

From: Guppy Ron
Sent: Thursday, 8 October 2009 12:58 PM
To: Allen Peter
Subject: Flood Operations Manual - some thoughts

Attachments: Document1.doc



Document1.doc

1. Section 8.4 talks about the strategy being chosen based on predictions, maximums and peaks as below:

The strategy chosen at any point in time will depend on the following predictions which are to be made using the best forecast rainfall and stream flow information available at the time:

- *Maximum storage levels in Wivenhoe and Somerset Dams.*
- *Peak flow rate at the Lowood Gauge (excluding Wivenhoe Dam releases).*
- *Peak flow rate at the Moggill Gauge (excluding Wivenhoe Dam releases).*

My concept is that actual values are used with some variations allowed for based on forecasts.

2. The flow chart on Page 23 needs to be looked at, particularly the use of 'likely'. There are a few W1s that need to be removed.
3. All W strategies should refer to actual levels and flows and not the predicted levels and flows. Then W4A and W4B can be differentiated based on Predicted Maximum Lake Level.
4. Strategy W2

I still have some difficulty in distinguishing between W2 and W3. Does the shift happen if it becomes impossible to restrict flows at Lowood to less than 3500 m³/s.

I think there needs to be another criterion of not less than 1900 m³/s given for the target maximum flows. Otherwise if for example the natural peak flow at Lowood excluding Wivenhoe releases was only 1000 m³/s that becomes the target maximum flow there.

I think it would be useful to have some 'guidance' for the SFOE in determining the actual outflow in particular circumstances such as when the water level is expected to peak at below EL 74.

5. Gate Operation Sequences – Section 8.6

- For outflows >4000 m³/s – says 'no restrictions on gate operating intervals' but W4A says openings to occur 'at the minimum intervals'.
- The large Table in section 8.6 is not helpful and likely to be confusing.

Under normal circumstances, gate operation is not dependent on storage level until EL 74 is exceeded. It is solely based on a discharge. The Table suggests otherwise.

Even after EL 74 is reached the strategy is to open gates at minimum intervals until the water level begins to fall. That also is inconsistent with the Table.

All that is needed is the order of gate operation.

The same Table in section 10 has merit but only up to EL 74 when 'open gates at minimum intervals until the water level begins to fall' is the requirement.

A few other pretty insignificant suggestions

- The Definitions section has Dam Supervisor but the emergency procedures sections refer to 'officer in charge'
- 'Flood Operations Centre' could be added to the Definitions section
- Section 2.4 last paragraph – there is an 'and' which should be 'an'
- Section 3 – All objectives apart from be at Full Supply Level at the conclusion of the event have a sub-section.
- Section 3.3 Extreme and Closely Spaced Floods is a bit out of place. Maybe renumber it as 3.2.?
- Table in 6.2. page 15 - for BOM – if we now have a 'flood event' that should be the trigger for providing information.
- In the title of the figure on page 40 'Strategy S2' should be removed - it applies to S3 as well.
- Page 44 dot point 2 refers to Somerset Dam. It should be Wivenhoe Dam.