

**In the matter of the  
Commissions Of Inquiry Act 1950**

**Commission of Inquiry Order (No. 1) 2011**

**QUEENSLAND FLOODS COMMISSION OF INQUIRY**

**SUBMISSIONS BY QUEENSLAND BULK WATER TRANSPORT AUTHORITY (LinkWater)**

**Flood preparedness relevant to 2011-2012 summer wet season**

**11 March 2011**

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Submissions  
Lodged on behalf of Queensland Bulk Water Transport  
Authority

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## Queensland Floods Commission of Inquiry

### Submission by Queensland Bulk Water Transport Authority

#### 1. Executive Summary

- 1.1 Clause 3 of the Commission of Inquiry Order (No. 1) 2011 contemplates an interim report being made by 1 August 2011 on matters associated with flood preparedness to enable early recommendations to be implemented before next summer's wet season.
- 1.2 Queensland Bulk Water Transport Authority (**LinkWater**) provides an essential service. It is responsible for the day to day operational management of the movement of potable water of appropriate quality across the South East Queensland Water Grid network to where it is required.
- 1.3 For the duration of the 2010-2011 flood events (**the flood events**) LinkWater successfully managed the water source and systems challenges occasioned by the events to ensure the maintenance of water quality and the movement of potable water throughout the water grid network to meet system demand.
- 1.4 In relation to those matters which fall within LinkWater's areas of responsibility it is submitted that no changes need to be recommended by the Commission before next summer's wet season to ensure the continued management and supply by LinkWater of that essential service.
- 1.5 It is submitted that the Commission can be satisfied that, in the event of a future flood event, LinkWater has in place the requisite capital, management and operational infrastructure and procedures, including redundancy systems and risk management planning, to ensure the delivery of water of appropriate quality to where it is required for the duration of such an event, and that LinkWater's existing powers, rights and authorities within the Water Grid structure are sufficient to enable LinkWater to deliver this essential service, and should be maintained.
- 1.6 Having regard to LinkWater's experience during the flood events, LinkWater submits that, in terms of preparation for next summer's wet season, recommendations may be considered as to:
- (a) the location and outfitting of appropriate premises above the flood line to serve as a coordination centre for emergency management of a flood event; and
  - (b) the interrelationship between and co-location of the crisis management, incident management and water grid network management functions during a flood event;

and, in the context of longer term forward planning:

- (c) measures to mitigate the consequences of a compromise of supply from the principal bulk water supply sources to the bulk water transport network (notably the Mount Crosby Water Treatment Plant).

## **2. Introduction**

2.1 This submission is made by LinkWater in response to the call for written submissions relating to issues of flood preparedness relevant to next summer's wet season.

2.2 LinkWater is the bulk water transport authority for South East Queensland with responsibility for:

- the movement of potable water from the bulk water suppliers (Seqwater and WaterSecure) to the water distributor/retailers (UnityWater, Queensland Urban Utilities and Allconnex Water) at the places and at the times, and in the quantities, required;
- the monitoring and maintenance of the quality of that water within the water grid network; and
- the day to day operational management of the movement of water across the water grid network by LinkWater from its 24/7 Grid Network Management Centre (Control Centre).

2.3 The principal sources of water supply into the LinkWater network, relevant to the areas affected by the flood events, are the Mount Crosby treatment plants (sourced by the Brisbane River and Wivenhoe Dam) and the North Pine Dam. Of these, the Mount Crosby treatment plants are the primary supply source, typically contributing between 200 – 300 megalitres per day toward a daily system demand of between 360 – 390 megalitres per day.

## **3. 2010-2011 Flood Events**

3.1 In October 2010, in response to long range weather forecasts predicting long periods of rain and heavy storm activity over the 2010-2011 Christmas/New Year holiday period and into the early months of 2011, LinkWater identified potential risk areas in terms of its operations and implemented actions to mitigate the identified risks, including the preparation of a Holiday and Summer Risk Mitigation Strategy.

3.2 These actions included:

- increasing and maintaining storage levels in the LinkWater reservoirs above the usual storage levels;
- ensuring the availability of contractors, staff and other resources over the holiday period;
- running a larger than normal operational and support staff level during the December 2010/January 2011 holiday period including a full time reception capability;
- developing contingency plans to address potential loss of critical services (for example, power and communications), and for continued access to and management of LinkWater assets;
- developing contingency plans to address loss of water supply from the bulk treatment sources and to address water quality issues, including making provision for increased regularity of water quality sampling;
- ensuring the operational readiness of the LinkWater special purpose crisis management room and special purpose incident management room;
- putting in place arrangements to ensure continued operation of the 24/7 Grid Network Management Centre in the event of power or communication failures.

3.3 LinkWater also had in place an approved Emergency Response Plan as required by the South East Queensland Water Market Rules.

3.4 A number of discrete, weather-related incidents impacted on LinkWater's operations in the period from 24 December 2010 to early January 2011. An ongoing Incident Management Team successfully dealt with these incidents and was in readiness for future summer incidents.

3.5 The LinkWater Crisis Management team, comprising members of LinkWater's executive management team, and the LinkWater Incident Management team, responsible for the monitoring and management of operational issues within LinkWater, were, from early January 2011, actively responding to the developing events.

3.6 On Thursday, 6 January 2011, LinkWater was notified of the declaration by Seqwater of a level 3 severity incident (planned release of stored flood waters from Wivenhoe Dam).

3.7 On Monday, 10 January 2011, LinkWater was notified of the declaration by Queensland Urban

Utilities, of a level 3 severity incident (an extreme weather event, including loss of supply to certain customers, supply issues in certain areas and peak river levels in the Brisbane and Bremer rivers).

- 3.8 On Tuesday, 11 January 2011, LinkWater formally convened its Crisis Management and Incident Management teams. This formalised the previous monitoring and management roles of the executive management team and the Incident Management Team, each of whom were, from early January 2011, actively responding to the developing events.
- 3.9 LinkWater's corporate office is located at levels 4-6, 200 Creek Street, Spring Hill (adjacent to the Novotel Hotel). The premises include a fully outfitted Incident Management room on level 4, located adjacent to the 24/7 Grid Network Management Centre, and a fully outfitted Crisis Management room on level 5, all with fully redundant communications and power facilities.
- 3.10 On and from the morning of Wednesday, 12 January 2011, key representative of the Water Grid Manager, Seqwater and WaterSecure relocated to, and began operating from, LinkWater's premises at Spring Hill after those organisations had to evacuate their own premises. From that date, the Water Grid Manager Emergency Management Team operated from LinkWater's premises and the premises became the water grid command and control centre for the duration of the flood events.<sup>1</sup>
- 3.11 LinkWater will address its preparation for, management of, and response to, the flood events more fully in the submission to be made by 4 April 2011.
- 3.12 For the purpose of this submission, it suffices to note that the LinkWater premises were ideally suited as an emergency management centre for a number of reasons:
- the premises house the Grid Network Management Centre;
  - the premises are located on high ground, well out of any flood prone areas;
  - there is hotel accommodation as part of the office complex;
  - there is good access to public transport and car parking;
  - the premises are centrally located and close to Government buildings/offices;
  - there is no dependence on the CBD power grid;
  - there are three independent entries to grid power and backup (generator based)

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<sup>1</sup> The Water Grid Manager and Seqwater representatives vacated LinkWater's premises on Monday 24 January 2011

emergency power;

- there are backup data centres located at Woolloongabba and Fortitude Valley;
- there is full security at the premises; and
- the premises offer kitchen, catering and shower facilities.

#### **4. Water Source and System Challenges during the Flood Events**

- 4.1 The availability of water for supply to the network is dependent on the supply sources and, in the event supply from any source is compromised, careful management of the system is required to ensure the continuing supply of water of appropriate quality throughout the Grid.
- 4.2 There were considerable water source and systems challenges and constraints occasioned by the flood events. The principal issues were the flooding of the Mount Crosby Eastbank raw water pump stations, which rendered the pump stations inoperable for a period of time, and water turbidity, which impacted on the efficient and continual operation of water treatment plants and the quantity of supply of bulk water from Mount Crosby and North Pine Dam. The Eastern Pipeline Interconnector (supporting the Logan area by supplying water from the North Stradbroke primary trunk main to the Kimberley Park reservoir) and the Southern Regional Water Pipeline (SRWP) were not affected by turbidity issues.
- 4.3 These constraints made it necessary to supply bulk water from the SRWP (sourced by the Gold Coast desalination plant) and the Northern Pipeline Interconnector (NPI) (sourced by the North Pine Dam and Landers Shute water treatment plant). The Eastern Pipeline Interconnector was able to supply water as normal.
- 4.4 By using alternative supply sources, LinkWater was able to successfully manage water quality and move potable water to meet system demand during the flood events, including during the intensive initial clean up period from Friday, 14 January 2011.
- 4.5 The most significant impact of the flood events on LinkWater infrastructure was the inundation of the Bundamba pump station. This pump station operates as a booster pump station for the southerly flow (Brisbane to Gold Coast) of water within the SRWP. The inundation, which considerably exceeded previous local flood levels, caused considerable damage but did not impact upon the availability of water during the flood events as, during that period, the flow of water within the SRWP was in a northerly (Gold Coast to Brisbane) direction.
- 4.6 Since the flood events, and with the benefit of the knowledge of local flood levels gained in

the flood events, LinkWater has commissioned a full flood affectation review of its assets with a view to assessing flood mitigation steps in relation to vulnerable assets before next summer's wet season.

## **5. Flood Preparedness for Next Summer's Wet Season**

5.1 LinkWater makes the following submissions based on its experience during the flood events:

- (a) LinkWater is satisfied that the planning and risk mitigation strategies it had in place from October 2010 were effective and efficient. Similar strategies will be put in place for the next wet season.
- (b) System constraints during the flood events were effectively managed and there are no additional measures that need to be taken by LinkWater to ensure water supply for the next wet season. In any longer term forward planning for the supply of essential services, however, consideration should be given to measures to mitigate the consequences of a compromise of supply from the principal bulk water sources (in particular, Mount Crosby) or measures to supplement those sources in the event of compromise.
- (c) In managing essential services during an emergency, there should be separation of the functions of crisis management, which is focussed outwardly on communication, coordination with emergency resources and the like, and incident management, which is focussed on the operational management of the incident so as to ensure the continued provision of services.
- (d) It would be prudent, however, to have the crisis management and incident management functions closely co-located in a future flood event.
- (e) In relation to the Water Grid, the incident management and Network Management Centre functions should also be closely co-located in a flood event.
- (f) There should be a coordination centre for emergency management of a future flood event. The centre must have assured 24/7 access, IT, communications and power supply, close availability of emergency accommodation, accessibility for staff and third parties during an extreme weather event, and accessibility to Government and related agencies.
- (g) LinkWater is willing for its premises to serve as a coordination centre for emergency management of a future flood event. The premises functioned



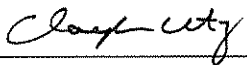
effectively as such a centre during the 2010-11 flood events.

- (h) LinkWater will be progressing steps to properly equip and outfit a second crisis management room on level 6 at 200 Creek Street to be available to fully function as a Water Grid emergency response room should this be required.

**6. Further Assistance to the Commission**

- 6.1 LinkWater will provide a comprehensive submission by 4 April 2011 detailing the management of its response to the flood events and the management of essential services (water) during the flood events. LinkWater will also provide statements from officers of LinkWater who managed its response to the flood event, as requested by the Commission in its letter to Clayton Utz dated 7 March 2011.

Dated 11th March 2011

  
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Solicitors for Queensland Bulk Water Transport Authority