

SEQ Water Grid Manager

Submission in response to the second supplementary submission of Seqwater

- 1 This submission by the SEQ Water Grid Manager (**Water Grid Manager**) is specifically in response to certain paragraphs of the second supplementary submission on behalf of Queensland Bulk Water Supply Authority (**Seqwater**) which was provided to the Commission and circulated to relevant parties under cover of a letter from Allens Arthur Robinson dated 3 June 2011.
- 2 The parts of Seqwater's submission with which the Water Grid Manager specifically takes issue are contained in Part VIII of that submission, the key parts of which are also replicated in paragraph 23 of Seqwater's submission. Those contentious elements are here, for convenience, referred to as 'Seqwater's submission'.
- 3 Relevantly, the thrust of Seqwater's submission is that:
 - (a) the advice which it gave in December 2010 with respect to pre-emptive releases of at least 250,000 ML was materially the same as the advice which it gave in February 2011;
 - (b) there was a difference in the advice given by the Water Grid Manager in February 2011 from that which it gave in December 2010 on pre-emptive releases of that scale; and
 - (c) the receipt of the 'new advice' from the Water Grid Manager in February 2011 was one of the essential pre-requisites for, or, at least, reasons for Seqwater making its recommendation of 10 February 2011, that a reduction in Wivenhoe Dam's storage level to 75 per cent of its full supply level (**FSL**) would provide appreciable flood mitigation benefits.
- 4 The Water Grid Manager contends that Seqwater's submission is based on an incomplete account of the evidence before the Commission and erroneous. In particular, Seqwater's submission

ignores key parts of the unchallenged and uncontroverted evidence of Mr Barry Dennien and Mr Daniel Spiller (refer to statement of Barry Kevin Dennien sworn 5 April 2011 and the supplementary statement of Daniel Thomas Spiller affirmed 17 May 2011). Reference is also made to the transcript of Mr Dennien's testimony of 18 May 2011 to the Commission, during which counsel for Seqwater cross-examined him on parts of his statement but, significantly, did not question him (let alone challenge him) on the alleged difference in the advice provided by the Water Grid Manager in December 2010 and February 2011 respectively.

5 The Water Grid Manager submits that Seqwater's submission fails to take account, in particular, the significant communications between officers of the Water Grid Manager and Seqwater prior to the provision of the Water Grid Manager's advice to the Minister on 24 December 2010. The Water Grid Manager refers to the following evidence which Seqwater's submission ignores:

- (a) the initial email from Mr Pruss of Seqwater of 10 November 2010, attaching the draft advice received on that date from Seqwater's 'Dam safety guys'. That draft advice noted that 'reductions in dam volume in the order of at least 250,000 megalitres would be needed to provide any significant reduction in water level peaks experienced in urban areas' and that such reductions would not necessarily guarantee reductions in urban flood levels because the distribution of rainfall in the Brisbane River catchment governs the extent of possible urban flooding, as would the spacing between individual flood events (paragraph 54 of Mr Dennien's statement and paragraph 68 of Mr Spiller's supplementary statement);
- (b) Mr Pruss' concession to Mr Spiller, on or about 16 November 2010, that the draft advice provided by Seqwater 'may not answer all the questions and may need some more work' (paragraph 69 of Mr Spiller's supplementary statement);
- (c) the meeting between Messrs Dennien and Spiller, Mr Pruss and Mr Drury of Seqwater on 23 November 2010, in which Mr Drury indicated:

- (i) that even if there was a significant reduction from the dam, it was unlikely to make any difference to the peak flow down stream;
- (ii) a large reduction in the dam level would not change whether or not there was 'mud in the houses' in Brisbane;
- (iii) if pre-releases were made from the dam immediately prior to major inflows, there was risk that, in a situation like the 1974 flood, large releases from the dam would coincide with the king tide or significant rainfall in the catchment area below the dam, making potential floods worse, and that that was illustrative of the types of complex interactions which necessitated the undertaking of detailed modelling;
- (iv) Seqwater was not in favour of doing pre-releases immediately prior to a potential flood event because of the unpredictability of weather systems, the tides and the confluence of all of those events; and
- (v) that the questions asked by Mr Dennien were very complicated and required a significant study that would take in the order of six months to do.

(see paragraph 76 of Mr Spiller's supplementary statement and paragraph 56 of Mr Dennien's statement).

- (d) the exchange of emails between Mr Drury and Mr Dennien on 2 and 3 December 2010 and their exchange on 8 and 9 December 2010, particularly:
 - (i) Mr Drury's concession, in his email of 9 December, that no modelling had been undertaken in respect of the comments that 'dam volume reductions of 250,000 megalitres (reduction 20% dam level) would be needed for any significant reduction in water level peaks';

- (ii) that was because the bigger the event, the much less impact a reduced FSL would have;
- (iii) that Seqwater had not attempted to model each scenario in the discussion paper, or even a variety of scenarios, and that a major study would be required to undertake that exercise;
- (iv) that the Queensland Water Commission (**QWC**) had commissioned Seqwater to undertake a study relating to raising the Wivenhoe Dam FSL and would also consider those issues;
- (v) that the study was scheduled to commence early in 2011 and would take in the order of six months;
- (vi) that quantifying the exact size of the potential benefit for a range of scenarios would take a major study, which would commence in the new year;
- (vii) that the flood mitigation manual should not be modified lightly and certainly not without suitable engineering investigations being undertaken; and
- (viii) that Seqwater would undertake extensive investigations for the QWC in the new year to examine the possibility of raising the FSL of Wivenhoe Dam and that the scope of that work should be widened to also examine in detail the costs and benefits of modifying the flood mitigation manual to allow 'pre-lowering' of storage levels based on forecast rainfall at the onset of potential flood events.

(see paragraphs 59 to 62 of Mr Dennien's statement and paragraphs 78 to 82 of Mr Spiller's supplementary statement and copies of the emails which appear in Annexure AA to Mr Spiller's supplementary statement).

(e) based on Seqwater's advice, Mr Dennien briefed the Minister at the Minister's meeting with the Water Grid Manager Board and senior management on 13 December 2010 to the effect:

- (i) that, without modelling, Seqwater had advised that major reductions below FSL may be required in order to lower impacts for large floods, however the estimated reductions varied greatly between 250,000 megalitres (21 per cent of capacity) to 580,000 megalitres (or 50 per cent capacity); and
- (ii) Seqwater had advised that pre-emptive releases in the days or hours before a major rainfall event was not recommended because of the difficulty in predicting exactly how much rain would fall and where, and the impact of releases from the dam downstream in the event that there was either a high tide or significant rainfall downstream.

(see paragraph 63 of Mr Dennien's statement and paragraph 83 of Mr Spiller's supplementary statement).

6 On a fair reading of that evidence, Seqwater's advice in November and December 2010 was, at best, tentative and inconclusive. There was no definitive advice by Seqwater that pre-emptive releases of at least 250,000ML were necessary or appropriate; indeed Seqwater was opposed to any such reduction without the undertaking of a comprehensive study and modelling which would not commence until the new year. That advice formed the basis of the Water Grid Manager's advice to the Minister, as the latter revealed in terms. At the 25 January 2011 meeting between the Chairs and Chief Executive Officers of the QWC, Seqwater and the Water Grid Manager and the Director-General of DERM and other departmental staff to discuss the Minister's letter to Seqwater of 20 January 2011, it was concluded that:

- (a) Seqwater would carry out any requisite modelling as regards flood mitigation; and

(b) the QWC and the Water Grid Manager respectively would carry out any necessary modelling with respect to water security once Seqwater had established if it was permissible and appropriate to reduce the water level below FSL

(see paragraph 69 of Mr Dennien's statement).

- 7 It was clear from that meeting that Seqwater was first to undertake the necessary modelling from a flood mitigation perspective. Once it had established the permissible and appropriate level to which to reduce the water level below the FSL, advice would be obtained from the QWC and the Water Grid Manager from a water security perspective (appropriately informed by their own modelling).
- 8 Following that meeting, the Water Grid Manager had its consultant hydrologists commence modelling from a water security and supply perspective (see paragraph 70 of Mr Dennien's statement).
- 9 Updates on Seqwater's preliminary modelling were provided at meetings on 31 January and 1 February 2011, with a letter being tabled by Seqwater at a meeting on 4 February 2011 (see paragraphs 71 to 73 of Mr Dennien's statement).
- 10 The effect of the letter tabled by Seqwater at the meeting on 4 February 2011, and dated 4 February 2011 was that a reduction to 75 per cent of FSL would provide flood mitigation benefits for extreme rainfall events occurring in the Wivenhoe and Somerset catchments.
- 11 Based on Seqwater's initial findings, the Water Grid Manager wrote to Seqwater on 9 February, formally confirming that the water levels could be temporarily decreased and that if a permanent reduction in the FSL of Wivenhoe Dam was being considered, that may have an impact on the System Operating Plan's desired levels of service and should be raised with the QWC directly (see paragraph 76 of Mr Dennien's statement).

- 12 From the chronology of events set out above, it is clear that what in fact changed between December 2010 and February 2011 was that Seqwater actually undertook the modelling to which it had earlier referred as being necessary to inform its recommendation and made a recommendation, each of which it had not previously done.
- 13 As soon as that modelling had been undertaken and Seqwater had made a recommendation, the Water Grid Manager was able to provide immediate input on that recommendation from a water security perspective, informed by its own modelling in respect of that issue.
- 14 The Water Grid Manager rejects the implication in Seqwater's submission that it provided inconsistent advice, or somehow changed its position between December 2010 and February 2011. The Water Grid Manager likewise rejects the contention that its advice of February 2011 was an 'essential pre-requisite' to Seqwater's recommendation of 10 February 2011 on flood mitigation measures.