

MBRI Submission to the Queensland Floods Inquiry

March 11

2011



Promoting Effective Sustainable
Catchment Management

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1. The Mid Brisbane River Irrigators Inc (MBRI) was established in 2005 to represent the rights of irrigators during the extended drought period along the mid Brisbane River (from Wivenhoe Dam to Mt Crosby Weir) and to promote effective sustainable catchment management. Since the ending of the drought, the MBRI undertakes projects to promote water quality in the mid Brisbane River, that area from below Wivenhoe Dam to Mt Crosby Weir which is the water corridor for Brisbane's urban water supply.
2. A history of the MBRI and its dealings with the Department of Natural Resources ("DNR") and the later Department of Environment and Resource Management ("DERM") is found at Annexure 1.
3. Of significance to the January 2011 flood is that some of the MBRI members are from families who have been farming along the mid Brisbane River for four generations. In some of those families, at least two generations are still farming along the river. These members in particular have lived along the River all their lives and are familiar with its flows and patterns in fair weather seasons, in flood and in drought.
4. From late 2010 MBRI expressed concerns to Seqwater that the operation of Wivenhoe Dam was inadequate to ensure the safety of the landholders and farms along the Mid Brisbane River. A chronology of these communications and later communications with other relevant parties is found at Annexure 2.
5. The Flood Event definition on Page 2 of the manual of Operational Procedures for Flood Mitigation ("FOM") is: "a situation where the Duty Flood Operations Engineer expects the water level in either of the Dams to exceed the full supply level."
6. Recognizing that definition, a Flood Event was current continuously from late December until 11 January 2011. Despite requests from MBRI, Seqwater has

refused to divulge to MBRI the staged strategies implemented during that period.

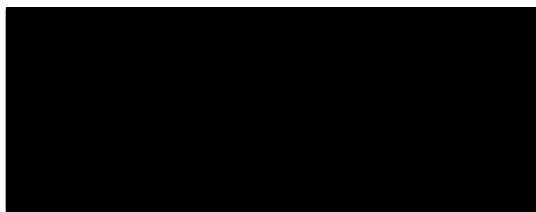
7. Clause 8.4 on page 22 of FOM requires evolving strategies be chosen by the Flood Operations Control ("FOC") at all times during the period when the Dam level was substantially in excess of the Full Supply Level ("FSL"). On 29 December, 2010 it was as high as 123% and rose to 188.5% on 12 January, 2011.
8. In the period leading up to the January 2011 flood, by arrangement referred to in Annexure 2 below at para 55, Seqwater sent emails to the MBRI members and landowners along the mid Brisbane River ("the Seqwater emails"). These emails have been summarised into a chart which, when read as a whole, shows the pattern of water release in relation to Wivenhoe Dam water levels and water inflow into the Dam. Annexure 3 is the chart of e-mails.
9. It is the submission of MBRI that the objectives of the FOM were not met during the January 2011 flood in as much as the operations during that Flood Event did not:
 - Provide optimum protection of urbanised areas from inundation;
 - Minimise disruption to rural life in the valleys of the Brisbane and Stanley Rivers;
 - Minimise impacts to riparian flora and fauna during the drain down phase of the Flood Eventas referred to in the FOM.
10. The worst inundations in the January 2011 flood were for a period of less than 12 hours. Earlier lower releases would not have prevented inundation of properties but would have reduced the number of affected properties substantially. It is submitted however that once your house has been flooded to the eaves, whether it is 12 hours or three days makes little difference.

11. It is the opinion of MBRI that the strategies set out in the FOM are extremely high risk.
12. This is demonstrably so in this event where Seqwater admits in emails to the irrigators to holding back releases to prevent minor flooding of bridges only to be forced to make massive, destructive releases of water when its strategy failed. MBRI does not think the FOM is as prescriptive as saying each individual bridge should be preserved but rather that the primary strategies of safety and urban inundation should always be paramount.
13. It is the opinion of MBRI that Wivenhoe is an excellent facility built primarily for flood mitigation in Major or Extreme Flooding (as defined in FOM) in urban areas during a Flood Event.
14. It is expected that this goal should be the focus of all decisions when a major rain event is forecast and that FOC should not be diverted from this priority for any reason, and in particular in favour of minor infrastructure.
15. The records in the emails to the MBRI and in the Seqwater report show a continual sensitivity to the inundation of minor infrastructure at the expense of reserving flood storage compartment space, to cope with an extreme event.
16. By keeping water in the flood compartment Seqwater had a reduced capacity to mitigate the Extreme Event for which purpose the Dam was designed.
17. The language used in the Seqwater emails shows a constant awareness that the rain event from 5 January, 2011 to 12 January, 2011 had the potential to cause Major Flooding; yet the FOM makes no allowance for the danger and damage posed by a high energy emergency release with its high risk to life and the riverine environment.

18. MBRI has constantly requested a low risk approach releasing early low volumes of water and more gradual cut backs later, simulating natural events. **Refer Annexure 2**
19. The FOM in clause 8.3 forbids spillway gates being opened for flood control purposes prior to the reservoir level exceeding EL67.25. Clause 8.4 requires storage at Full Supply Level ("FSL") at the conclusion of a Flood Event. It is highly unlikely that FSL would be compromised in a significant flood event but clause 8.3 undoubtedly compromises the Dam operator's ability to achieve optimum flood mitigation.
20. The Dam operator is prevented from opening the spillway gates until the water level exceeds EL67.25.
21. No flexibility is allowed. If the water level in the Dam can not be reduced at the beginning of or prior to a Flood Event, by following clause 8.3 it compromises the Dam operator's ability to achieve optimal flood mitigation.
22. Several graphs have been prepared by MBRI depicting the water levels, releases and what could have occurred under different strategies. These graphs are included in **Annexure 4.**
23. The two graphs included for the Commission's consideration in **Annexure 4 (iv)** compare strategies.
24. The Histogram of Actual Wivenhoe Releases (FOM High Risk Strategy) Annexure 4(iv) shows the amount of water released each day. The red markings in this graph show that the most water was released in two bursts of three hours each; the first at 6,700 cumecs for three hours and the second at 7,500 cumecs hours.
25. The second Histogram in Annexure 4(iv) entitled Histogram Showing MBRI Low Risk Strategy illustrates what the effect would have been if Seqwater had

followed the recommendations and requests of MBRI. A flood mitigation release strategy as shown would have resulted in a maximum of 3,301 cumecs.

26. To assist the Commission, 7,000 cumecs is equal to 7 megalitres per second which is equal to approximately seven (7) Olympic swimming pools.
27. It is both the volume and the force of the water which was released that has caused the devastation along the mid Brisbane River.
28. The devastation of the mid Brisbane River can best be appreciated from flying the length of the River by helicopter with a representative of the area who has local knowledge of the River and conducting site inspections. The MBRI respectfully submits that this step be given serious consideration by the Commission. MBRI would be willing to assist if this step is to be taken.
29. To assist the Commission in its consideration of the affect of the January 2011 flood along the mid Brisbane River a number of photographs has been included in this Submission. These can be found at Annexure 6.



Ken Schmidt
Chairman
Mid Brisbane River Irrigators Inc.
Signed 8.00am 11 March 2011

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Annexure 1

Mid Brisbane Rivers Irrigators Inc. (MBRI)

30. MBRI is made up of irrigators who include vegetable farmers, beef cattle farmers, one dairy farmer and turf farmers and others. Some of the families have been farming along the mid Brisbane River for four generations.
31. MBRI was formed after September 2005 when the DNR called a meeting in Ipswich of the irrigators along the Mid Brisbane River before the higher water restrictions were put in place in Brisbane. At that meeting the irrigators were told that the Department intended to reduce to 0% the existing irrigation licences while the people of Brisbane were still being allowed to put in swimming pools, fill swimming pools, wash cars and water lawns. When queried on this point, the response was that the government did not want to panic the people of Brisbane about water levels in Wivenhoe Dam.
32. Following the Ipswich meeting irrigators met in Fernvale and out of that meeting the Mid Brisbane River Irrigators Inc was formed. Committee members from this organisation met with the Department on numerous occasions and were alarmed by:
 - the lack of knowledge held by the Department relating to the River, inflows into the River and Wivenhoe Dam;
 - the lack of knowledge held by the Department relating to water requirements for effective irrigation;
 - the turnover of Departmental staff;
 - the inability of Departmental staff to answer questions on water issues;
 - the refusal of Departmental staff to provide information on water flows at the same time that the Department was seeking to revoke the water licences.
33. Notwithstanding these concerns MBRI sought to work actively with the Department throughout the drought and it did so, introducing voluntary logbooks showing reduced irrigation by its members for submission to the

Department each month. That MBRI did work effectively is recorded in the Hansard record of 10 November 2005.

34. Since the end of the drought the MBRI has continued to be active and at the Healthy Waterway Awards 2009 the MBRI won the Rural Award sponsored by Seqwater for Property Management Planning & Environmental Rehabilitation.
35. The MBRI has worked with SEQ Catchments to develop Property Management Plans with the objective being to ensure a high level of water quality in the mid Brisbane River by the implementation of best management practices and erosion rehabilitation projects.
36. The MBRI has been the recipient of substantial amounts of funding for workshops and field days that educate mid Brisbane River landowners on these issues.
37. More recently, MBRI has been granted \$19,375 from the Federal Government 'Caring for Our Country' for lantana control of riparian areas along the mid Brisbane River, the key urban water corridor. The aim of this project was to improve riverbank stability by vegetation rehabilitation thus contributing to water quality for a significant proportion of the population in South East Queensland. (Permission is being sought to reallocate these funds as the lantana has been swept away in the January 2011 flood.)
38. It was with the environment, farmers' and business' interests in mind that the MBRI and other community members met with Seqwater on 10 December 2010 following the 700,000 megalitres of water released in October 2010. Those releases commenced suddenly and ceased suddenly, and resulted in major riverbank slumping and vegetation loss along 60 kilometres of river bank. There was also significant damage to irrigation/stock water pumps, fences and business infrastructure along the River.
39. MBRI would seek to be included with "other stakeholders" with whom the Action officer may undertake discussions when the FOM is compiled. This is

one of the steps outlined in the Government brochure “DS 5.1 Flood mitigation manual for a dam” which, although it does not require that as a mandatory step to be taken by the Action officer, does make it allowable. Given the local knowledge held by MBRI in relation to Wivenhoe Dam inflows, other inflows into the mid Brisbane River and the character of the mid Brisbane River such discussions may be fruitful for the chief executive.

40. It is ironic that although MBRI has been working with Seqwater to promote water quality in the mid Brisbane River (the water corridor for Brisbane’s urban water supply), water quality in the mid Brisbane River following the 2011 floods is now severely compromised and will be for a long time, leading to ongoing substantial costs for water treatment.

Annexure 2

Chronology of Communications between MBRI and Seqwater

41. MBRI has been communicating its concerns about the operations of Wivenhoe Dam at meetings and in correspondence with Seqwater and DNR for an extended period. The following dates are relevant.

9 July, 2009

42. At this meeting with DNR the MBRI raised the inadequacies of the IQQM model which forecasts water releases and flows for Wivenhoe and Somerset Dams, Brisbane River, Lockyer Creek and Bremer River.
43. MBRI concerned model did not include total catchment (such as input from major & minor streams into mid Brisbane River & overland flow).
44. MBRI requested that IQQM model be amended to include this but DNR refused. MBRI requested access to the model to run some different scenarios but DNR refused.

6 September, 2010

45. At this meeting with officers of Seqwater and SEQCatchments, MBRI raised its concerns that the low river level in the mid Brisbane River, caused by reduced water releases from Wivenhoe Dam, had resulted in riverbank slumping and headwall erosion cuts in streams entering the river, even though at this time Wivenhoe Dam was at 95% FSL.

10 – 15 October, 2010

46. During this period, Seqwater made an unannounced large water release of 700,000 megalitres from Wivenhoe Dam which caused loss and damage to irrigation pumps and other infrastructure, and caused hydraulic drawdown and riverbank slumping, and disappearance of other landholder property along the mid Brisbane River.

47. This unannounced release also caused substantial damage to at least one another business in the area, Zanows' Quarry ("Zanows' "). Independently of MBRI, Zanows' has made its own submission to this Commission.

Mid October, 2010

48. In a telephone call between Mr Ken Schmidt (MBRI Chairman) and [REDACTED] (Seqwater Engineering Officer), Mr Schmidt requested a notification of Wivenhoe Dam water releases for MBRI members and landowners along the mid Brisbane River to enable adequate warning for removal of irrigation/stock water pumps and other infrastructure.
49. An informal system of notification was agreed with [REDACTED] emailing Mr Schmidt who then emailed or telephoned MBRI members and landowners who then alerted others along the mid Brisbane River.

18 November, 2010

50. At the Rural Water Advisory Group meeting, Mr Ken Schmidt (MBRI Chairman) raised the necessity for a better and more formal communication from Seqwater to notify irrigators and landholders of water releases, as outlined above. Mr [REDACTED] of Seqwater who was present was to follow up on a communication strategy for notification to irrigators on operational issues, such as storage releases.

10 December, 2010

51. At a meeting with Seqwater and SEQCatchments MBRI formally requested an early warning system be established to notify MBRI members and landowners along mid Brisbane River of Wivenhoe Dam water releases.
52. Mr [REDACTED] Seqwater advised that it was the responsibility of the Councils along the river to inform landowners of water releases.
53. MBRI responded that such a system would not be practicable.

54. Seqwater agreed to provide MBRI members and landowners with water release email notifications in adequate time for those affected to attend to their property.
55. MBRI voiced concerns that those without emails would need to be contacted and Seqwater agreed to provide a 1800 number for this purpose. It was suggested to Seqwater by MBRI that more than one telephone line to that number would be needed.
56. In relation to Wivenhoe Dam operations, MBRI expressed concerns about damage to property, riverbanks, pumps, pump sites, vegetation and the river environment due to the sudden quick up and down water releases that had been occurring. MBRI stressed the point that the mid Brisbane River should not be treated like a concrete drain but as a fragile natural ecosystem. In particular, that had been the view expressed to MBRI by DNR during the drought years when DNR argued for "environmental flow".
57. Mr [REDACTED] of Seqwater advised that the FOM governed water releases and it was important to have minor bridges, such as Colleges Crossing, open for public use. MBRI expressed the view that Colleges Crossing is basically a low level causeway and that and all other bridges in the mid Brisbane River had been promised to be raised to allow for water flow and vehicular traffic.
58. MBRI suggested that the FOM be revised to reduce the level in Wivenhoe Dam to 70 - 80% to act as a buffer and to enable long, slow water releases with an extended drain down phase to stop hydraulic drawdown of riverbanks, thus replicating a natural flow.
59. MBRI expressed the view that the water level in Wivenhoe Dam should be reduced to avoid the risk of flood in the forthcoming wet season.
60. Mr [REDACTED] advised that water releases were governed by the FOM and that they were not able to be changed because this required legislative change which was too difficult and would take too long. Mr [REDACTED] also advised MBRI were talking to the wrong people and 'they' (the Flood Operations Centre (FOC)) were in

charge of the FOM. This statement fails to consider the provisions of Part 1.8 Provisions for Variation of the Manual which specifically provides that Seqwater may approach the chief executive requesting a change to the FOM.

61. MBRI requested a meeting with FOC and a copy of the FOM but Mr [REDACTED] stated that they were unable to release the FOM.

20 December, 2010

62. In an email from the MBRI Planning Co-ordinator Ms Jocelyn Bailey to Mr [REDACTED] a meeting with FOC was formally requested. In an email reply dated 20 December 2010 from Mr Drury, he stated that he would arrange a meeting in early January (2011).

22 December, 2010

63. In an email from the MBRI Planning Co-ordinator Ms Jocelyn Bailey to Mr [REDACTED] of Seqwater, reference was made to the damage done by the water releases being dropped quickly in order to open Colleges Crossing for Christmas Day. [REDACTED] responded in an email on 23 December, 2010.

23 December 2010

64. In a letter to the Minister for Natural Resources, Mining & Energy Mr Stephen Robertson, concerns were expressed about the operations of Wivenhoe Dam. No reply was received to this correspondence until follow up correspondence was sent post the January 2011 flood.

27 January 2011

65. MBRI met with Mr Wayne Wendt MP and Somerset Regional Council Chairman, Mr Graeme Lehmann requesting a meeting with FOC to avoid a repeat occurrence of the January flood.

2 February 2011

66. In a follow up email to Mr Wayne Wendt MP MBRI repeated its above request.

3 February 2011

67. Mr Wendt responded by email that he was “currently trying to ascertain” what could be done and would be back in touch as soon as he knew more.
68. Mr Wendt later sought confirmation of the issues raised by MBRI.
69. In an email from [REDACTED] of Seqwater, MBRI was advised that the Office of the Dam Safety Regulator had agreed to a meeting.

4 February 2011

70. MBRI responded to Mr Wendt by email, clarifying issues. **Refer Annexure 10.**

9 February 2011

71. A meeting was held with [REDACTED] Dam Safety Officer (DERM) and Mr Graeme Lehmann and MBRI. [REDACTED] stated that because the rain fall event occurred south of the telemetry points in the catchment and in the central impoundment the rainfall was not accurately measured, the Dam levels therefore rose faster than the telemetry information suggested.

Annexure 3

Summary of Information from E-mails from SEQWater to MBRI Members And Wivenhoe Dam Levels (*from SEQWater website records)

Between 13.12.2010 and 14.01.2011

Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River riverbanks	River Heights
NB. MBRI SEQW meeting 10.12.10 – 102.3%										
Mon.13.12.2010	12:32p.m.	300	*6:30a.m. 103.1%		To revert to 50 cumecs Thurs. 16 Dec.			Cut only Twin Bridges, Savage's Crossing & College's Crossing	No reference	
Wed.15.12.2010	9:57a.m.	300	Both Dams above FSL *7:00a.m. 102.1%					Twin Bridges may remain submerged for some time.	No reference	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Ths.16.12.10	6:55a.m.	No amounts advised		+50mm on Sun-Mon. Storms next few days	Gate release to close			Low level crossings to reopen within 24 – 36 hrs	No reference	
Fri.17.12.10	1:27p.m.	One gate to open – no amount advised	*6:30a.m. 102.1%						No reference	
Fri.17.12.10	7:52p.m.	50 – to increase to 315.				63 cumecs		Twin Bridges, Savage's Crossing and College's Crossing to be submerged	No reference	
Sat.19.12.2010	6:44a.m.	350	*Dam levels are not updated on weekends.	Rain event developing			Releasing fr Somerset Dam and additional inflow from Upper Bris River	Only low level crossings to be submerged	No reference	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Mon.20.12.10	6:57a.m.	Amounts not advised	*7:00a.m. 105.7%		Reducing release to compensate for Lockyer Ck. Release to be later increased but no amounts advised.		Moderate to major flooding in Upper-Bris R & minor to moderate in Stanley R. Both Dams receiving flood water.		No reference	
Mon.20.12.2010	8:48p.m.	Increased amount not stated but to further increase to 1300 on Tues.			Midnight Wed. 22.12.10			All bridges bar Mt Crosby to be submerged and to reopen late Thurs 21 st	No reference	
Tues.21.12.10	2:55a.m.	Release brought fwd - 1275 from 5:00a.m.	*6:46a.m. 111.7%			Peak combined flow to be less than Oct 2010			No reference	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Wed.22.12.2010	8:25a.m.	1440 since 6:30p.m. last night.	*9:00a.m. 106.4%	Significant rainfall to occur next week, catchments wet so early run- off.	Not until early Thurs, then to progressively reduce.	Peaked combined flow similar to Oct 2010		No estimate of times for crossing openings is available.	No reference	
Wed.22.12.2010	4:23p.m.	No amount advised.			Gate closing from 4p.m. Takes 24 hrs to close.			Mid-Bris.R. crossings to reopen by Fri a.m.	No reference	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Ths. 23.12.2010	7:50a.m.	Gates still closed.	*9:00a.m. 102.6%	Situation to deteriorate over long weekend.				Crossings estimated to open for 23/24.12.2010	No reference	
Ths. 23.12.2010	11:55a.m.	No amount advised. Gate release to be managed to keep open crossings.				To allow Burton's & Kholo bridges to stay open. Amount not advised.		All crossings bar Kholo and Burtons Bridge to be closed.	No reference	
Fri. 24.12.2010	4:52p.m.	Gate operations ceased at 1p.m.	*6:25a.m. 101%	Current severe weather warnings		Flows to be maintained tomorrow to keep high level crossings opened.		Burton's Bridge and Mit Crosby Weir bridge to remain open.	No reference	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Sun. 26.12.2010	10:24a.m.	Max.release 350. If expected rain falls, expect larger release rates.	*Dam levels are not updated on weekends.	Total rainfall forecast 100-150mm over catchment for next 4 days.				High level crossings to remain open. If expected rain falls, greater potential for crossing closures.	No reference	
Sun. 26.12.2010	6:53p.m.					Minor stream rises in the catchments.			No reference	
Mon.27.12.2010	7:58a.m.	Reduced flow from Wivenhoe Dam.	*9:00a.m. 106.4%	Severe weather warning reissued and	Gates to be closed.	Lockyer Creek mod. to major flood & peak to reach Bris.R.			No reference	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and Riverbanks	River Heights
Mon.27.12.2010 Cont'd	7:58a.m.	Gate closed late morning. Releases to recommence once Lockyer Ck peak passes. No amount advised.	*9:00a.m. 106.4%	further heavy rainfall expected in catchment.				Burtons Bridge will remain open till 4pm then remain closed until Wed.		
Mon.27.12.2010	2:05p.m.	Lockyer Crk is still rising. Releases to recommence once Lockyer Ck peak passes. No amount advised.	*2:00p.m. 107.9%					Burton's and Kholo Bridges to be submerged	Total peak flow in mid-Bris R. to be maintained at 1500 cumecs, similar to peaks of recent releases.	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Tue.28.12.2010	9:36a.m.	Releases may recommence but dependant upon peak flow from Lockyer Ck. No amount advised.				To keep total flow at 1500 cumecs if possible		High level crossings may open Sunday morn.Fernvale Bridge to remain open. Mt Crosby Weir bridge may be impacted.	Lockyer Ck still rising at O'Reillys Weir. This major flood to cause moderate river level rises in the mid-Bris R.	
Wed.29.12.2010	8:30a.m.	Release rate increasing but no amount advised.	*8:00a.m. 123%		Close down phase to begin Saturday	Total flow to continue at 1600 cumecs, similar to Oct & Dec.		Release to continue till Saturday. High level crossings may open on Sunday.	No reference	
Ths.30.12.2011			*7:00a.m. 120.5%							



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Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Fri. 31.12.2010	8:30a.m.	1600	*8:00a.m. 112.7%		Gates to close late evening and cease release Sunday.	Continuing minor flows from Lockyer Creek.		Twin Bridges to remain submerged. Burton's Bridge to open Sunday.	No reference	
Fri.31.12.2010	2:37p.m.		*8:00a.m. 112.7% Dam still above FSL.		Gate closures to commence at midnight and to cease midday Sunday 2/1.			Burtons Bridge to reopen Sunday & Colleges Crossing to reopen Monday.	No reference	
No e-mails were received between 1.1.2011 & 4.1.2011 inclusive										



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Tue. 04.01.2011			*6:30a.m. 102.1%							
Wed 05.01.2011 Red Category	12:26p.m.	Likely to release flood waters in the near future if BOM's forecasts are accurate.	*6:30a.m. 102.4% Wivenhoe and Somerset Dams still above FSL and rising slowly.	Severe weather warning for next few days. 100 – 200 mils may occur.						
Ths. 06.01.2011 Red Category	12:32p.m.	To commence releases to a maximum of 250 by 10pm.	*6:30a.m. 103.2%	BOM forecast for rain until Tues next week.		Lockyer Creek still flowing and rising.		To keep high level crossings open for as long as possible.	No reference	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Ths. 06.01.2011	4:39p.m.		Wivenhoe & Somerset Dams both rising.			Lockyer Creek rising to peak at 600 – 700 cumecs at O'Reillys Weir late Fri	Flooding situation has deteriorated. Upper Bris R at moderate flood levels.	Crossings to be submerged for a couple of days again.		
Fri. 07.01.2011	10:56.m.	Initially 1200 may be up to 1500 rapidly if conditions deteriorate.	*7:00 a.m. - 106.3%	Heavy rainfall from Sunday to Tuesday.	To continue releasing until the end of the week.	Peak rate to be held and continue until end of week.	Somerset Dam to be released into Wivenhoe Dam.	High level crossings to be submerged	No reference	

Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Sat.08.01.2011	8:26a.m.	1250	*Dam levels are not updated on weekends.	Return of rainfall tonight. Forecast for next 4 days is for significant rainfall across SE Qld.				Crossings to be affected until 12/1.	To max flow 1600 cumecs in Mid-Bris R. including Lockyer.	
Sun. 09.01.2011	8:33p.m.	1400	*Dam levels are not updated on weekends.	Heavy rain until Tuesday.			Major flooding in catchments. 5,000 cumecs in upper-Bris. R. & 3,000 cumecs in Stanley R. and rainfall continuing	Crossings to be affected until 15/1. Fernvale Bridge and Mt Crosby may be affected early Tuesday morning.	Aim is for max flow 1600 cumecs in mid-Bris. R. for 24 hours	



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Mon.10.01.2011	3:25a.m.	Increase in release rates. Target is 2600 cumecs, potential peak rate is 3500 cumecs.	*9:00a.m. 148.4%				Rapid increase in river levels & inflow rates in Upper-Bris R, similarities to 1974 peak flows at Savages Crossing [below Wivenhoe D]	Fernvale Bridge affected and Mt Crosby closed.	Comparisons with 1974 flood levels at Savages Crossing and Mt Crosby – 8 to 9 m below 1974	
Mon.10.01.2011	9:03p.m.	2400 to increase to 2800 but not yet scheduled.	*9:00a.m. 148.4%					Strategy of peak flow of 4,000 cumecs in lower Brisbane R. and to minimise flooding in urban areas.		



Submission for Qld Flood Inquiry

Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Tue. 11.01.2011	2:42a.m.	2730	*9:00 a.m. 175.9%			No significant rise has occurred at lower Lockyer gauging stations.		No change to overall strategy of peak flow of 4,000 cumecs in lower Brisbane R.		Lowood: 15.89m Savage's Crossg: 15.77m Burton's Bridge: 12.16m Mt Crosby Weir: 15.68m



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Tue. 11.01.2011	6:53a.m.	2750. Entering conditions where Dam Safety overrides other concerns.				O'Reillys Weir [Lockyer Ck] beginning to rise. River will rise with Lockyer Ck but attempt to hold Dam releases until peak of Lockyer Ck passes.	Another flood in Upper-Bris R. Reduced flows from Somerset D to Wivenhoe Dam	Attempting to maintain flows of 4,000 cumecs in lower Brisbane R. New target flow in lower Brisbane R. will be 5,000 cumecs including all streams.		Lowood: 16.13m Savage's Crossg: 16.19m. Burton's Bridge: 12.94m Mt Crosby Weir: 16.23m



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Tue. 11.01.2011	9:50a.m.	Increasing to 3500 by lunch Now in a critical phase as lake approaching the next trigger level.	*9:00 a.m. 175.9%	Current severe weather alert & further falls of heavy rainfall appear likely.		River levels to rise significantly.		Please check your options for re-location.		Lowood: 17.05m Savage's Crossg: 18.33m Burton's Bridge: 14.82m Mt Crosby Weir: 16.76m



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Tue. 11.01.2011 Reference to telecommunication problems	7:43p.m.	6700 @ 5:30pm and increasing to 8,000 by 8:30p.m.	Expected to reach maximum level of 75.5m provided no further significant rainfall. This is 0.1m below trigger leve for fuse- plug No. 1.			Release exceeds 1974 peak flow rate of 7500 cumecs at Savage's Crossing.	Release rate will match estimated inflow rate.		Flood levels to be significantly higher than 1974 flood.	Lowood: 21.97m – unconfirmed peak for 1974 22m; Savage's Crossg: 21.67m – DERM peak for 1974 23.8m; Burton's Bridge: 17.14m; Mt Crosby Weir: 21.64m – BoM peak for 1974 26.7m.



Submission for Qld Flood Inquiry

Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Wed.12.01.2011	5:04a.m.	4300 reduced from 7500. Unknown when it was 7500.	*9:00 a.m. - 188.5%							Lowood: 24.37m – peaked at 25.09m Savage's Crossg: 23.99m – peaked at 24.13m Burton's Bridge: 18.4 and rising Mt Crosby Weir: 24.84m peaked at 24.91m but rising



Submission for Qld Flood Inquiry

Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Wed.12.01.2011	9:15a.m.	2,500 at 7:30a.m. After Lockyer Ck peak flow enters the Mid-Bris R. will increase to 3,500. Max flow will be 4,000.					Somerset D continuing to discharge over its spillway.			Lowood: 21.35m, falling; Savage's Crossg: 23.09m, falling; Burton's Bridge: 19.68m rising Mt Crosby Weir: 26.0m static.



Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Ths. 13.01.2011 Reference to communication problems	11:48a.m.	2,500 – expected to increase.	*10:00 a.m. - 186.5%				Increased drainage of Somerset D.			Lowood: 14.91m, falling; Savage's Crossg: 14.91m, falling; Burton's Bridge: no valid data; Mt Crosby Weir: 19.82, falling.



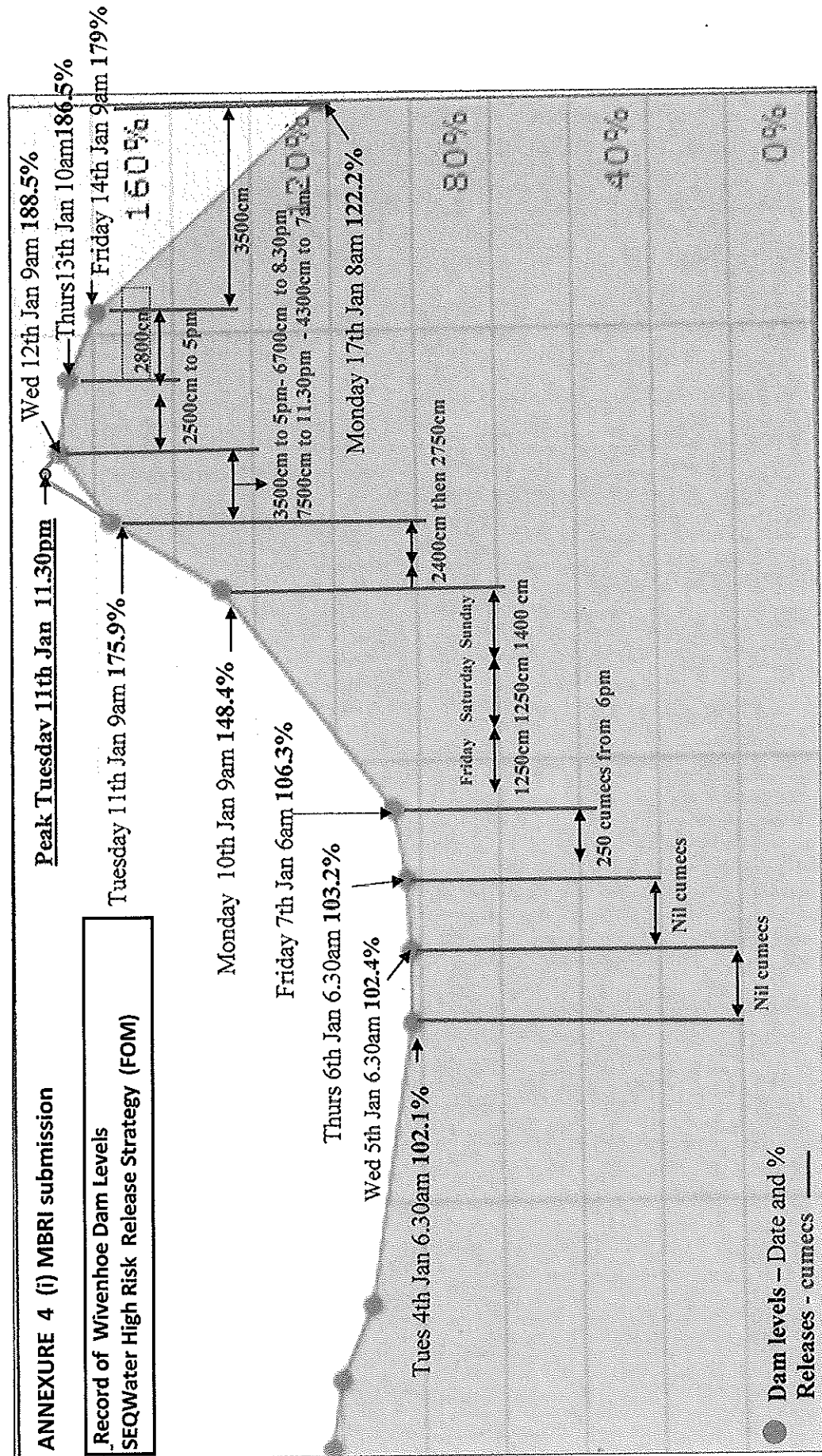
Day & Date	Time	Releasing Cumecs	Wivenhoe Dam Level at set time	Forecast Rainfall	Release Reduction Expected	Estimated Flow	Inflows to Dam	Advised Expected Result	Advised Effect on Mid-Bris River and riverbanks	River Heights
Ths. 13.01.2011	12:47p.m.	To increase to 2,800 by 6p.m. with target of 3,500 at Moggill (downstream of junction of Bremer & Brisbane R.)				River rises will occur.				Lowood: 14.65m, falling; Savage's Crossg: 14.59m, falling; Burton's Bridge: unreliable data; Mt Crosby Weir: 19.16, falling.
Fri. 14.01.2011	10:37a.m.	3,500.	*9:00 a.m. - 179%							

Annexure 4

Water Level and Water Release Graphs

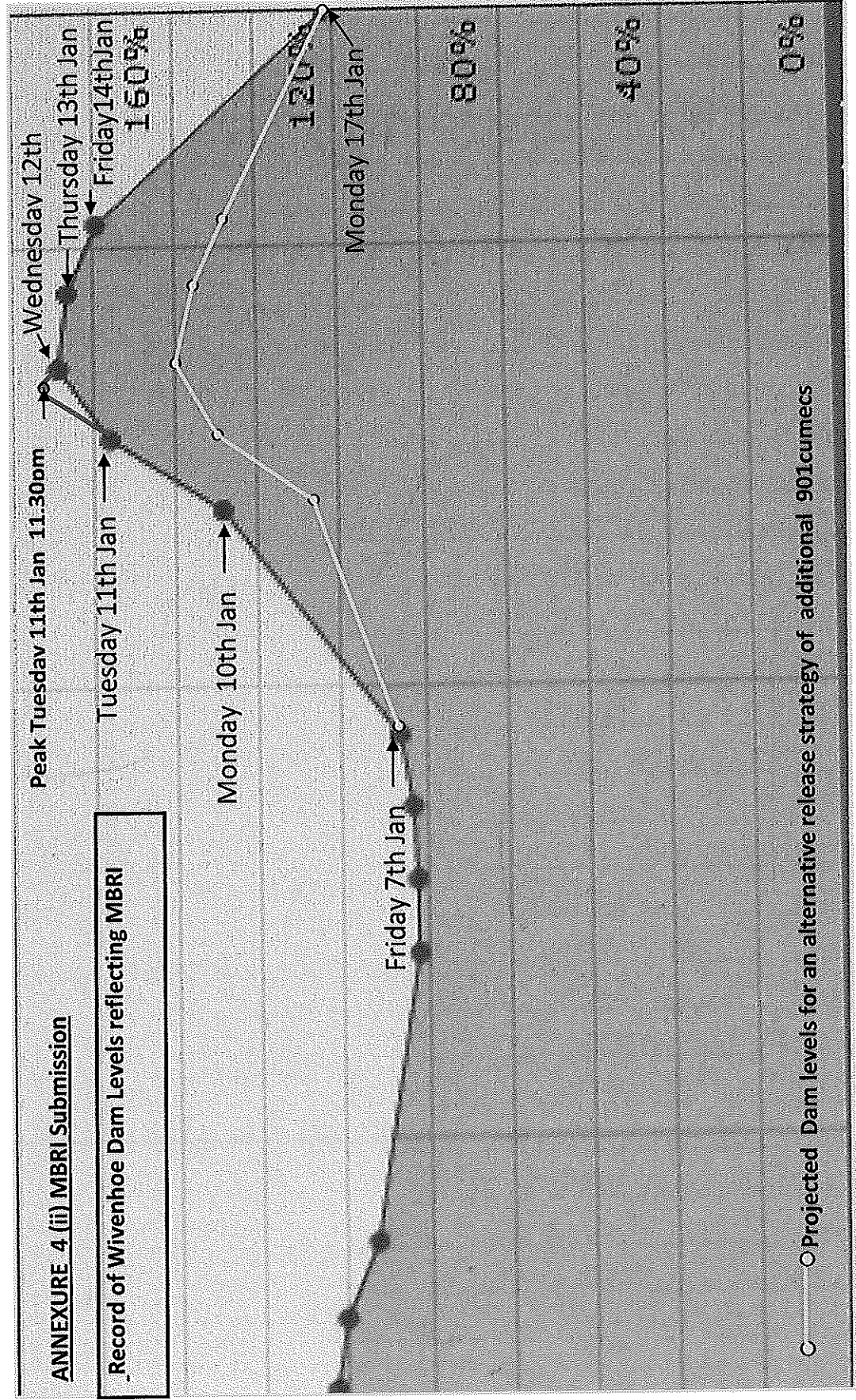
72. The Annexure 4(i) Graph shows the impact on Wivenhoe Dam water levels of the Seqwater high risk strategy.
73. The Annexure 4(ii) Graph with the yellow line indicates the levels that would have eventuated using the MBRI low risk strategy.
74. The Annexure 4(iii) Graph with the green line indicates the levels that would have eventuated had Seqwater maintained a wet season 75% urban water storage which Seqwater has now implemented exactly as recommended by MBRI.
75. MBRI cannot be accused of hindsight. The annexed correspondence referred to in paragraph 64 refers to these concerns.
76. Both the situations illustrated in Annexures 4(ii) and 4(iii) show that the extreme releases of 6700cumecs and 7500cumecs would have been avoided.
77. These extreme releases occurred in the dark and without warning to residents in Fernvale and the upper reaches of the mid Brisbane River.
78. These extreme releases caused massive energy surges damaging all before them and flooding large areas of Lowood and Fernvale that were not damaged in 1974.
79. The theories of the respected Mr Robert Manning are apposite in this regard.
80. It should also be noted that the increased releases of Friday 14 January, 2011 re-flooded properties and homes that owners had commenced to clean up.
81. The releases suggested by the MBRI are “within the upper limit of non damaging floods downstream” as described in Strategies W2 and W3 of the FOM.

82. Annexure 4(iv) histogram shows two graphs which provide a comparison between SEQ high risk strategy and MBRI's opinion of what could have been a low risk strategy.
83. Subsequent to the preparation of this submission Seqwater has issued a Report on the operation of Somerset and Wivenhoe dam. MBRI considers that the Conclusions set out in the Executive Summary will be shown to be substantially self serving when assessed against the actual activities and communications from Seqwater contemporary with the Flood Event. Rainfall forecasting will never be an exact science. Depending on such forecasts requires judgement and also having a contingency. Flood mitigation can rarely be successful should process override common sense, conservatism and experience when executing a high risk strategy.



Historic water levels in Lake

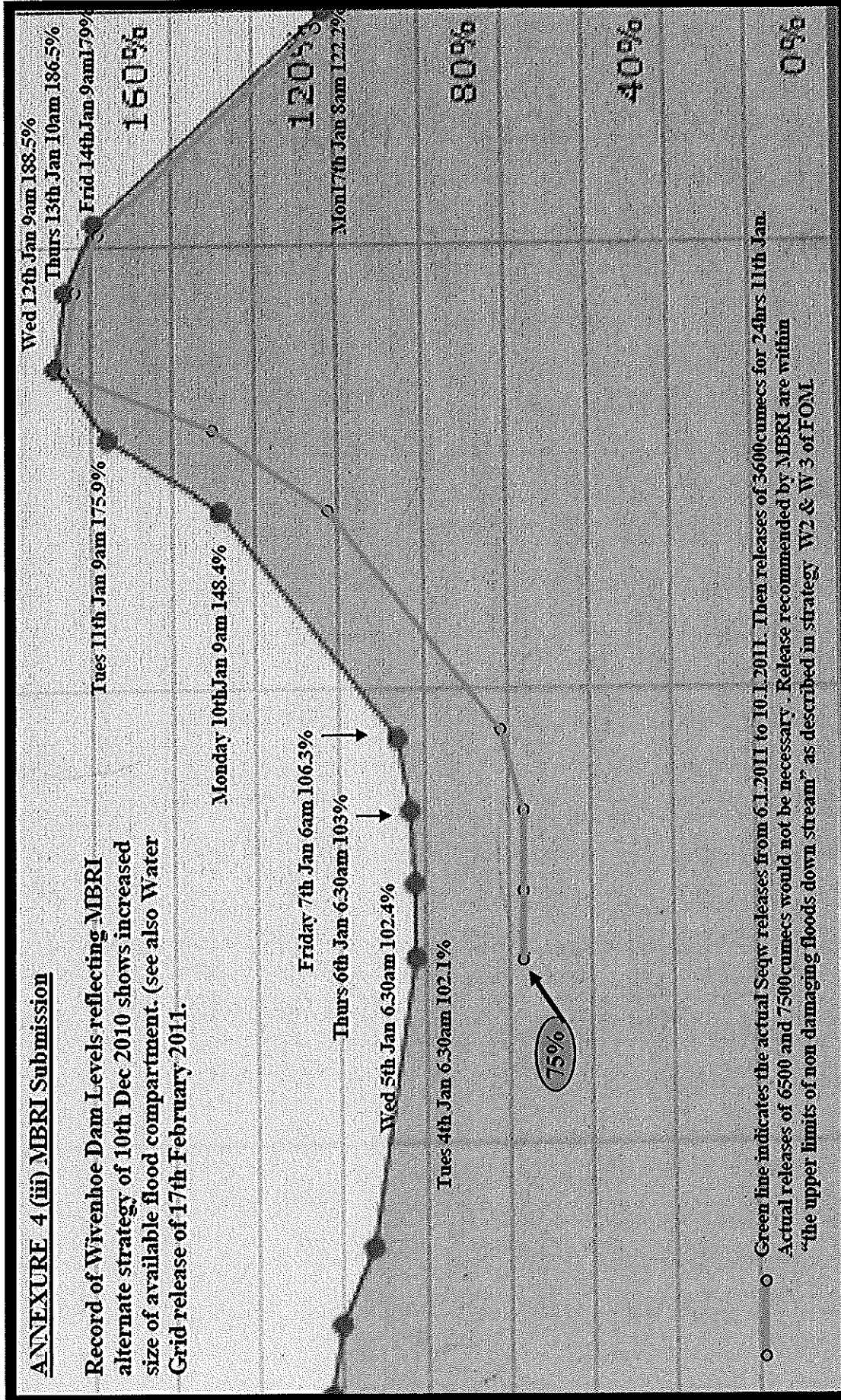
Tue 14 Dec. 2010 - Mon 17 Jan. 2011





ANNEXURE 4 (iii) MBRI Submission

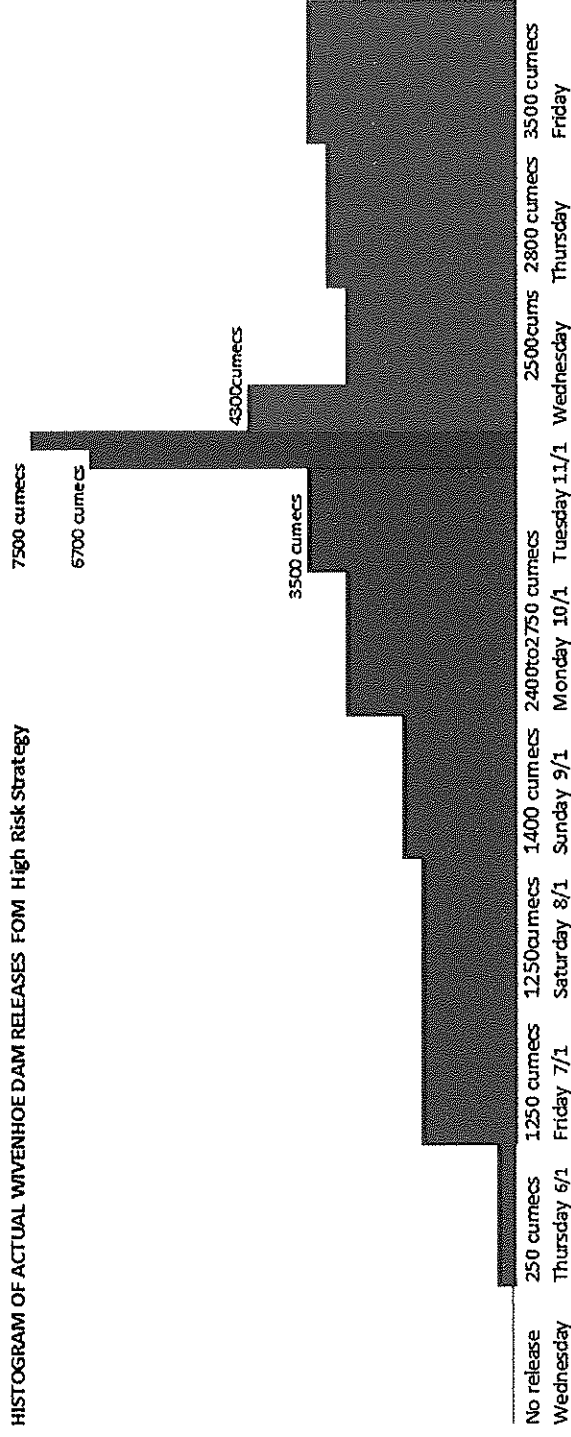
Record of Wivenhoe Dam Levels reflecting MBRI alternate strategy of 10th Dec 2010 shows increased size of available flood compartment. (see also Water Grid release of 17th February 2011.





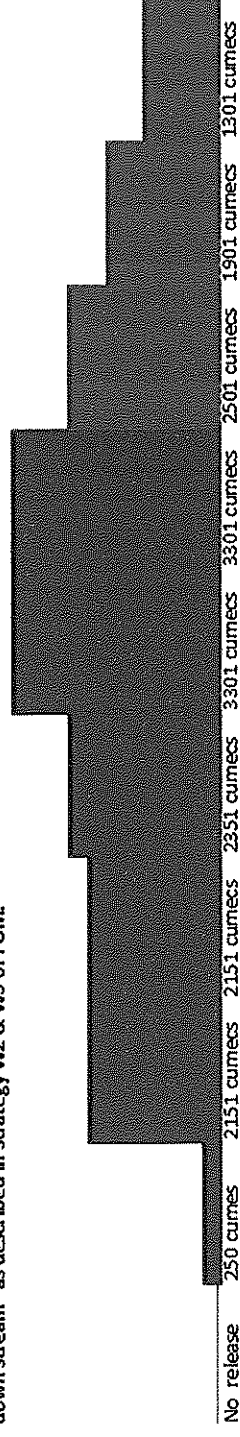
ANNEXURE 4 (iv) MBRI Submission

HISTOGRAM OF ACTUAL WIVENHOE DAM RELEASES FOM High Risk Strategy



HISTOGRAM SHOWING MBRI LOW RISK STRATEGY

Accuracy sufficient only to make realistic comparison.
Release recommended by MBRI are within "the upper limits of non damaging floods down stream" as described in strategy W2 & W3 of FOML





ANNEXURE 4 (ii) Page 2 MBRI Submission

SEQW RELEASED Tuesday 11th - The day and night of the flooding

8am to 12noon 3500cm	=	4 hours x 60minutes x 60seconds x 3500cm = 50,400,000cumecs
12pm to 5.30pm 3500cm increasing to 6700cm	=	5.5 hours x 60 x 60 x Average 5000cm = 99,000,000cumecs
5.30pm to 11.30pm 6750cm increasing to 7500cm	=	6 hours x 60 x 60 x Average 7500cm = 162,000,000 cumecs
Total		= 311,400,000cumecs

311,400,000cumecs were released over a period of 15.30hrs (½ of 1 day)

ALTERNATE RELEASES - LOW RISK If released over a 2,3,4 day period would have caused Minor to Moderate flooding in Fernvale and downstream.

As of Friday the dam was 106% full and a flood event was occurring. The releases itemized below would have substantially reduced the level of flooding in Fernvale Ipswich and Brisbane and would have preceded the Lockyer and Bremer peaks also high tides in Brisbane.

4day Friday, Saturday, Sunday & Monday = 4 day 96hours @ 901cumecs = 311,400,000cumecs plus already being released 1200cm +901 = 2101cumecs

3 day Starting Saturday Sunday and Monday 3 days 72 hrs @ 1201cumecs = 311,400,000cumecs plus already being released 1250cm +1201 = 2451cumecs

2 day Sunday and Monday 2 days 48hrs @ 1802cumecs = 311,400,000cumecs plus already being released 1400cm +1802 = 3202cumecs

None of the above constituted a risk to the Town Water supply which was secure because the rain had already fallen in the catchment. Grantham was not known about on the above dates so cannot be said, were waiting for the Lockyer to peak. The releases itemized above cannot be considered in hindsight.

A further 157,000,00cumecs would have reduced the volume in the dam if on Tuesday based on any of the above scenarios the releases continued, say 2500cumecs from 6am to 11.30pm (peak 10cms off fuse)

They knew 8000cumecs (3000 Somerset 5000 Wivenhoe) was running into the dam Sunday but only 1400/1600 was being released. Heavy rains never let up until Tuesday 11th afternoon.

CHANGES TO BE MADE 1. Water releases should not be governed solely by the Lockyer and Bremer peaks

2. Infrastructure -- Inundation of Bridges should not govern water releases

3. That the Manual be interpreted in a more flood averse way.

Annexure 5

The Flood

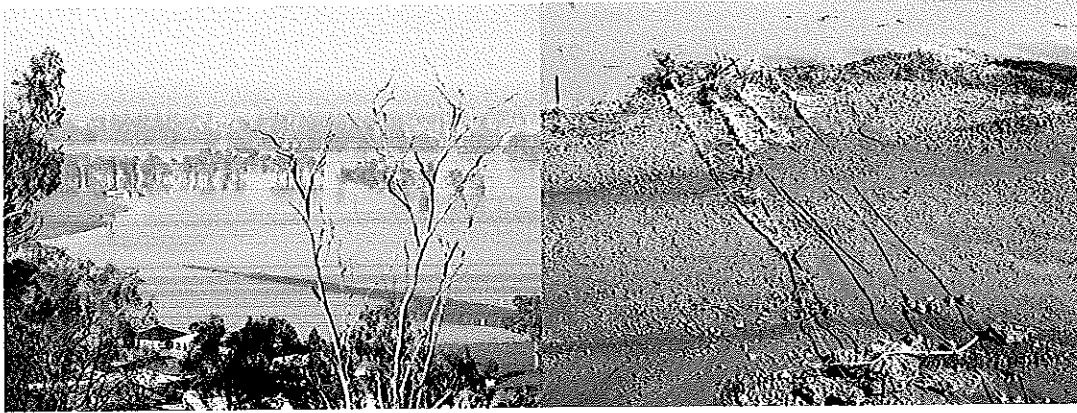
84. Seqwater had considerable warning that this was a major Flood Event, as defined in FOM. Emails from [REDACTED] to MBRI members stressed:

- “+50mm on Sunday Monday storms next few days” (Thursday, 16.12.2010 @ 6:55a.m.)
- “rain event developing” (Saturday, 19.12.2010 @ 6:44a.m.)
- significant rainfall to occur next week” (Wednesday, 22.12.2010 @ 8:25a.m.)
- “situation to deteriorate over long weekend” (Thursday, 23.12.2010 @ 7:50a.m.)
- “current severe weather warnings” (Friday, 24.12.2010 @ 4:52p.m.)
- “total rainfall forecast 100 – 150 mm over catchment for next 4 days” (Sunday, 26.12.2010 @ 10:24a.m.)
- “severe weather warning reissued and further heavy rainfall expected in catchment” (Monday, 27.12.2010 @ 7:58a.m.)
- “severe weather warning for next few days” (Wednesday, 05.01.2011 @ 12:26p.m.)
- “BOM forecast for rain until Tues next week” (Thursday, 06.01.2011 @ 12:32p.m.)
- “heavy rainfall from Sunday to Tuesday” (Friday, 07.01.2011 @ 10.56a.m.)
- “forecast for next 4 days is significant rainfall” (Saturday, 08.01.2011 @ 8.26a.m.)
- “heavy rain until Tuesday” (Sunday, 09.01.2011 @ at 8.33p.m.)

- “current severe weather alert and further falls of heavy rainfall appear likely” (Tuesday, 11.01.2011 @ 9:50a.m.)
85. Seqwater emails indicate massive inflows to both Somerset and Wivenhoe Dams from the catchment areas, variously described as:
- “flooding situation has deteriorated Upper Brisbane R at moderate flood levels levels” (Thursday, 06.01.2011 @ 4:39p.m.);
 - “Major flooding in catchments 5000cumecs upper Bris R and 3000cumecs Stanley River and rain continuing.” (Sunday, 09.01.2011 @ 8.33pm);
86. By 10.27p.m. Sunday, 9 January 2011, the total inflows into the dams reached 11,700 cumecs and only 1,400 cumecs was being released. Thirty-two hours at this inflow/outflow would fill the Flood Compartment.
87. At 3.25p.m. Monday, 10 January 2011, the peak flow above Wivenhoe Dam at Gregors Creek Station was similar to the 1974 peak flow below the Dam at Savages Crossing, with a combination of Brisbane River, Lockyer Creek and Somerset Dam.
88. The Commission is referred to the article written by Mr Daniel Hurst in the Brisbane Times on 13 October, 2010 wherein Mr Barry Dennien Chief Executive is quoted: “If there was a bigger event than 1974 in terms of rainfall and inflows we’re prepared for that”, and further, “Based on trigger points of the dams, they start opening the gates when it approaches that full supply level.”
89. This article is then to be considered alongside that by Mr Hedley Thomas of The Australian on 21 February 2011 wherein a landowner, Mr Chris McConnel is reported as telephoning the operators of Wivenhoe Dam to express his concerns about an imminent flood and being advised: “Call back tomorrow.” That article reports that after Mr McConnel replied “That’s going to be too bloody late. We’re going to get a big flood and the dam needs to be releasing a lot more water to cope”, the response received from the staff person was: “Well, I cannot add to what I have said. Please ring back tomorrow.”

90. The chart of email communications (**Annexure 3**) shows that it was only on Tuesday 11 January 2011 at 7:43p.m. when irrigators and landholders were advised: "Flood levels to be significantly higher than 1974 flood." By that time, electricity was down in most areas along the mid Brisbane River.
91. There was no other communication sent to advise irrigators and landholders of what was, by then, imminent major flooding.
92. The mid Brisbane River peaked at different points sometime between the above email and Wednesday 12 January, 2011 at 5:04a.m.
93. The comparisons between the 1974 flood and the 2011 flood as advised in the emails are as follows:
- Lowood 1974 - 22 metres 2011 - 25.09 metres
 - Savages Crossing 1974 - 23.8 metres 2011 – 24.13 metres
 - Mt Crosby Weir 1974 - 26.7 metres 2011 – 26.0 metres
94. It is clear that the regions closer to Wivenhoe Dam were more affected by the depth of water than were those further away, where the water did not reach the 1974 flood level.
95. MBRI raises the question whether this was as a result of the massive amount of water that was released from Wivenhoe Dam in proximity to those areas with the water having little time to spread out due to the force of the ongoing release.

Annexure 6



Just after the peak in Fernvale

Fallen power lines (example of infrastructure damage)



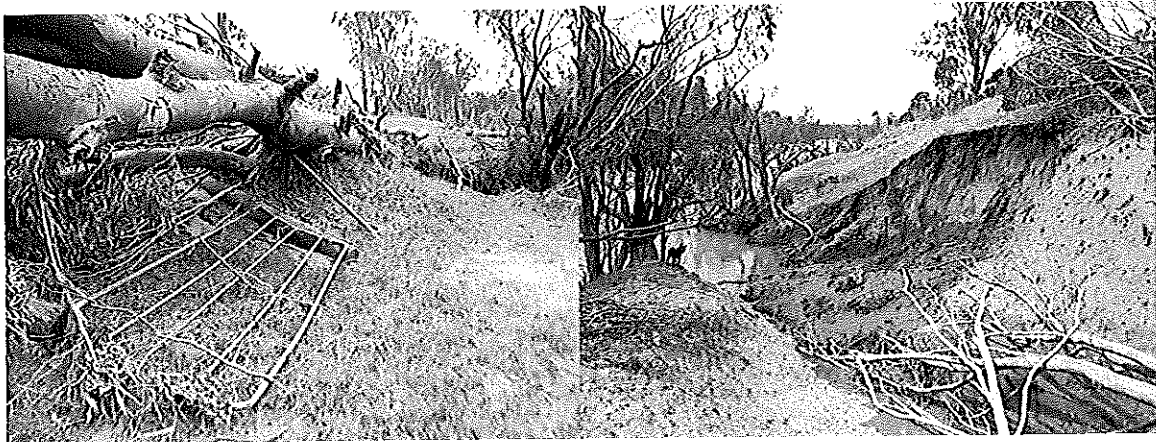
Massive scarring on Lowood – Fernvale section

Bank slumping south of Fernvale



Large tree washed down causing scouring

Example of damaged fence lines



More fence and tree damage

River bank scouring



Pump site beginning to slump

Pump site after slumping

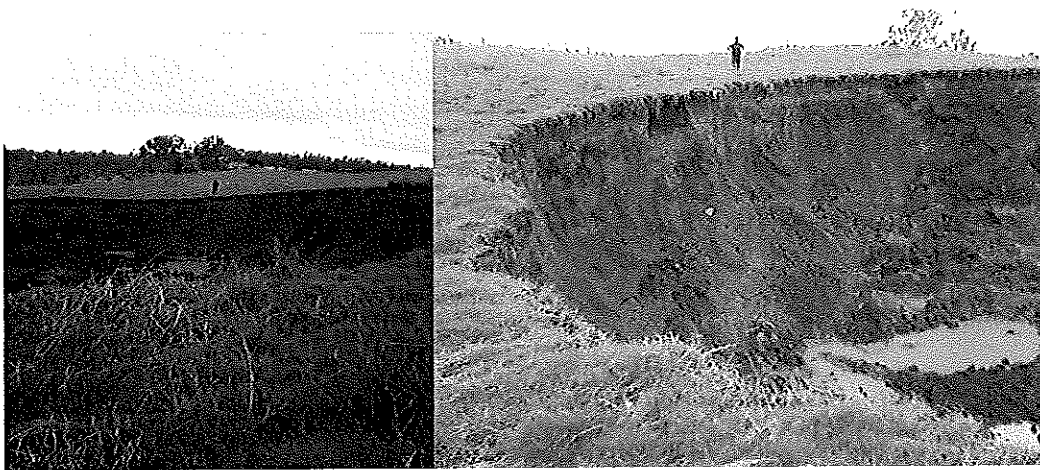


More Infrastructure Damage

Bank slumping and fence damage



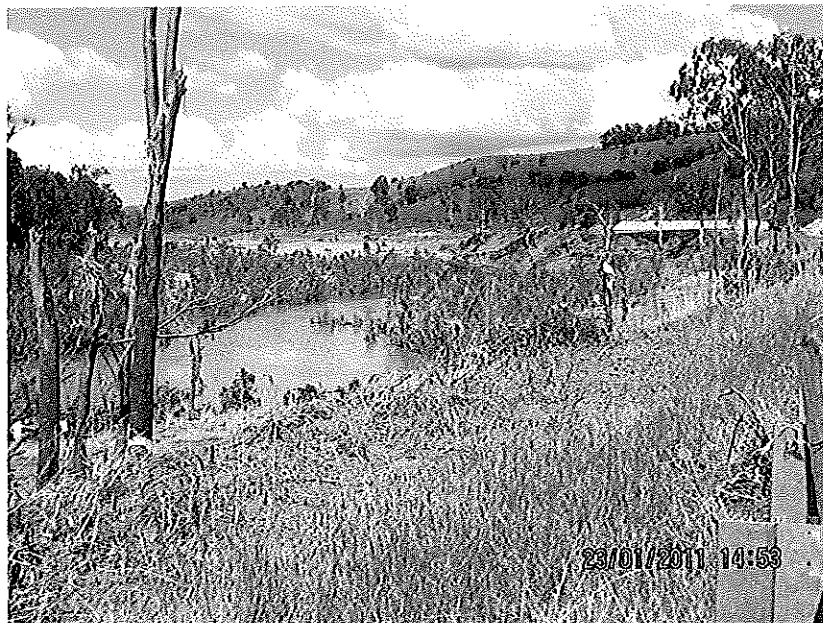
Approx. Eight hectares of farm washed away



Massive slumping at Pine Mountain



Slumping at Wivenhoe Pocket



Gum trees snapped off on the Fernvale –Lowood stretch of the river



More mature gums devastated by the velocity of the release south of Fernvale



Twisted trees and bank slumping south of Fernvale



Massive damage to quarry office on a farm north of Fernvale



More trees snapped in the Lowood Fernvale Stretch



Infrastructure damage north of Fernvale



A poly tank wrapped around a tree showing the velocity of the water

Annexure 7

Post Flood

96. Wivenhoe Dam water released in 1986 (following Cyclone Aivu) damaged properties, riverbanks, pumps, pumpsites & vegetation.
97. Landowners on the Mid Brisbane River were assured by Wivenhoe Dam operators that this would not happen again as the FOM prevented it.
98. A table of the damage caused by the January 2011 floods appears below.

Fences –	conservative estimate of over 120 km
Power Infrastructure –	numerous private poles need to be replaced
Pump sites –	washed away, extensive earth works required to reinstate
Bank Slumping –	extensive and irreparable
Lost Production –	six to twelve months on most farms
Irrigation equipment –	extensive damage
Livestock Loss –	unknown numbers lost
TOTAL DAMAGE	\$MILLIONS

99. Refer Appendix 6 for photos of flood damage along the length of the river.
100. Many comparisons have been made between the recent flood event and that of 1974. Perhaps the most telling comparison is that of the velocity.
101. The water being released from Wivenhoe came from a height well above the level of the river and thus had a tremendous velocity.
102. This was observed along the length of the river by landholders who witnessed this event and the event of 1974.
103. This velocity caused extensive environmental damage to the river, wiping out large gum trees which have lived in this situation for hundreds and perhaps

thousands of years and have survived many natural flood events, only to be felled by the massive man made peak.

104. The heavy suspended sediment load now carried by the river will be continuing for extended periods due to the continuing riverbank erosion process now set up.
105. The resultant poor water quality will require continuing expensive treatment to fulfil the requirements for urban water supply.
106. Although the flood water has passed, the river bank slumping is continuing to occur on various river front properties due to the saturated land masses now drying out, contracting and falling. Soil conservationists have advised MBRI members that this can happen without warning and caution needs to be exercised along riverbanks.
107. Full poly tanks with 5,000l of water have been swept away by the flood waters as have loaded containers.
108. Livestock have been swept away and in some instances have swum down stream to clamber up riverbanks, miles from their farms.
109. Farming equipment has been swept away or destroyed.
110. Kilometres of fencing have been destroyed.
111. Top soil to varying depths on farms has been swept away.
112. Homes have suffered extensive damage. Ceilings and walls have been destroyed. Furniture has been destroyed, lifted and dumped by the flood waters, windows broken and small buildings swept away. Kitchens and bathrooms have been destroyed. Carpets and soft furnishings have been destroyed.
113. Values of inundated properties have been negatively affected.
114. Many of these homeowners will not receive flood insurance and will not be eligible for the larger government grants due to the value of their other assets which easily exceeds that set by the government.



115. Few of this region's landholders are not suffering financial and emotional distress following the flood.

Annexure 8

Release Strategies

116. The 'Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam & Somerset Dam - Revision 7' was only publicly released after the Jan 2011 flood.
117. In relation to the Flood Mitigation Objectives, Section 3.6 of the FOM states 'when determining the time interval between successive gate closures consideration should also be given to reducing potential bank slumping. Rapid draw down of stream levels where banks are saturated should be avoided if this can be managed within the other flood mitigation objectives'.
118. The Dam operators are in clear breach of the FOM by ignoring this objective.
119. The requirement for stored floodwaters to be emptied from the dams within seven days of the flood event peak passing through the dams concentrates the volume of water into a short period of time. This creates a higher peak, stronger flow and rapid draw down of water compared to a natural flow.
120. Seqwater's 'Sustainability Charter' dated 17 September, 2010 states that it is committed:
 1. 'to work within the restorative capacity of our environment':
 - minimise our environmental footprint
 - work in partnership with others to restore the natural productivity of our catchments
 - scale what we do to the adaptive limits & productive potential of each ecosystem
 2. 'to nurture confidence in the strength of our communities':
 - communicate openly to create active & knowledgeable community partnerships

- respond to communities in ways that respect & encourage the value they place on water.
121. By requiring the water storage in FOM clause 8.4 and thus necessitating a release of water as has happened in January 2011, the FOM and the Sustainability Charter cannot be consistent.
 122. The MBRI believes that the recent flood event was made worse by the release strategy selected by the Dam operators. After viewing the FOM post the flood it is evident that the W1 release strategies were used from the beginning of the flood, right through to Monday morning, 10 January, 2011.
 123. Reported inflows in this period amounted to approx 11,700cubic metres per second and the outflows were only 1400 cubic metres per second. The Dam increased from 106% to 148% over the weekend yet the strategy was not changed, thus enabling high level crossings to remain open longer.
 124. When Wivenhoe Dam was being planned it was promised that all low level bridges would be rebuilt to a higher level, which apart from the bridge at Fernvale has not happened.
 125. The obsession by the Dam operators with keeping Colleges Crossing open is questionable as although a high traffic area, it is little more than a causeway and other roads, albeit longer routes, are available for motorists. To concentrate on keeping this Crossing open for vehicular traffic at the expense of riverbank slumping suggests their priorities are wrong.
 126. Aside from the environmental damage to the riverbanks, slumping causes sediment to enter the River which reduces water quality.
 127. Seqwater has a vested interest in maintaining water quality in relation to minimising water treatment costs downstream at the Mt Crosby Weir Water Treatment Works.
 128. The reason given to the MBRI by the Dam operators for this release strategy was that FOC was waiting for the Lockyer Creek to peak so that the water from

Wivenhoe Dam could be released on the back of this peak. This of course in the end only placed a man made peak (caused by the massive urgent release from Wivenhoe on Tuesday 11 January 2011) on top of the natural peak from the Lockyer. The emails from Seqwater to the MBRI members substantiate this claim. Without this man made peak the MBRI believe that the damage to our properties would have been much less intense.

129. If the release strategies of the present are maintained, this will happen again and again. The river system will no longer be a natural system and will require redesigning to be made more like a shallow channel with gradually sloping grassed banks resembling a suburban drain.
130. The release strategy needs to be changed to more closely mimic nature to prevent this extensive environmental damage from occurring in the future. To do this the releases should be made earlier in the event to reduce the peak and extended over a longer period tapering the flow to prevent bank slumping and hydraulic drawdown. (**Refer Annexure 4ii**).

Annexure 9

Sustainability Charter

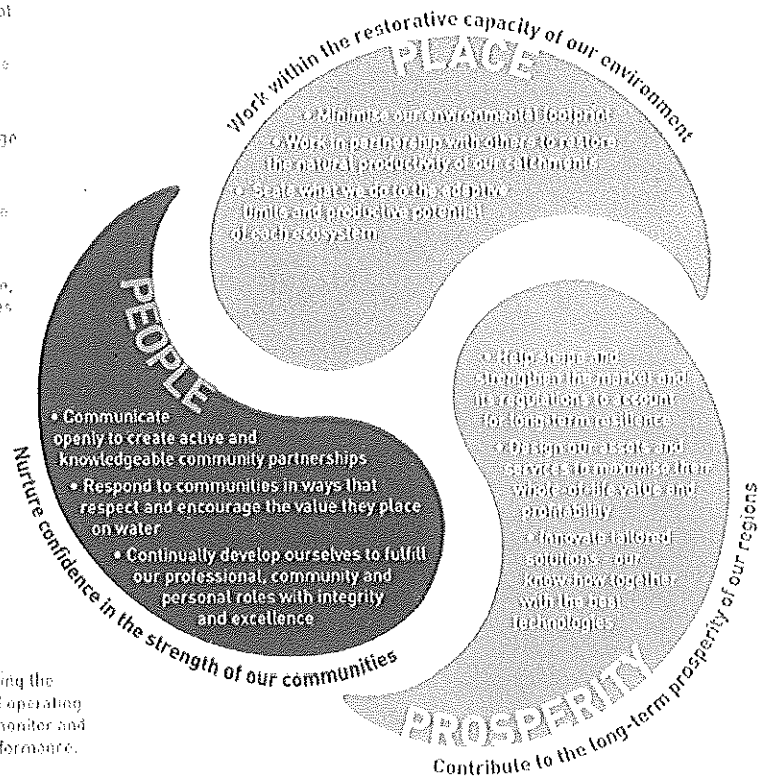
Water for life - vibrant, sustainable and optimistic urban and rural communities and businesses. That's our vision for the future of South East Queensland.

Our business performance depends on catchment quality, community confidence and economic health. Business sustainability - commercial performance in step with the fertile potential of natural and social systems - is critical to our future.

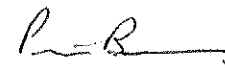
At Seqwater, we believe:


- The community has a natural right to water for life.
- Water for life depends on the ongoing health of complex systems.
- Science underpins knowledge about the complexity of systems.
- Knowledgeable people make the difference.
- Well-framed markets provide incentives for people, communities and businesses to succeed.

We are committed to:



We are all responsible for meeting the challenges and opportunities of operating sustainably. We will measure, monitor and report on our sustainability performance.


Peter Borrows
Chief Executive Officer


Phil Hannessy
Chairman

17th September 2010

 **seqwater**
WATER FOR LIFE
www.seqwater.com.au

Annexure 10**History of email exchange between MBRI, Mr Wayne Wendt MP and Mr Mike Foster of Seqwater.**

From: Ken & Carolyn Schmidt [REDACTED]
Sent: Wednesday, 2 February 2011 6:18 PM
To: IpswichWest Electorate Office; [REDACTED]
Cc: [REDACTED]
Subject: Meeting with FOC

To Wayne Wendt and Graham Lehman

We were most appreciative of your meeting with us last Thursday and hoped that would result in a more cooperative approach from SEQW. Despite a friendly call from [REDACTED] it is clear as from yesterday that no one in authority or of consequence from SEQW or the FOC is prepared to meet with us despite our repeated assertions that our focus is not on a witch hunt, but on a constructive approach to avoiding a repeat of events that occurred in the period 7th to 14th of January 2011.

Our position is that there appears to a clear failure to comply with the Manual prepared and legally adopted for flood control in Wivenhoe and Somerset. This despite vitally important pages being blacked out(see page 30). We believe that may be dealt with by the Government's Commission of Enquiry despite public opinion that the Government has acted contrary to accepted good practice in relation to appointments to keep the Commission genuinely independent.

We firmly believe that the current stonewall by SEQW gives no confidence to people who live below the Dam(Fernvale to Brisbane) that anything has been learned from the recent event and that there is every likelihood that should a Major Flood Event occur the same tragic result will follow. We would appreciate your continued help in arranging a meeting with FOC to enable us to gain some confidence that an event like the last will not happen again.

Regards

Ken Schmidt

Chairman

Mid Brisbane River Irrigators Inc.



Ph. [REDACTED]

Mob. [REDACTED]

E-Mail [REDACTED]

From: IpswichWest Electorate Office
Sent: Thursday, 3 February 2011 8:27 AM
To: 'Ken & Carolyn Schmidt'; [REDACTED]
Cc: [REDACTED] Cr Graeme Lehmann
Subject: RE: Meeting with FOC

Hi Ken

I am currently trying to ascertain what can be done in regard to this email. As soon as I know more I will be back in touch.

Wayne

From: IpswichWest Electorate Office [<mailto:Ipswich.West@parliament.qld.gov.au>]
Sent: Thursday, 3 February 2011 12:47 PM
To: IpswichWest Electorate Office; Ken & Carolyn Schmidt; mail@somerset.qld.gov.au
Cc: Cr Graeme Lehmann
Subject: RE: Meeting with FOC

Hi Ken

Further to my earlier email I am aware that everyone is working together to try to ensure that a meeting takes place ASAP.

To ensure that this occurs I have been emphasising the following, which is my understanding of your position last week:

- that the MBRI are wishing to bring a number of suggestions and thoughts on flood management to the table;
- that the MBRI members have experience in flood management and control;
- that the MBRI seeks to work co-operatively together with all affected parties for the benefit of the entire SEQ region;
- that the MBRI will not be asking questions, or seeking answers to specific flood management practices at this early stage. Bearing in mind that these issues will be followed up as part of the Commission of Inquiry terms of reference.



I would appreciate your advice as to whether or not these issues have been covered correctly.

Cheers

Wayne

Wayne Wendt MP

State Member for Ipswich West

✉ Shop 1, Brassall Shopping Centre
68 Hunter Street, Brassall Qld. 4305

☎ 07 38130074

📠 07 38130076

💻 ipswich.west@parliament.qld.gov.au

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From: Ken & Carolyn Schmidt [REDACTED]

Sent: Friday, 4 February 2011 12:37 PM

To: IpswichWest Electorate Office

Cc: [REDACTED]

Subject: RE: Meeting with FOC

Dear Wayne

Thanks for the email and we are pleased that you have identified the issues as you saw them. We would just like to make some points about these issues that we may differ with you about

Dot point 2. MBRI is not claiming to have experience in flood management control in the context of the management of Wivenhoe. We are however very experienced in the negative impacts to our farms and riverbanks since the installation of Wivenhoe. In addition we have been kept well informed about what was eventuating at Wivenhoe and Somerset since October and had already approached SEQW management to have changes made but without success.

Dot point 4. We are seeking advice and answers to specific flood management practices because we expect that should another major flood event occur under the present interpretation of the Manual then the same disastrous consequences will impact our businesses and the community in general.

The Manual states that history shows a significant probability that a repeat of this last flood event will occur. Do the Government, SEQW and the Commission really believe that the community should suffer the risk of the same disastrous consequences prior to producing their report just because the FOC and SEQW fear that they may have been found wanting in their management of this Flood Event. Surely the Commission would support SEQW taking a different course of action now if it mitigated the risk of further flooding.

Wayne, we need urgent action to allay community fears about the remainder of the Wet season

We have arranged to meet with [REDACTED] from DERM on Wednesday 9th Feb at 2.00pm at my residence [REDACTED] though at this stage his ability to influence the outcome the community needs seems limited. We would welcome your attendance if that is possible.

Ken Schmidt

Chairman

Mid Brisbane River Irrigators Inc.



[REDACTED]

[REDACTED]

[REDACTED]

Hi Ken

I discussed my understanding of the meeting with Graeme Lehmann who confirmed the details before I sent you the email below. I was very clear on the day of the meeting in ensuring that you simply wanted to pass on your concerns and experiences.

Unfortunately due to the short notice of this event I will not be able to attend as I have another meeting in Brisbane. However I hope that the meeting is constructive and beneficial to all.

Cheers



Wayne

Wayne Wendt MP

State Member for Ipswich West

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Ken,

Thanks for your email below.

Seqwater does not have an issue meeting with yourself or your members. However as per our discussions and your email below, the issues you wish to discuss are now before a Commission of Inquiry. As you agreed, a meeting with Seqwater at this stage is likely to result in frustration for both yourself and your members given the limitations on what Seqwater can discuss.

Seqwater has discussed the nature of your concerns and the Office of the Dam Safety Regulator who has agreed to a meeting.

The Dam Safety Regulator [REDACTED] has requested you contact him on [REDACTED] to arrange a time.

Cheers

Mike

From: Ken & Carolyn Schmidt [REDACTED]
Sent: Wednesday, 23 February 2011 9:04 PM
To: Mike Foster
Subject: Information request

22 February 2011



Mike [REDACTED]

Manager, Strategic Relations Manager

SEQ Water

Dear Mike,

You may recall that committee members of the Mid-Brisbane River Irrigators Association met with SEQ Water representatives at Wivenhoe Dam on 10 December 2010. At that meeting those present raised concerns about the level of water in Wivenhoe Dam and the forecast for the forthcoming months.

In light of that meeting and the events that followed in January 2011, we would be grateful if you would supply the following information:

1. the strategies selected by the FOC progressively in the period Thursday 6/1/11 to Wednesday 12/1/11;
2. the rainfalls forecast to fall in the Wivenhoe Dam catchment area over the same period; and
3. a copy of communications between the FOC and Dam control personnel in the same period.

Regards

Ken Schmidt

Chairman

Mid Brisbane River Irrigators Inc.



Promoting Effective Sustainable
Catchment Management



Thanks for your email Ken

The information you seek will be contained in an event report Seqwater is required to submit to the Dam Safety Regulator. The report will also be provided to the Commission of Inquiry where it is our understanding that it will be made public.

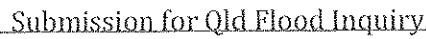
As previously discussed, any public release of this information and any commentary around prior to consideration by the Commission would be deemed to be a contempt of the Commission.

Seqwater's preference is to have this information in the public arena as soon as possible to provide the community with all the relevant information surrounding the January event. As an organisation we are greatly looking forward to telling our story in the Commission.

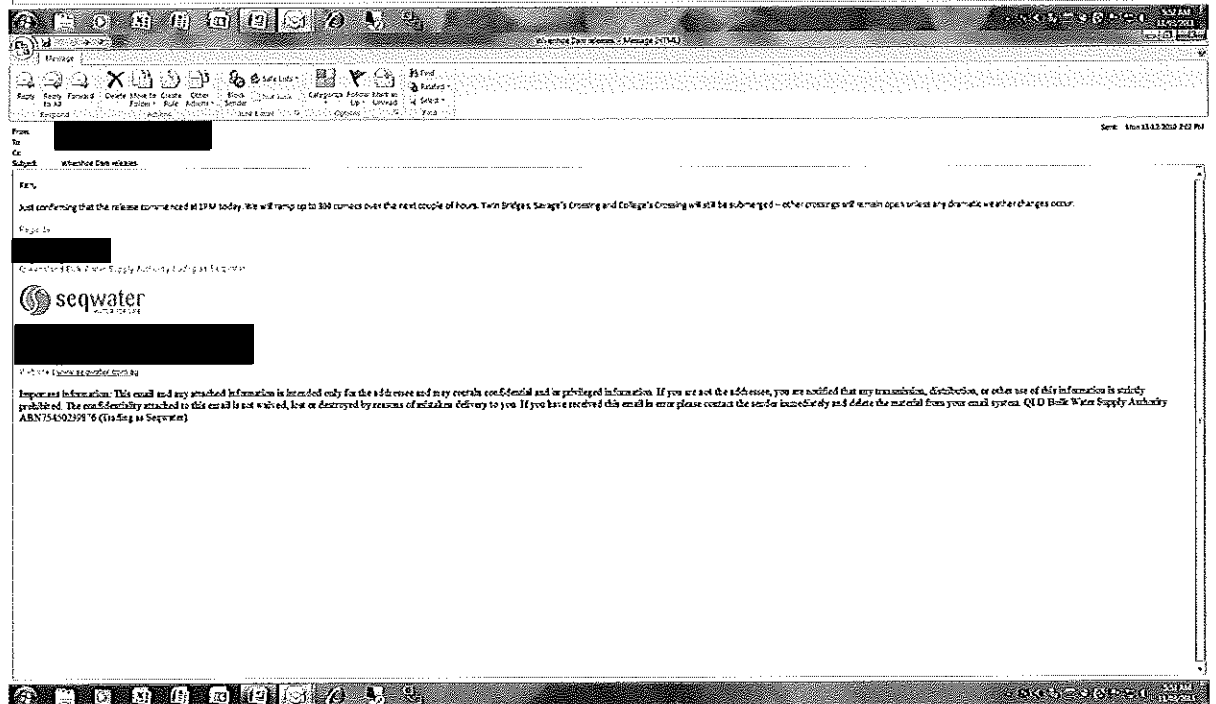
In relation to timing, it is our understanding that the management of Wivenhoe Dam over the January event period will be among some of the first issues considered by the Commission.

Happy to discuss.

Cheers Mike



Bundle of Seqwater emails





Submission for Qld Flood Inquiry

Message

From: [Redacted]
To: [Redacted]
Cc: [Redacted]
Subject: [Redacted]

Good morning MBSR members,
Update on a few issues and information sources follows:
Catchment details
Heather Sinclair (Secretary) forwarded a list of known email addresses. If you know of other irrigators who need to be included please let us know.
1800 Water Qld information number
The number is 1800 613 132. This will provide you (and the general public) with access to details of gate releases, flood events and any other significant events. The recorded information will be updated regularly by our Communications Team.
When does release:
Our release is static at 300 cumecs (cubic metres per second). Lockyer Creek is still discharging via Dally's Wick. The current flow in the river is the combination of Dally's Wick and it may increase slightly as Lockyer Creek recedes. A small additional pulse may enter the river from Lockyer Creek over the next couple of days, however the river will not rise significantly. There doesn't appear to be any significant run-off within the mid-basin catchment as the lower creeks only have very minor flows.
At present our plan is to close the Warabrook Dam gate release some time tomorrow (Thursday 16/12), then react to release via hydro and cone valve. Two bridges may still remain submerged for some time.
Catchment status:
Our FOC (Flood Operations Centre) staff provide us with a weekly Storage Status report which summarises Dam by risk, catchment conditions and other operational data projections. As discussed at our recent meeting with your executive team and members, we will include some of this data on our website. This will provide you with a guide to catchment status and the likelihood of run-off and resultant Dam releases under rainfall events.
Examples:
Our latest status report (16/12) indicates that the EA (Expected Initial Loss) for Somerset Dam's catchment is 34mm and that for Warabrook Dam is 45mm. EA is the amount of rainfall that is required to replace the soil moisture deficit (or fill up the soil profile) in the catchment. These are average values for each catchment and indicate the amount of rainfall needed to initiate run-off. EA drops during rainfall events and the weekly update accounts for these (or a lack of rainfall).
Note that while much of the balance of the rainfall converts to run-off, some is lost by gravitational effects (percolation) in the soil - this is OI (Ongoing Loss) and is normally equivalent to 1 to 2mm of rainfall per hour. Therefore a 50mm rainfall event of 3 hours duration may only provide run-off equivalent to 20mm of the total rainfall (for Somerset's current catchment condition). After rainfall the soil drains or moisture is removed by vegetation and evaporation, and EA begins to increase again. Drainage (including the OI component) returns rainfall to streams via aquifers and is usually a slow process, e.g. the Stanley River continues to flow at low levels and discharges into Somerset Dam well after substantial rain events.
This process may be complicated by distribution of rainfall and soil infiltration rates. However these EA values and both rainfall projections as a guide to the likelihood of releases from the Dam (a check of the 1800 number will then provide up-to-date information on release).
The current version in EA indicates that the Somerset catchment is water than in historical and requires less rainfall to produce run-off. As both dams are about 75% (full supply level) or maximum long term storage level for water supply, Somerset Dam is more likely to release water. Warabrook Dam falls below 75% and (as a supply reservoir) to release "flood" water to recover the flood compartment space (short term storage) by release through gates, hydro or valves to the mid-basin river.
The release rate is varied according to storage status, probability of further rainfall events in the catchments, events in the mid and lower Brisbane river catchments and potential effects on river crossings and river traffic. Remember that no 2 events are the same, so our operational plans will vary.
Dam probability:

Message

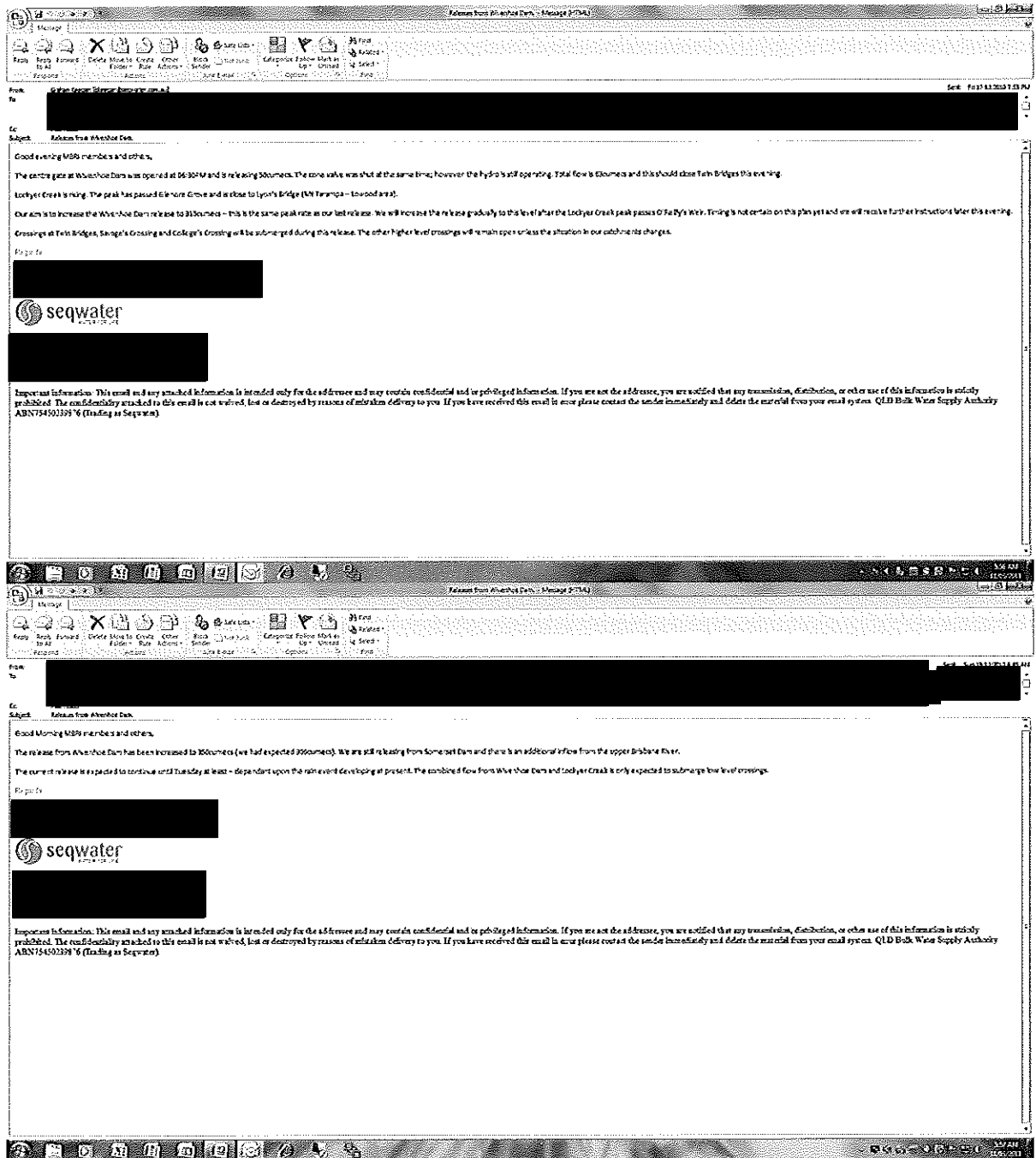
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To: [Redacted]
Cc: [Redacted]
Subject: [Redacted]

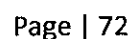
Good afternoon MBSR members and others,
We will be opening a gate at Warabrook Dam this evening at approx 7AM. Not sure what flow or duration yet but will advise later.
Note that there is another pulse in Lockyer Creek at present - due to last night's storms.
Regards
[Redacted]
City Attorney, Acting as Secretary
seqwater
[Redacted]
[Redacted]

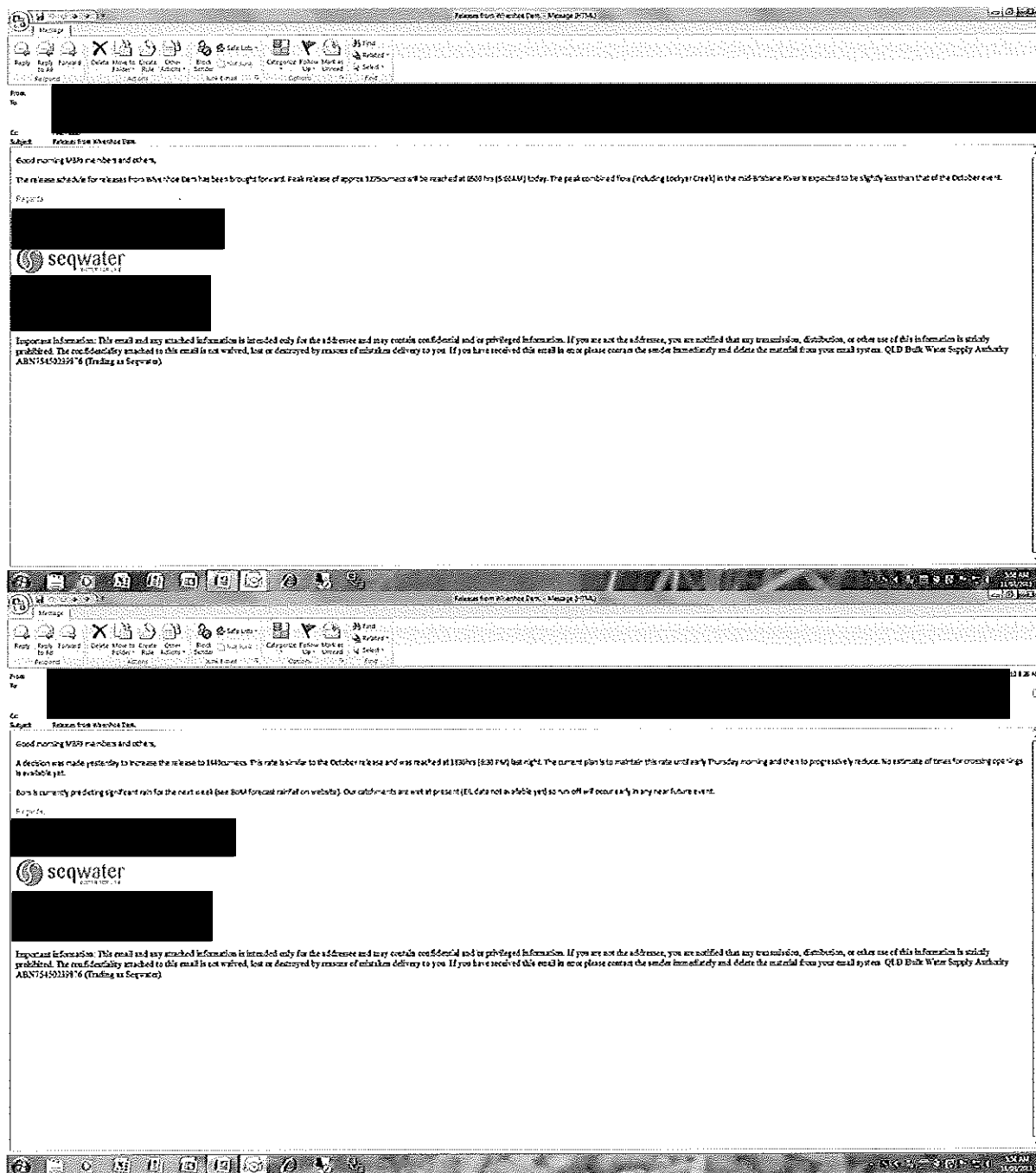
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Submission for Qld Flood Inquiry

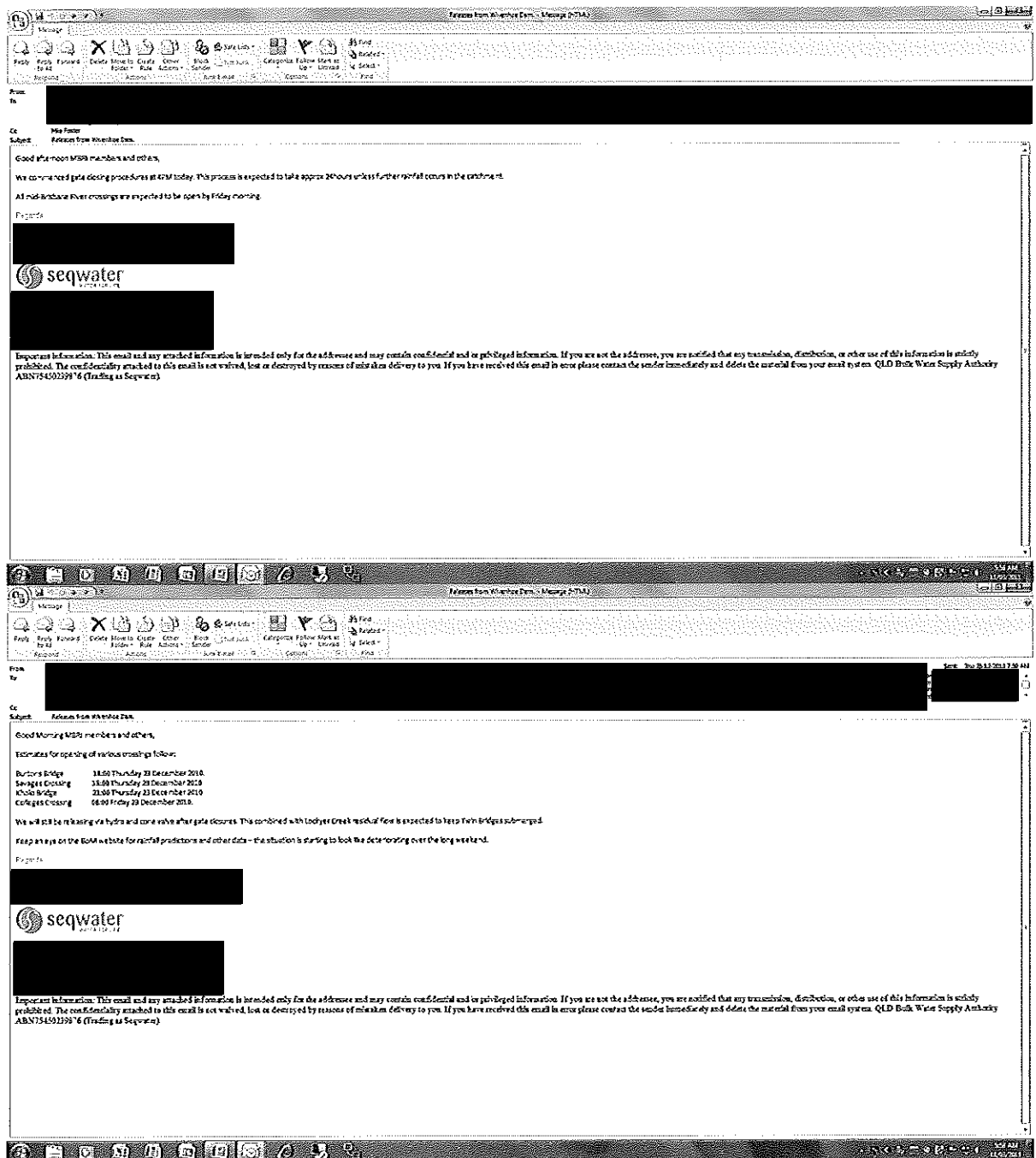


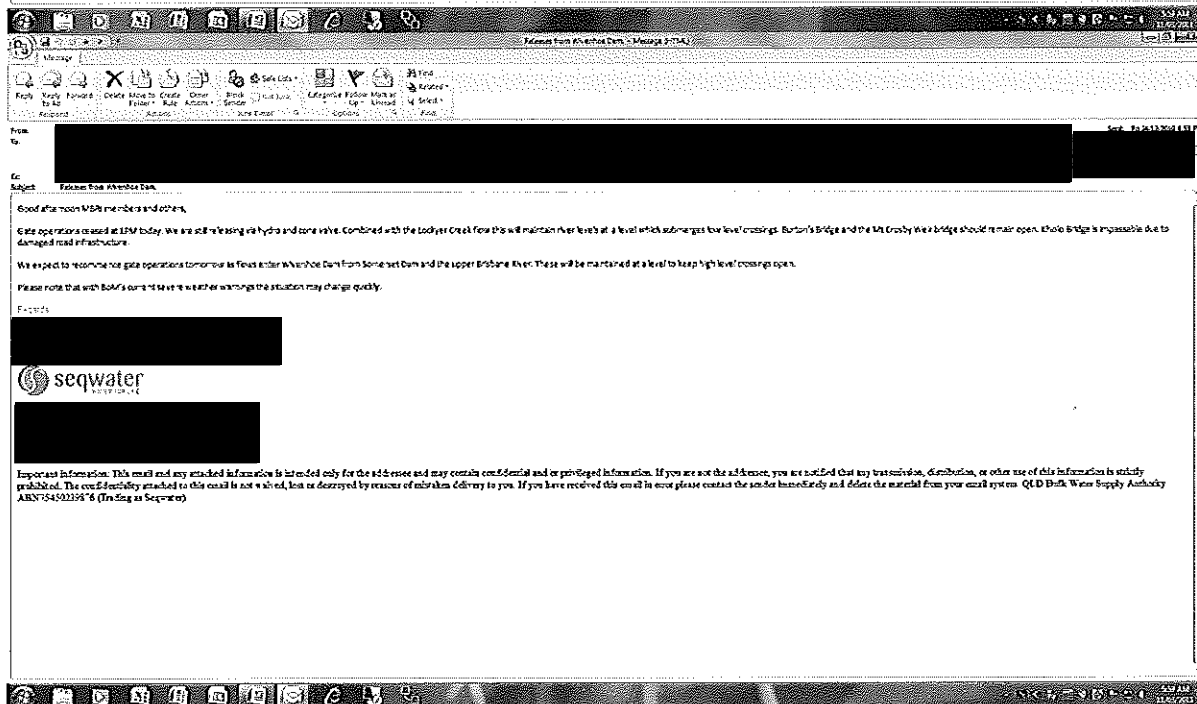
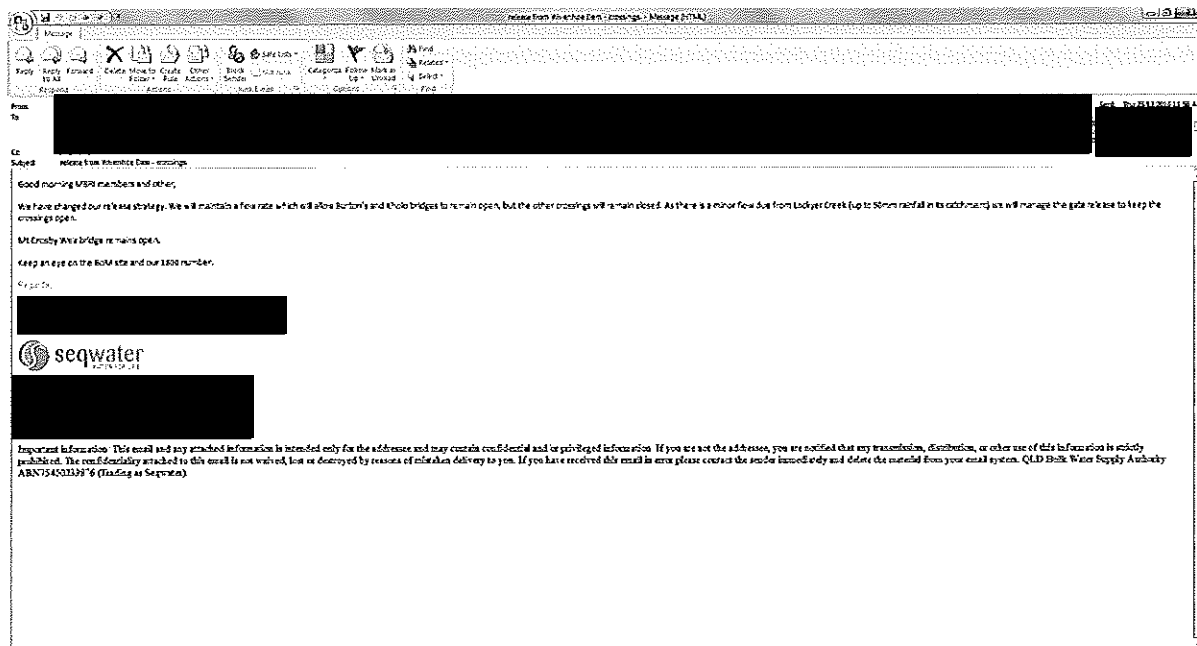






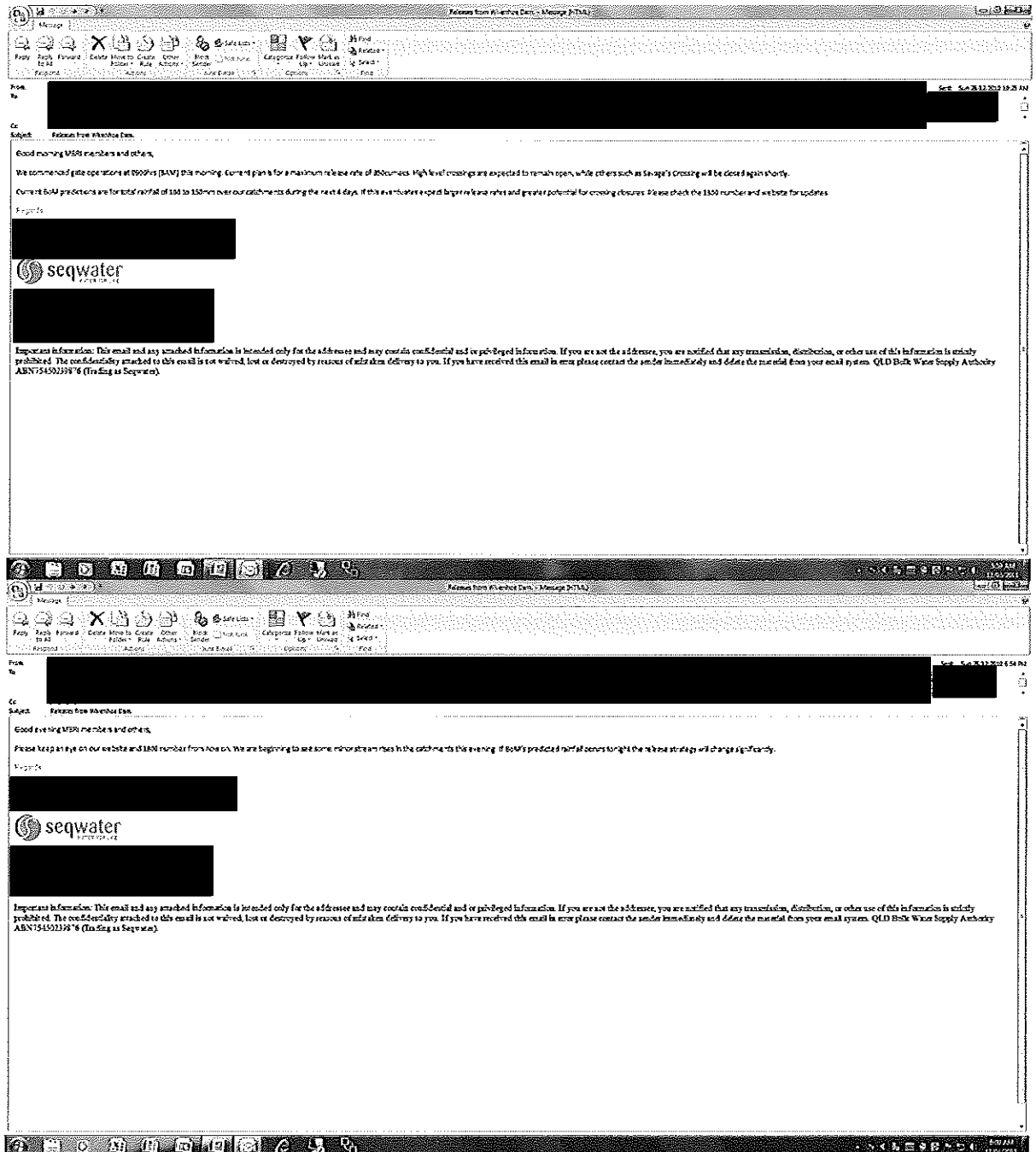
Submission for Old Flood Inquiry





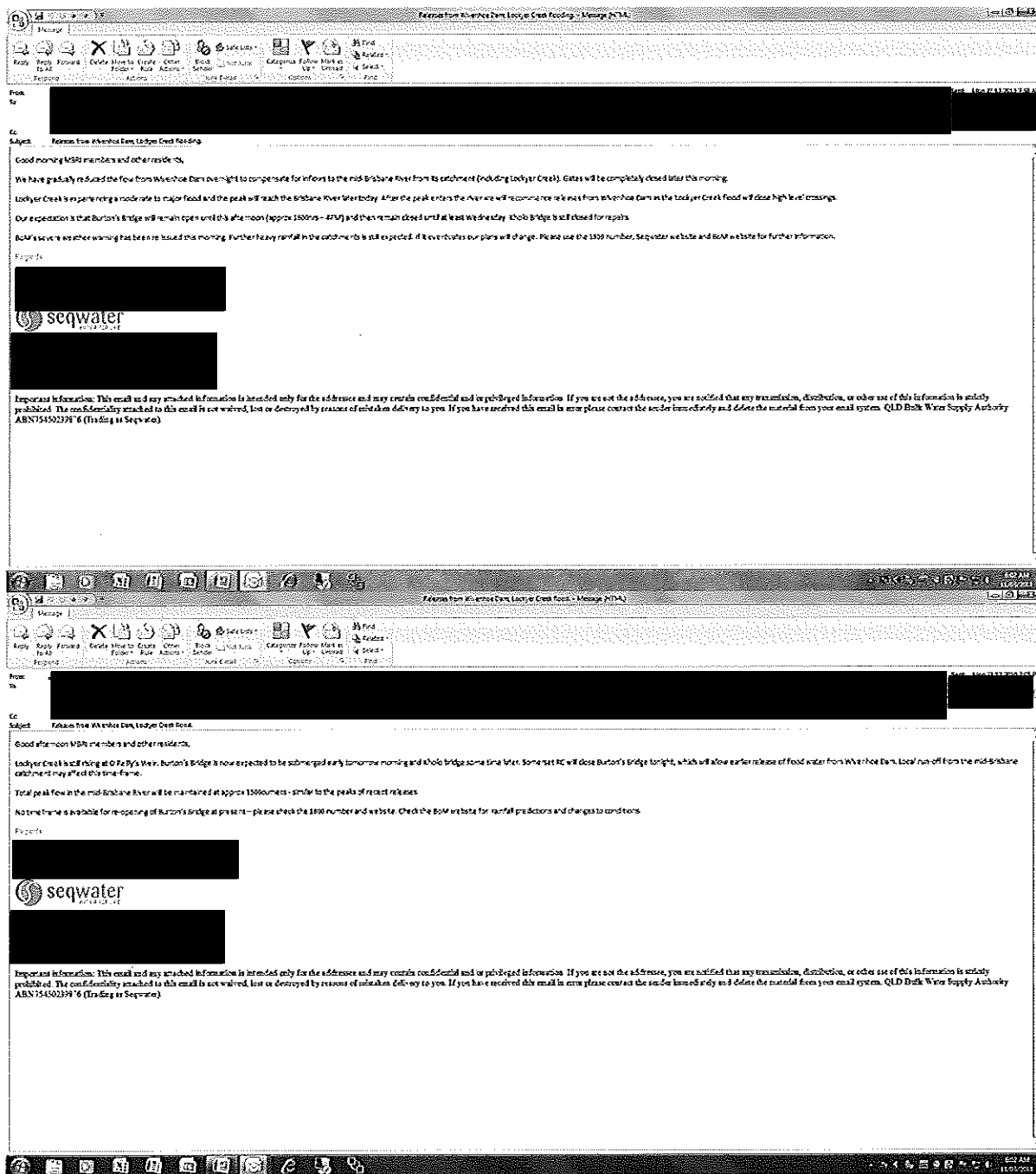


Submission for Qld Flood Inquiry

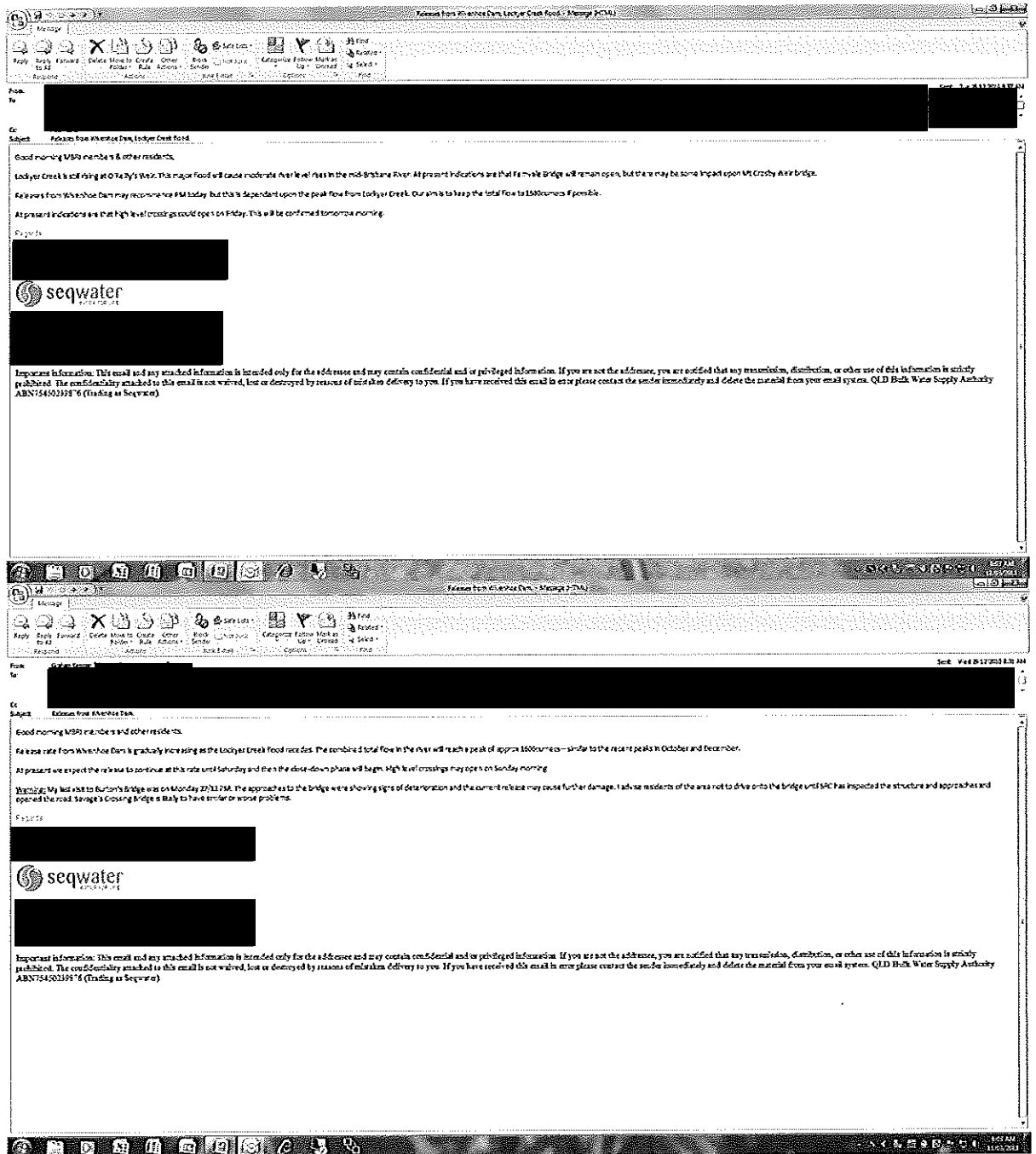




Submission for Qld Flood Inquiry

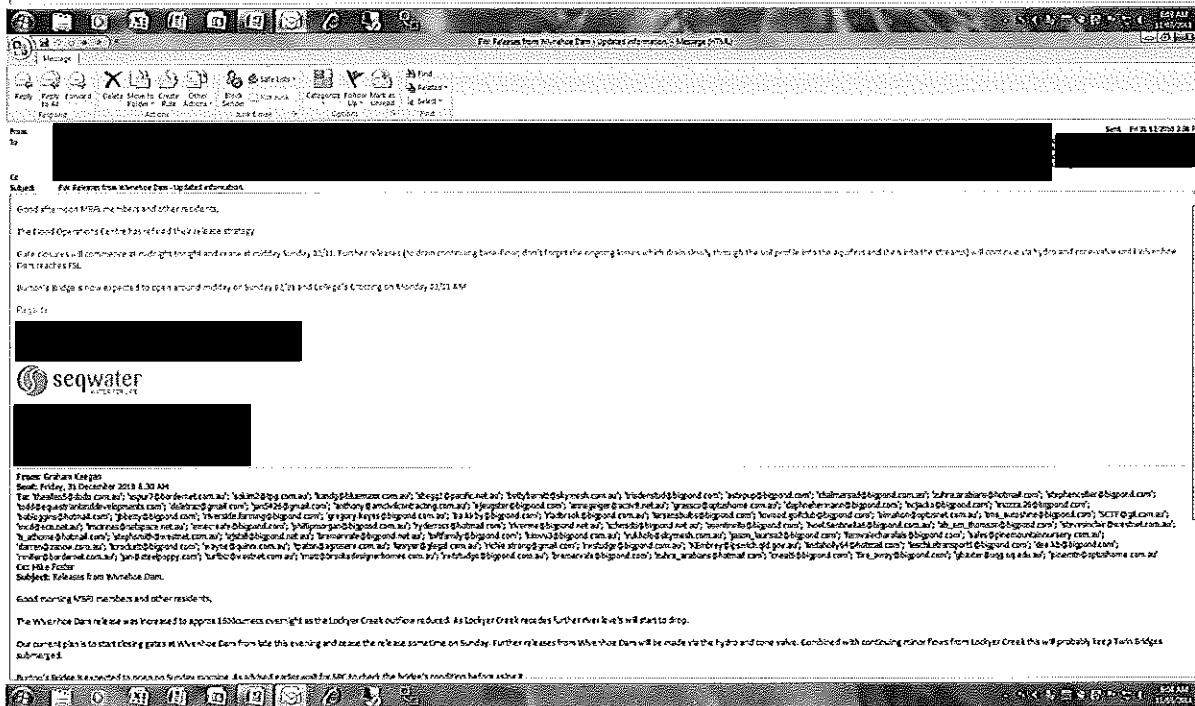
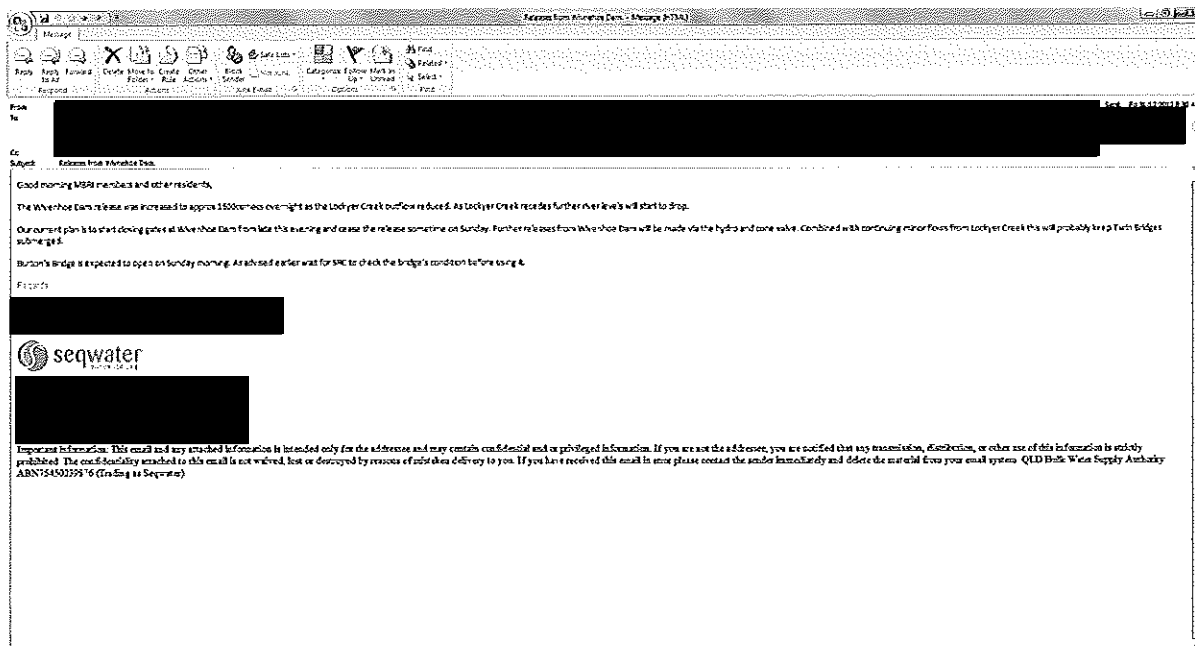


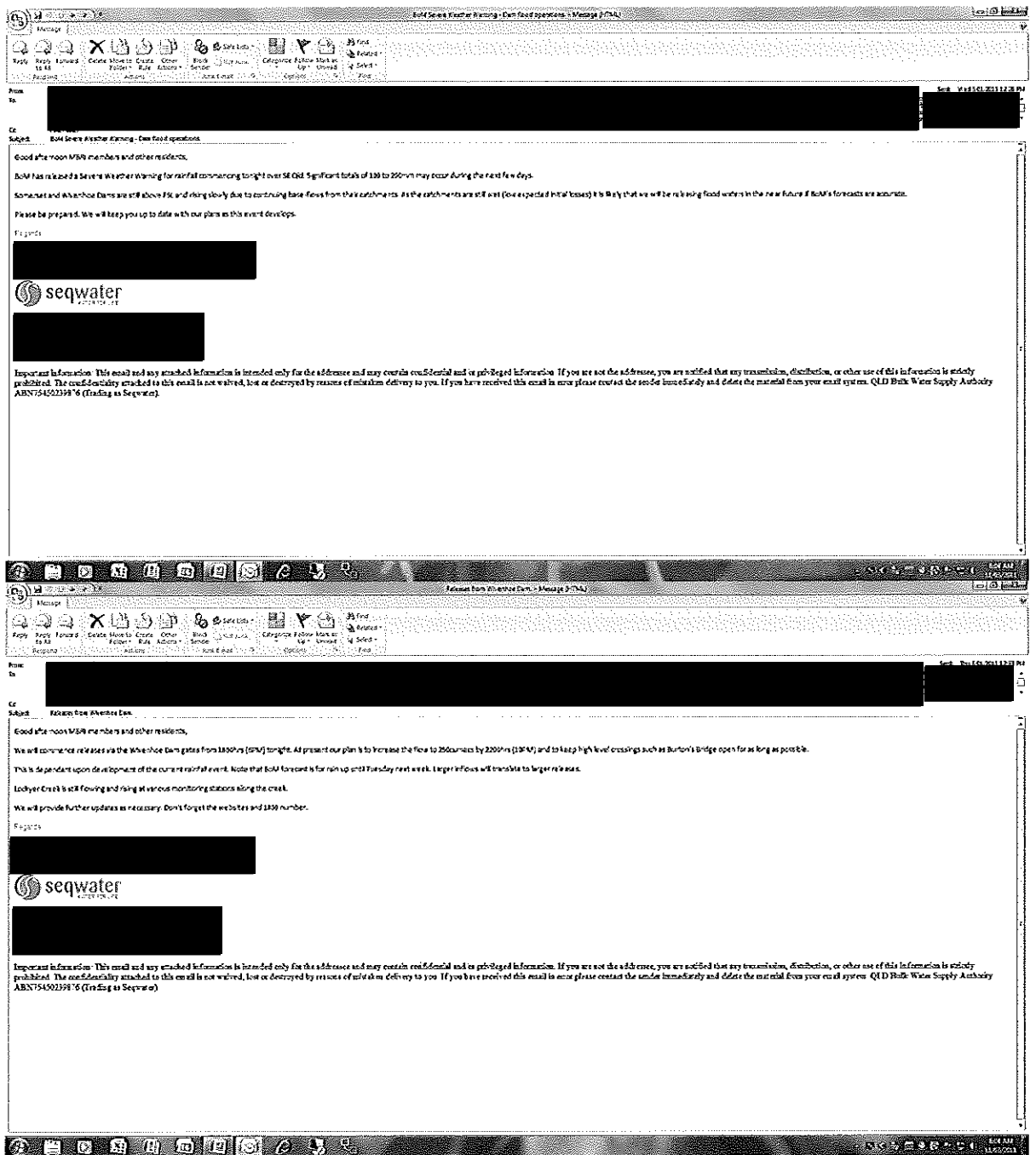
Submission for Qld Flood Inquiry





Submission for Qld Flood Inquiry







Submission for Qld Flood Inquiry

Message: Release from Wivenhoe Dam - change to plan... (Message 2774)

From: [Redacted] Sent: Thursday, 9 January 2012 12:28 PM

To: [Redacted]

Subject: Release from Wivenhoe Dam - change to plan...

Good afternoon MBR members and other residents.

The flooding situation has deteriorated since my last e-mail.

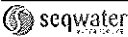
Luckey Creek is rising at present and estimates indicate a peak of approx 250 cumecs at O'Reilly's Weir late tomorrow. This will also affect crossings except for the main and Mt Crosby Weir bridges. Butts Weir Bridge will be submerged again - probably early Saturday morning.

The upper reaches of the river are reaching "moderate" flood levels. Some wetlands catchment are receiving rainfall but serious flooding is only occurring in the Luckey Creek area at present. Both Wivenhoe and Somerset Dams are rising.

Contrary to the previous e-mail and providing the weather does not change significantly, we do not expect to commence releases from Wivenhoe Dam until the Luckey Creek peak passes O'Reilly's Weir late tomorrow. Our maximum release rate will again reach similar levels to the last release.

Expect crossings to be submerged for a couple of days again. We'll update the situation when we have further information.

Page 10.



From: Graham Kingston
Sent: Thursday, 9 January 2012 12:28 PM
To: [Redacted]
Subject: Release from Wivenhoe Dam - change to plan...

Good afternoon MBR members and other residents.

We will commence releases via the Wivenhoe Dam gates from 11:30pm (5PM) tonight. At present our plan is to increase the flow to 250 cumecs by 2500 hrs (11PM), and to keep high level crossings such as Butts Weir Bridge open for as long as possible.

Message: Release from Wivenhoe Dam - Message 2774

From: [Redacted] Sent: Thursday, 9 January 2012 12:28 PM

To: [Redacted]

Subject: Release from Wivenhoe Dam

Good afternoon MBR members and other residents.


Luckey Creek is beginning to peak at O'Reilly's Weir. High level crossings (except for the main and Mt Crosby Weir bridges) will be submerged later today.

As we expect heavy rainfall from Sunday to Tuesday (BOM predictions) we will begin releasing flood water from Wivenhoe Dam at 5PM today. Release rate will initially reach 1200 cumecs, but may be increased to 1500 cumecs rapidly if conditions deteriorate in the catchments. At present we expect to hold the peak rate for a couple of days and continue releasing until the end of the week.

Somerset Dam will also be releasing into Wivenhoe Dam at this time.

We'll keep you informed of our plans. Don't forget the website and 1800 number.

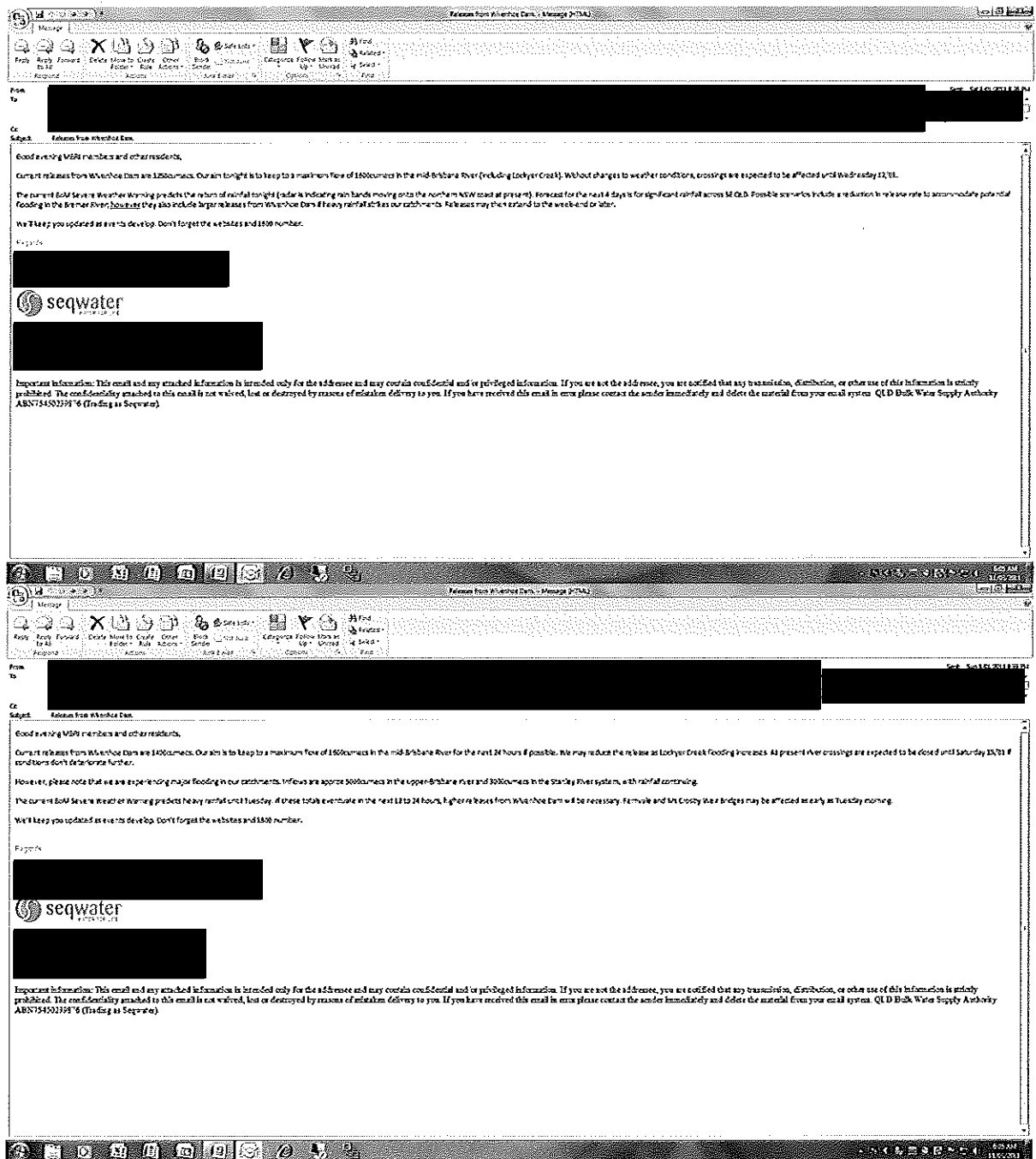
Page 10.

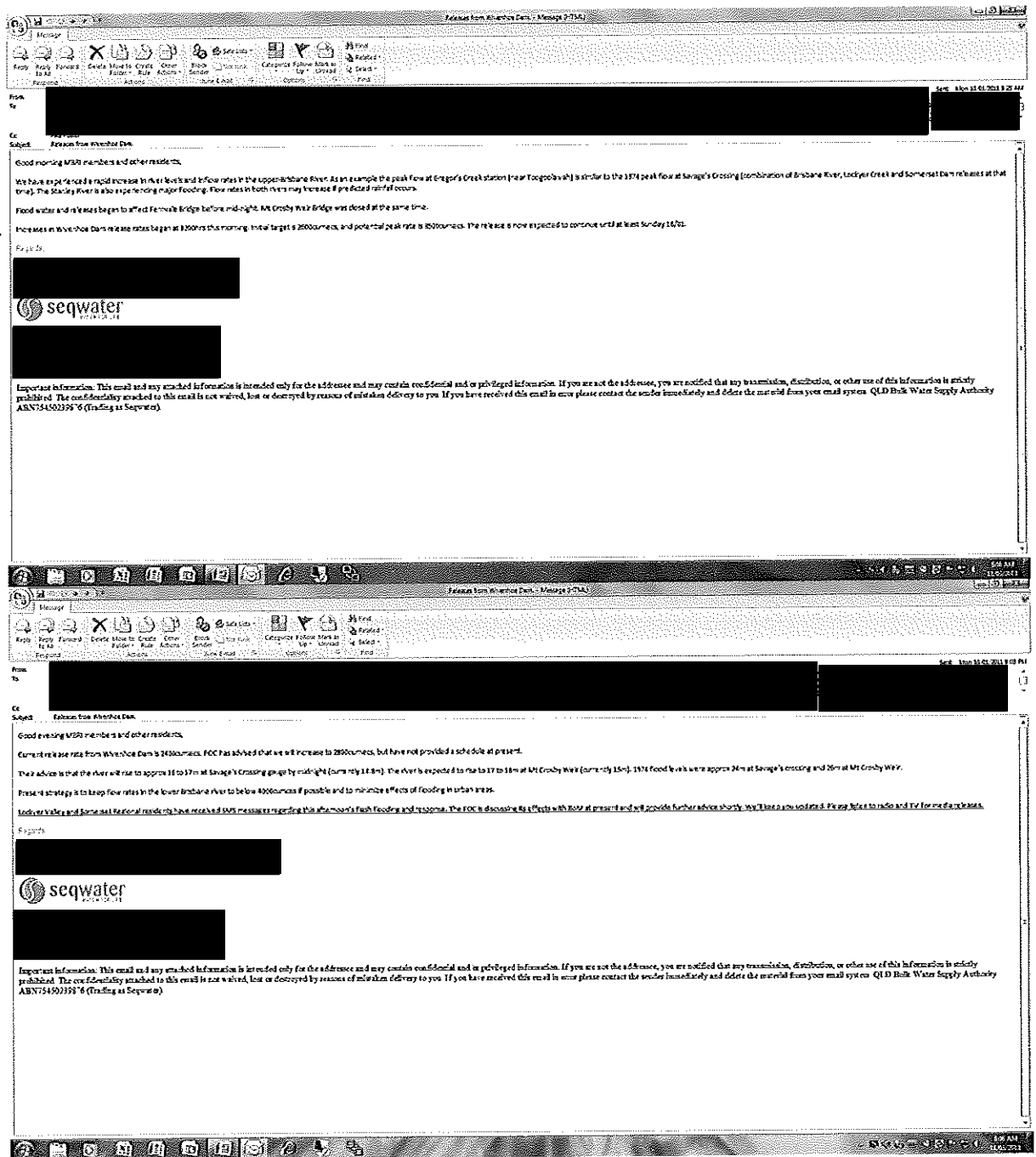


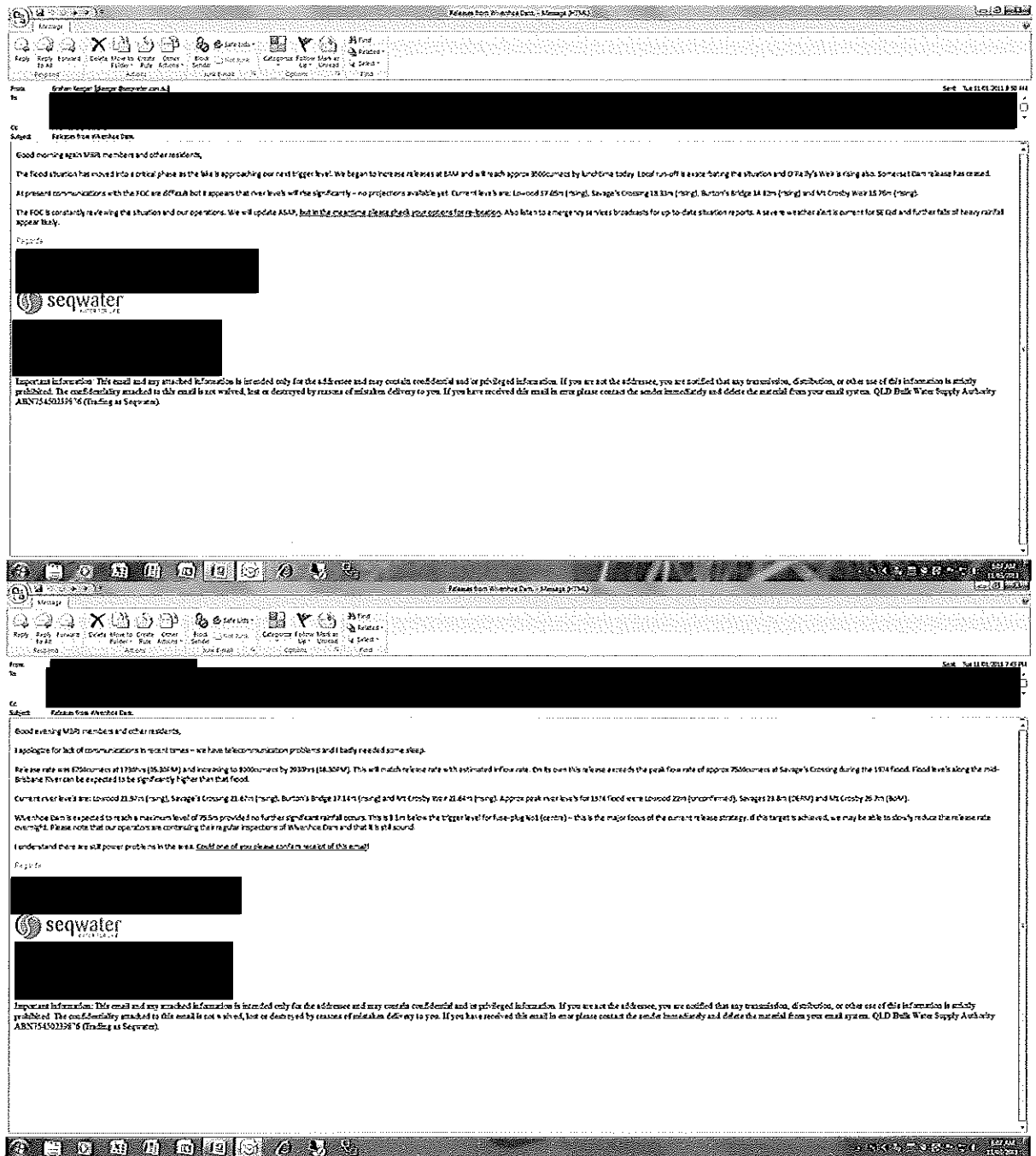
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Submission for Qld Flood Inquiry









Submission for Qld Flood Inquiry

Message

From: [Redacted] To: [Redacted] Subject: Release from Wharfedale Dam

Good morning MBRI members and other residents,

The lake level in Wharfedale Dam is rising very slowly and clearance to the flood-plugging is increasing. We are reducing the release rate slowly - current rate is approx 450cumecs; peak was approx 750cumecs.

Peak flow levels and current levels are:


	Peak	Current
Loudon	25.0m @ 23.0hrs 11/01	24.8m (falling)
Savage's Crossing	24.1m @ 01.0hrs 12/01	23.35m (falling)
Burton's Bridge		18.4m (falling)
McCreedy Weir	24.5m @ 03.0hrs 12/01	24.3m (rising)

Levels in Lockyer Creek are also dropping - the reduction at Wharfedale Dam will also permit Lockyer Creek to drain quicker.

We'll keep you updated on our operations.

Regards

[Redacted]

 **seqwater**
POWER & WATER

[Redacted]

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Message

From: [Redacted] To: [Redacted] Subject: Release from Wharfedale Dam

Good morning MBRI members and other residents,

Thanks to those people who were able to confirm receipt of the last email - communications appeared unreliable last night.

The Wharfedale Dam release reached a peak of approx 750cumecs last night (all gates opened to 10m). After the rise in the lake was brought to a halt (without triggering a flood-plug), we confirmed that status for a few hours and then commenced reduction of the release rate as it was directed. At 07.00hrs (07.30AM) this morning the release rate has been reduced to approx 450cumecs - lake level is now relatively static. We will hold this rate for a short period until the Lockyer Creek peak flow enters the mid-Sydney River. The Wharfedale Dam release will be increased to 350cumecs and drainage of the flood compartment will resume.

Somerset Dam has continued to discharge over its spillway (my mistake - release had not ceased completely as stated in a previous email). The lake has now reached its peak (event) level. We will begin to drain it later today as we increase the Wharfedale Dam release. Combined flood releases for the 3 Dams is expected to exceed 2million megalitres for this event - a return period (for probability) has not been assigned to the event yet; however BOM will eventually release that data. The concurrent event in the North Pine River catchment has been described tentatively as 1 in 10000 years (an extreme event).


Please note that there may be an initial reduction in river level associated with the lower release rate, but also note that river level may rise again as we increase our release. Maximum flow in the river will be approx 480cumecs. Our release will continue for another 7 days - flow rate will gradually reduce and river crossings will re-open. No timing is available at present. Please check BOM and traffic websites for flood information and updates on road conditions.

Current river levels are: Loudon 21.35m (falling, unreliable data), Savage's Crossing 23.35m (falling), Burton's Bridge 18.45m (falling) and McCreedy Weir 25.3m (static).

We'll provide updates as information is available.

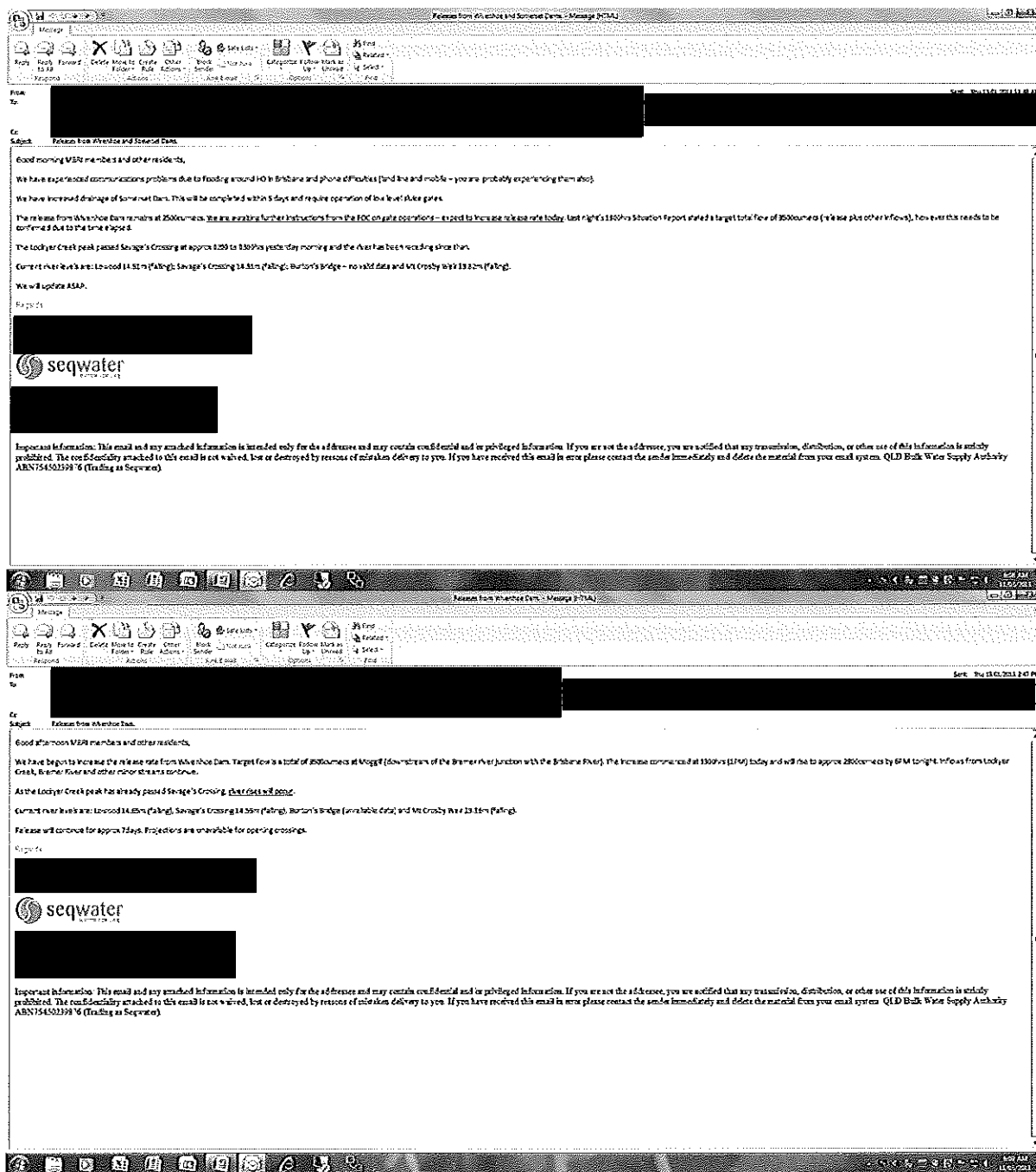
Regards

[Redacted]

 **seqwater**
POWER & WATER

[Redacted]

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Submission for Qld Flood Inquiry

