm. Rain of such intensity is 'real flood rain' (defined as 25mm or more per hour) and experienced locals said a big flood was likely and one said "it could be like 1974". He was not far out!

These reports along with very heavy rain in Lismore were indicators that a significant flood was very likely.

By 9am, after 6-7 hours of such rain and the continuing southward movement of the rain depression a FLOOD WARNING could have been issued to say that:

"Extremely heavy rain has been falling in the catchment for the past 6-7 hours and more than 150mm has been recorded in a number of locations. The very heavy rain is still falling and is expected to continue due to the continuing southward movement of ex-tropical cyclone Debbie. A flood is expected, however it is too early to predict a height. People are advised to listen to local radio stations after the hourly news when more detailed information will be provided on the developing situation".

By noon 'alarm bells should have been ringing' because catchment gauges were indicating significant rises, yet the FLOODWATCH had not been upgraded. The FLOODWATCH was upgraded to a MODERATE FLOOD WARNING at 12.39pm (apparently the time the BoM advised RT SES. However, for some inexplicable reason this warning did not go out over the media until just before 2pm. Lismore City SES received the warning by fax at 2.01pm.

By 2pm Nimbin had passed its 1974 level and had risen a significant 0.5m in the previous hour and The Channon was approaching its 1974 level.

By 2.30pm Nimbin was 0.5m above the 1974 level and had risen 1m in the last hour and The Channon was within millimetres of its 1974 level and had risen 1m in the previous hour. Most other gauges were indicating rapid rises and heavy 'flood rain' was still falling.

By 2.30pm Thursday a major flood was virtually certain. It was certainly time for a MAJOR FLOOD WARNING to be issued. Flood Bulletin 2 (Major Flood Warning for the Wilsons River) was issued

at 4pm (this time is printed on the bulletin and is presumably the time RT SES received advice from the BoM). It was faxed to Lismore City SES at 4.32pm. It is not known exactly when it was aired by local radio stations. Notwithstanding the fact that such a warning should have been given at least one and a half hours earlier, some businesses receiving such a warning close to closing time may have had difficulties taking appropriate action because of staff having already left or about to leave.

A number of problems need to be addressed:

1. Apart from the timely Floodwatch, other bulletins, Bulletin 1 (Minor Flood Warning) and, especially Bulletin 2 (Major Flood Warning) were not issued early enough.

2. Bulletin 2 was badly prepared with some vague expressions and imprecise timings.

To refer to the river "reaching around 11m early Friday morning" without stressing that it is not a peak was misleading.

What does "early Friday morning" mean anyway? For one person 7am might be early, for someone else 2am might be early. The person predicting 11m for early morning must have had a time in mind in order to say early morning so why not state the time.

According to the BOM, "Flood Warnings provide a predicted flood level and the time at which a River will reach that level". This was not done.

Also, the word "possibility" was used – "possibility ..... of reaching around 11m."

Is such vagueness a kind of insurance against being wrong. Surely not, but nevertheless it is clumsy wording and makes the message less useful than it should be.

It should have been stressed that if the river reaches 11m the levee will be overtopped and the CBD will be inundated. This vital piece of information should have been included with the height prediction yet it hidden amongst other less important information on page 2.

At the bottom of page one and the top of page two there are 28 lines of information which radio staff are asked to read out. Some of this material is of questionable relevance in such a bulletin and would be better printed on a Flood Fact Sheet (one for North Lismore, one for South Lismore and one for the CBD/Basin) which could be made available to all residents and businesses for them to keep in their homes/businesses for reference in times of flood. This would make for shorter bulletins which could concentrate on the most important details and possibly be repeated as has been done in other situations to good effect.

3. Some people affected by the flood were not aware until it the flood was upon them. This is a real problem and shows that there is need for more/better public education. Consideration needs to be given to how the initial notice (warning/alert) can best be given to the public. At an appropriate time, possibly late this year and before the next 'flood season' a very well designed and presented public information program should be embarked upon.

4. Some people did not listen to the radio and missed important information. The radio has been very useful in past floods and virtually everyone tuned in to hear the latest information. It seems that fewer people have done so in recent years, however given the recent disaster it is probably an opportune time to inform the public of the benefit of listening to the radio. Too much is expected of radio staff who do a great job. Refer to Bulletin 2 – they are expected to read too much. Also, SES should take over 'ownership of the official broadcast information' and go back to the system of earlier years when SES staff actually read the information on air.



5. Many people have complained about the timing of the Evacuation Order and in some cases the manner in which it was delivered. With the levee expected to overtop in the early hours of Friday morning, there have been complaints that evacuation orders were too early. Some people have said that the attitude of some people issuing the evacuation order showed little empathy for people trying to save their stock/property and were in fact overbearing, rude and threatening. If that is so, more attention should be given to how that part of the event is managed. One police officer was heard to say that "lives are more important than property". That is, of course, true, but what was the pressing need to evacuate up to ten and a half hours before the levee overtopped? What was the danger to life?

The evacuation order was issued at 5.28pm (the time on SMS messages) when the river was at 6.15m and rising at approximately 0.5m/hr. At that rate of rise it would be at least nine hours before the levee would overtop. Actually, it was likely that more than nine hours would elapse before overtopping because as higher levels are reached the rate of rise tends to slow.

When was the decision made to order an immediate evacuation? It is likely that the decision was made 30 minutes or so before 5.28pm (see above time of the SMS message) because it would take some time to draft the message, for someone to approve it and then actually send it. This means that the actual decision to issue the immediate evacuation order was made when the river height was below 6m.

One of the benefits the levee provides, apart from keeping moderate floods out of the CBD is that in the case of an overtop it should give people in the CBD several extra hours to prepare and save stock and protect property. The unnecessarily early order on 30 March effectively denied those who promptly obeyed the order the extra time that the levee should have given them.

This leads to the point that there were unnecessary losses suffered. An example is a coffee shop proprietor who was new to Lismore who thought he was doing the right thing by obeying the order and did not stay to lift or remove his machines etc. and suffered a loss in excess of \$50,000.

Another business proprietor lifted his stock and property above the 11m referred to in Bulletin 2 because it did not tell him that the figure was not a peak and the level could go higher (as it should have stated). His loss was in excess of \$100,000. One other business owner claimed his loss exceeded \$400,000. There are many, many similar stories.

One can only guess at what the total sum of losses would be for the whole of Lismore.

No doubt ignorance and complacency would explain some of the failures to take appropriate action but the conclusion is inescapable that the less than adequate management of the flood on the part of those issuing warnings and orders contributed significantly to losses suffered.

A senior SES officer at RTHQ said at a public meeting that there were "unknowns because the levee had not been overtopped before". This seems more like a 'cop out' than a genuine reason. The reality is that if people in the main block of the CBD were ready to leave when the levee overtopped in the recent flood they could have done so in complete safety via Keen Street, Orion and Leicester Streets. Such a late evacuation is not to be recommended, but there was certainly no need to order evacuations as early as was done.

6. It is interesting to look at the timing of the various bulletins and orders. The Floodwatch remained current for too long, until the Minor Flood Warning (12.39pm Thursday or just before 2pm as far as the public was aware) quickly followed by a Major Flood Warning (4pm) and then very quickly by an Immediate Evacuation Order (5.28pm).

If certain people had been 'on top of things' the timing of these warnings/orders could have been quite different. This flood (or any other flood) did not develop so quickly that the process should have moved from Floodwatch to Evacuation Order in only five hours, or only



four and a half hours as far as the public was aware.

7. A Lismore resident who was away from home at the time of the flood reported hearing a senior officer at State SESHQ say after the flood peak in Lismore "The flood threat has moved downstream to Ballina and it is to be hoped that the Ballina residents take more notice of what they are told than the people of Lismore". It can be assumed that he was referring to the fact that a number of business people in the CBD did not take kindly to being told to evacuate at a time they considered was much too early and told the deliverers of the message where to go!!!
8. It is patently obvious that there are some serious management problems within SES in that some people who are making decisions lack sufficient local knowledge/experience to make the best decisions and do not avail themselves of the extensive local knowledge/experience that is available at Lismore City SES. Also, it has been claimed that some decision-making that should be the province of the Local Controller, such as the issuing of Evacuation Orders, has been hijacked by people at Richmond-Tweed HQ or at a higher level. If this is correct, it is not only contrary to proper procedure, it displays an unacceptable arrogance and at best it is poor management practice and unprofessional, but most importantly it runs the risk of poor decision-making leading to community lack of confidence in SES and risking distrust in the future, and this lack of confidence and distrust is directed at local SES volunteers because it is the local volunteers that the community has day-to-day contact with and this is a cross that local volunteers should not have to bear when it is the fault of others.
9. In the last flood a significant number of SES and RFS members were brought in from elsewhere in NSW and interstate and while this was a worthwhile exercise because some of them did great work, some important points must be made:
  - a) there was insufficient co-ordination/co-operation/consultation between RTHQ and Lismore City SES. There was no central control issuing tasks to personnel.
  - b) some important decisions were made by out-of-district people acting as Incident Controllers who had little or no local knowledge (at least insufficient local knowledge).
  - c) Lismore City SES has two members whose service dates back to 1964 and 1972, both of whom have had experience in floodboats and have a detailed knowledge of the complexity of local flooding (probably more complex than flooding in any other river system in NSW).
  - d) after almost every flood calls are made that there should be more local input and control in planning, decision-making and management (this goes back as far as Bruce Duncan, local member for Lismore in the 1970s).

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Received by
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Date: <b>31/5/22</b>
Resolved to publish Yes / No