IN THE MATTER OF
THE QUEENSLAND FLOODS COMMISSION OF INQUIRY 2011

A COMMISSION OF INQUIRY UNDER THE COMMISSIONS OF INQUIRY ACT 1950

AND PURSUANT TO THE COMMISSIONS OF INQUIRY ORDER (No. 1) 2011

STATEMENT OF PETER CLARK BORROWS

On the 9th day of February 2012, I, **Peter Clark Borrows**, of C/- 240 Margaret Street, Brisbane, state on oath:

1. I am the Chief Executive Officer of Queensland Bulk Water Supply Authority trading as Seqwater (***Seqwater***).

2. This statement is provided to the Queensland Floods Commission of Inquiry pursuant to a requirement issued by the Commission dated 4 February 2012 (***Requirement***).

January 2011 Flood Event, Report on the operation of Somerset Dam and Wivenhoe Dam dated 2 March 2011 (the *Flood Event Report*)

3. The Flood Event Report was prepared by the flood engineers who had first hand knowledge of the operations that took place at Somerset Dam and Wivenhoe Dam during the January 2011 flood event.

4. I do not have any first hand knowledge of the operations that took place at Somerset Dam during the January 2011 flood event.

5. Since receiving the Requirement I have caused enquiries to be made in relation to:

   (a) the accuracy of Somerset Directive 7 that appears in Appendix L of the Flood Event Report (***Report Directive 7***); and

   (b) the record of gate openings for Somerset Dam in the Flood Event Report.

6. The information set out below has been provided to me by Mr Barton Maher, Seqwater's Principal Engineer, Dams and Weirs Planning (***Mr Maher***). Mr Maher is now a flood engineer for Seqwater, but was not at the time of the January 2011 flood event.

[redacted] [redacted]

Somerset Directive 7 in Appendix L of the Flood Event Report

7. Exhibited to this statement and respectively marked:

   (a) **PB-1** is Somerset Directive 1 that appears in Appendix L of the Flood Event Report;

   (b) **PB-2** is Somerset Directive 2 that appears in Appendix L of the Flood Event Report (***Report Directive 2***);

   (c) **PB-3** is Somerset Directive 3 that appears in Appendix L of the Flood Event Report (***Report Directive 3***);

   (d) **PB-4** is Somerset Directive 4 that appears in Appendix L of the Flood Event Report (***Report Directive 4***);

   (e) **PB-5** is Somerset Directive 5 that appears in Appendix L of the Flood Event Report (***Report Directive 5***);

   (f) **PB-6** is Somerset Directive 6 that appears in Appendix L of the Flood Event Report (***Report Directive 6***);

   (g) **PB-7** is Report Directive 7;

   (h) **PB-8** is Somerset Directive 8 that appears in Appendix L of the Flood Event Report (***Report Directive 8***); and

   (i) **PB-9** is Somerset Directive 9 that appears in Appendix L of the Flood Event Report (***Report Directive 9***).

8. Following receipt of the Requirement, I reviewed Report Directive 7 and some of the directives around it. It is apparent that:

   (a) the date at the top of Report Directive 7 does not correspond to the date in the box in the middle of the directive;

   (b) Report Directive 7 and Report Directive 8 are the same directive, except for:

      (i) the dates at the top of each directive; and

      (ii) the 'directive no' in the boxes in the middle of each directive;

[redacted] [redacted]

(c) the direction in Report Directive 7 conflicts with earlier directives because it directs Sluice L to be opened when Sluice L would not have been closed if the earlier directives had been implemented (i.e. Sluice L would have already been opened), namely:

(i) Report Directive 2 directed Sluice L to be opened;

(ii) Report Directive 3 directed Sluice M to be opened, which would have resulted in both Sluice L and Sluice M (or 2 Sluices) being open after the directive was implemented;

(iii) Report Directive 4 directed Sluice K to be opened, which would have resulted in Sluice K, Sluice L and Sluice M (or 3 Sluices) being open after the directive was implemented;

(iv) Report Directive 5 directed Sluice N and Sluice J to be opened, which would have resulted in Sluice J, Sluice K, Sluice L, Sluice M and Sluice N (or 5 Sluices) being open after the directive was implemented; and

(v) Report Directive 6 directed Sluice J, Sluice N and Sluice K to be closed, which would have resulted in Sluice L and Sluice M (or 2 Sluices) remaining open after the directive was implemented; and

(d) the direction in Report Directive 7 conflicts with later directives because:

(i) Report Directive 8 directs Sluice L to be opened, however Sluice L would not have been closed if:

A. Report Directive 7; or

B. the earlier directives to Report Directive 7, as explained above in 8(c),

had been implemented; and

(ii) Report Directive 9 directs Sluice M to be opened, however Sluice M would not have been closed if the earlier directives to Report Directive 7, as explained above in 8(c), had been implemented.

9. I am informed by Mr Maher that generally during a flood event:

[redacted] [redacted]

(a) the flood engineers make decisions on how to operate the gates at relevant dams from time to time;

(b) after such a decision has been made, the flood engineers place a call to the relevant dam operators to advise them a Flood Event – Operations Directive (***Directive***) is to be sent and the intent of the Directive;

(c) the flood engineers then send the Directive by email and facsimile to the dam operators at the relevant dam for implementation; and

(d) the dam operators:

(i) confirm receipt of any Directives by return email and facsimile; and

(ii) note Directives received and implemented in a Flood Event Log and Flood Operating Log, both of which are kept at the dam.

Dirctive 7 as Emailed to Somerset Dam Operators to implement

10. Exhibited to this statement and marked **PB-10** is a copy of an email and attachment sent from the Duty Engineer email account to the operators of Somerset Dam at 8:33 am on Tuesday, 11 January 2011.

11. The attachment to the email is a Directive to the Somerset Dam Operators:

(a) with the box in the middle of the Directive noting:

(i) the date as '11/01/2011';

(ii) the time as '08:30'; and

(iii) the directive number as '7'; and

(b) directing the closure of Sluice M and, 1 hour later, the closure of Sluice L (***Emailed Directive 7***).

12. The date, time and direction in Emailed Directive 7 is different to the date, time and direction in Report Directive 7.

13. However, unlike Report Directive 7, Emailed Directive 7 is consistent with (and does not otherwise conflict with) the earlier directives, as explained in 8(c) above, and the later directives, as explained in 8(d) above.

[redacted] [redacted]

14. Exhibited to this statement and marked **PB-11** is a copy of the emails attaching Directives, including Emailed Directive 7, sent from the Duty Engineer email account to the operators of Somerset Dam during the January 2011 flood event (***Emailed Directives***). Directive 8 was not emailed, but was faxed.

15. With the exception of Emailed Directive 7, the Emailed Directives correspond with the Directives contained in Appendix L of the Flood Event Report.

16. Exhibited to this statement and respectively marked:

    (a) **PB-12** is a copy of an email sent from the Dam Levels email account to, among others, the 'DG-Ops duty engineers' at 8:02 am on Tuesday, 11 January 2011 forwarding an earlier email from Agg Dagan, who I am informed was one of the Somerset Dam operators during the January 2011 flood event (***Pre-Directive Email***);

    (b) **PB-13** is a copy of an email sent from the Dam Levels email account to, among others, the 'DG-Ops duty engineers' at 9:44 am on Tuesday, 11 January 2011 forwarding an earlier email from Agg Dagan (***First Emailed Confirmation***); and

    (c) **PB-14** is a copy of an email sent from the Dam Levels email account to, among others, the 'DG-Ops duty engineers' at 10:17 am on Tuesday, 11 January 2011 forwarding an earlier email from Agg Dagan (***Second Emailed Confirmation***).

17. The Pre-Directive Email includes a table for Somerset Dam that indicates Sluice L and Sluice M were open as at 08:00hours on 11 January 2011.

18. The First Emailed Confirmation:

    (a) includes a table for Somerset Dam that indicates Sluice L was open and Sluice M was closed as at 09.45hours on 11 January 2011; and

    (b) indicates Sluice M was closed in the period between when the Pre-Directive Email and the First Emailed Confirmation were sent.

19. The Second Emailed Confirmation:

    (a) includes a table for Somerset Dam that indicates no Sluice Gate was open and Sluice L was closed as at 10:15hours on 11 January 2011; and

    (b) indicates Sluice L was closed in the period between when the First Emailed Confirmation and the Second Emailed Confirmation were sent.

[redacted]

[redacted]

20. Exhibited to this statement and marked **PB-15** is a copy of the emails sent from the Dam Levels email account to, among others, the 'DG-Ops duty engineers' confirming the implementation of Directives, and including the First Emailed Confirmation and Second Emailed Confirmation, during the January 2011 flood event (***Emailed Confirmations***).

21. I was provided with each of the Emailed Directive 7, Emailed Directives, Pre-Directive Email, First Emailed Confirmation, Second Emailed Confirmation and Emailed Confirmations by Seqwater's lawyers. I am informed by Seqwater's lawyers that the above emails were provided to the Commission as part of a tranche of material on or about 11 March 2011.

Directive 7 as Faxed to Somerset Dam Operators to implement

22. Exhibited to this statement and marked **PB-16** is a copy of a facsimile from the Flood Operations Centre to Somerset Dam (***Faxed Directive 7***).

23. Faxed Directive 7 is a signed version of Emailed Directive 7. Faxed Directive 7 is signed by Terry Malone as Duty Engineer.

24. Similarly to the Emailed Directive 7:

    (a) the date, time and direction in Faxed Directive 7 is different to the date, time and direction in Report Directive 7; and

    (b) unlike Report Directive 7, Faxed Directive 7 is consistent with (and does not otherwise conflict with) the earlier directives, as explained in 8(c) above, and the later directives, as explained in 8(d) above.

25. Exhibited to this statement and marked **PB-17** is a copy of the facsimiles with Directives, including Faxed Directive 7, from the Flood Operations Centre to Somerset Dam during the January 2011 flood event (***Faxed Directives***).

26. Exhibited to this statement and marked respectively:

    (a) **PB-18** is a copy of a facsimile from Somerset Dam to the Flood Operations Centre at 9:53 am on 11 January 2011 (***First Faxed Confirmation***); and

    (b) **PB-19** is a copy of a facsimile from Somerset Dam to the Flood Operations Centre at 10:11 am on 11 January 2011 (***Second Faxed Confirmation***).

27. The First Faxed Confirmation states, in part:

[redacted] [redacted]

"SLuice L open

Directive NO:7 closed SLuice M"

28. The Second Faxed Confirmation states, in part:

"Directive NO. 7 closed Sluice L

All Sluices closed"

29. The First Faxed Confirmation and Second Faxed Confirmation are signed 'A.Weller', who I am informed is Adam Weller, one of the Somerset Dam operators during the January 2011 flood event.

30. Exhibited to this statement and marked **PB-20** is a copy the facsimiles from Somerset Dam to the Flood Operations Centre confirming the implementation of Directives during the January 2011 flood event, including the First Faxed Confirmation and Second Faxed Confirmation (***Faxed Confirmations***). Confirmations for the implementation of Directives 2, 12 and 13 were not faxed, but were emailed.

31. I was provided with copies of each of the Faxed Directive 7, Faxed Directives, First Faxed Confirmation, Second Faxed Confirmation and Faxed Confirmations by Mr Maher, who has also informed me that each are copies from the records kept at the Flood Operations Centre of what was sent and received during the January 2011 flood event.

Directive 7 as noted in Somerset Dam Event Log

32. Exhibited to this statement and marked respectively:

(a) **PB-21** is a copy of the Somerset Dam Flood Event Log; and

(b) **PB-22** is a copy of the Somerset Dam Flood Operating Log.

33. The Flood Event Log states that:

(a) Sluice M was closed at 9:45 am on 11 January 2011; and

(b) Sluice L was closed at 10:15 am on 11 January 2011.

34. Correspondingly, the Flood Operating Log records that:

(a) Sluice L and Sluice M were open as at 7:00 am on 11 January 2011;

[redacted]

[redacted]

(b) Sluice M was closed as at 9:45 am on 11 January 2011; and

(c) Sluice L was closed as at 10:15 am on 11 January 2011.

35. The closures recorded in the Flood Event Log and Flood Operating Log are generally consistent with the directions in Emailed Directive 7 and Faxed Directive 7.

36. I was provided with a copy of the Flood Event Log and Flood Operating Log by Mr Maher, who has also informed me that it is a direct copy of the logs as maintained at the dam as a record or what directives were received and implemented during the January 2011 flood event.

Directive 7 in Flood Event Summary of Flood Event Report

37. I also note that the Flood Event Summary on page 24 of the Flood Event Report indicates that 'Somerset Directive #7' was implemented between 8:00 am and 1:00 pm on 11 January 2011, which consistent with the implementation of Emailed Directive 7 and Faxed Directive 7.

Conclusion regarding Directive 7

38. In light of the information from 7 to 37 above, and in particular the Emailed Confirmations and Faxed Confirmations, I believe that:

(a) Emailed Directive 7 and or Faxed Directive 7 (the ***Actual Directive 7***) was sent by the Flood Operations Centre to the Somerset Dam Operators at or about 8:30 am on Tuesday, 11 January 2011;

(b) Somerset Dam was operated in accordance with the Emailed Directives and Faxed Directives, including Actual Directive 7, as directed by the flood engineers in the Dam Operations Centre to the Somerset Dam Operators during the January 2011 flood event;

(c) Report Directive 7 was not sent by the Flood Operations Centre to the Somerset Dam Operators; and

(d) the Flood Event Report is inaccurate insofar as it includes Report Directive 7 and not Actual Directive 7.

39. I have been informed by Seqwater's lawyers that several copies of both Report Directive 7 and Actual Directive 7 were located on the computer in the Flood Operations Centre that was

[redacted]

[redacted]

utilised during the January 2011 flood event and for the preparation of the Flood Event Report. I am also informed by Seqwater's lawyers that these computer files were provided to the Commission on or about 11 March 2011.

40. As I did not compile the Flood Event Report I cannot say with absolute certainty why Report Directive 7 was included in the Flood Event Report and not Actual Directive 7. However, in light of there being copies of both Report Directive 7 and Actual Directive 7 being located on the Flood Operations Centre computer and Report Directive 7 being the same as Report Directive 8 (but for the exceptions noted at 8(b) above), it appears:

(a) at some stage prior to the preparation of the Flood Event Report, Actual Directive 7 was saved over, possibly when Directive 8 was being prepared during the January 2011 flood event ; and

(b) at some subsequent stage, someone has incorrectly located Report Directive 7 on the Flood Operations Centre computer and included it in the Flood Event Report.

Record of Gate Openings in Flood Event Report

41. Exhibited to this statement and marked **PB-23** is a copy of pages 168 to 177 of the Flood Event Report which includes Table 9.2.1 which "shows the gate operation sequence [for Somerset Dam] was in accordance with the Manual over the duration of the Event" (***Record of Gate Openings***).

42. The figures in the 'Total sluices' column of the Record of Gate Openings on page 172 indicate that:

(a) 2 sluices were open as at 07:00hours on 11 January 2011;

(b) 1 sluice was open as at 08:00hours on 11 January 2011; and

(c) no sluice was open as at 09:00hours on 11 January 2011.

43. The figures noted at 42(a) correspond with the final direction in Directive 6.

44. The figures noted at 42(b) and 42(c) above indicate closure of Sluice M and Sluice L may have occurred 1 hour earlier than the respective directions in Actual Directive 7.

45. In light of the Emailed Directives, Emailed Confirmations, Faxed Directives, Faxed Confirmations and Somerset Dam Event Log, and notwithstanding the discrepancy noted at 44 above:

[redacted]

[redacted]

(a) I believe the Record of Gate Openings supports my belief at 37 above; and

(b) I am nonetheless informed by Mr Maher that irrespective of whether:

(i) the sluices were closed in accordance with the directions in Actual Directive 7; or

(ii) the sluices were closed as recorded in the Flood Event Log and Flood Operating Log, being 45 minutes and 15 minutes later than the precise directions in Actual Directive 7; or

(iii) the sluices were closed at the increments recorded in the Record of Gate Openings,

such operations would be in compliance with Strategy S2 of the Manual.

Accuracy of Flood Event Report in relation to operations at Somerset Dam

46. My understanding is that 3 situation reports were not included in Appendix E of the Flood Event Report, with 1 of those reports being an update to an earlier report included in Flood Event Report. Those 3 situation reports are exhibited to this statement and marked **PB-24**, **PB-25** and **PB-26** respectively.

47. Aside from the 3 situation reports, the inclusion of Report Directive 7 and the discrepancy on page 172 of the Record of Gate Openings, I have not been made aware of any inaccuracy in relation to record of the operations that took place at Somerset Dam during the January 2011 flood event in the Flood Event Report.

SWORN by **PETER CLARK BORROWS** on 9 February 2012 at Brisbane in the presence of:

[redacted]

Deponent

[redacted]

Solicitor

[redacted]

N THE MATTER OF
THE QUEENSLAND FLOODS COMMISSION OF INQUIRY 2011

A COMMISSION OF INQUIRY UNDER THE COMMISSIONS OF INQUIRY ACT 1950

AND PURSUANT TO THE COMMISSIONS OF INQUIRY ORDER (No. 1) 2011

STATEMENT OF PETER CLARK BORROWS

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[redacted]

[redacted]

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[redacted]

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[redacted]

[redacted]

PB-1

SOMERSET DAM

Somerset Directive 1

Date: Friday 7 January 2011

Time: 17:00

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	Senior Flood Operations Engineer 1	Flood Operations Engineer 2	Flood Operations Engineer 4

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 07/01/2011 Time: 17:00 Directive No: 01

This transmission comprises of this page and 0 other pages.

Message:

Please open a regulator 100%

Engineer 2
Duty Engineer

PB-2

Somerset Directive 2

Date: Friday 7 January 2011

Time: 18:00

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	Senior Flood Operations Engineer 1	Flood Operations Engineer 2	Flood Operations Engineer 4

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date: 07/01/2011** **Time: 18:00** **Directive No: 2**

This transmission comprises of this page and 0 other pages.

Message:

Given the headwater level in Wivenhoe is still rising and may impact upon the open regulator at Somerset in the next 12 hours, it is preferable to close the regulator and open a sluice.

At 19:00, close Regulator #3 and open Sluice L.

Regards

Engineer 2

Duty Engineer

PB-3

Somerset Directive 3

Date: Saturday 8 January 2011
Time: 11:30

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	**Senior Flood Operations Engineer 1**	**Flood Operations Engineer 2**	**Flood Operations Engineer 4**

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date: 08/01/2011** **Time: 11:30** **Directive No: 3**

This transmission comprises of this page and 0 other pages.

Message:

Somerset Dam is expected to peak at around mid-day at about EL 100.48 m. As we have exceeded EL 100.45 m (fixed crest level), but Wivenhoe Dam is still rising we will need to implement Strategy S2.

This strategy is aimed at maximising the benefits of the mitigation storage in both Somerset and Wivenhoe dams. Consequently we will endeavour to follow the target line as defined in the manual.

- Please open Sluice M to 100% at 12:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

Engineer 1
Duty Engineer

PB-4

Somerset Directive 4

Date: Sunday 9 January 2011

Time: 08:15

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	**Senior Flood Operations Engineer 1**	**Flood Operations Engineer 2**	**Flood Operations Engineer 4**

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date: 09/01/2011** **Time: 08:15** **Directive No: 4**

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice K to 100% at 09:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

Engineer 2
Duty Engineer

PB-5

Somerset Directive 5

Date: Sunday 9 January 2011

Time: 12:30

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	Senior Flood Operations Engineer 1	Flood Operations Engineer 2	Flood Operations Engineer 4

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date: 09/01/2011** **Time: 12:30** **Directive No: 5**

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice N to100% at 13:00
- Please open Sluice J to 100% at 14:00

Please confirm this gate operation by fax once you have completed the opening.

Regards

Engineer 2

Duty Engineer

PB-6

Somerset Directive 6

Date: Tuesday 11 January 2011

Time: 04:30

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	Senior Flood Operations Engineer 1	Flood Operations Engineer 2	Flood Operations Engineer 4

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date: 11/01/2011** **Time: 04:30** **Directive No: 6**

This transmission comprises of this page and 0 other pages.

Message:

Significant rainfall has fallen in the Upper Brisbane River in the last 12 hours. This has resulted in further inflows into Wivenhoe Dam. To prevent Wivenhoe Dam exceeding the trigger level for implementation of strategy W4 (EL74.00 m AHD) we will need to store floodwater in Somerset Dam.

Therefore we need to reduce releases from Somerset Dam so as to equalise the relative volumes in flood storage.

Please undertake the following operations:-

- Please close Sluice J at 05:00
- Please close Sluice N at 06:00
- Please close Sluice K at 07:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Engineer 1
Duty Engineer

PB-7

Somerset Directive 7

Date: Tuesday 11 January 2011

Time: 10:15

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	**Senior Flood Operations Engineer 1**	**Flood Operations Engineer 2**	**Flood Operations Engineer 4**

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date:**	**12/01/2011**
	Directive No:	**7**
	Time:	**10:15**

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice L at 10:30.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Engineer 4
Duty Engineer

PB-8

Somerset Directive 8

Date: Wednesday 12 January 2011

Time: 10:15

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	Senior Flood Operations Engineer 1	Flood Operations Engineer 2	Flood Operations Engineer 4

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date:**	**12/01/2011**
	Directive No:	**8**
	Time:	**10:15**

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice L at 10:30.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Engineer 4
Duty Engineer

PB-9

Somerset Directive 9

Date: Thursday 13 January 2011

Time: 08:15

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer 3	Senior Flood Operations Engineer 1	Flood Operations Engineer 2	Flood Operations Engineer 4

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date:** 13/01/2011
	Directive No: 9
	Time: 8:15

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice M at 08:30.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Engineer 4
Duty Engineer

PB-10

From: Duty Engineer [redacted]
Sent: Tuesday, 11 January 2011 8:33 AM
To: adagan [redacted] Doug Grigg [redacted] gkeegan [redacted] Graham Francis ([redacted] Jayam Tennakoon [redacted] Matthew O'Reilly [redacted]
Subject: Somerset Directive #11
Attachments: OPS_Directive_Somerset #7.doc

Please find attached Directive #11

Terry Malone

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No. [redacted]
Answering Machine:
General:

FACSIMILE MESSAGE

Senior Flood Operations Engineer	Senior Flood Operations Engineer	Flood Operations Engineer	Flood Operations Engineer
John Rufffini	Rob Ayre	Terry Malone	John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 11/01/2011 Time: 08:30 Directive No: 7

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Please close Sluice M at 09:00
- Please close Sluice L at 10:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Terry Malone

Duty Engineer

[Filename]

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PB - 11

Zissis, Michael

From: Duty Engineer [redacted]

Sent: Friday, 7 January 2011 4:13 PM

To: adagan [redacted] Doug Grigg [redacted]
gkeegan [redacted] Graham Francis [redacted] Jayam Tennakoon [redacted] Matthew O'Reilly [redacted]
john.ruffini [redacted] jtibaldi [redacted] rob.ayre [redacted]
tmalone [redacted]

Cc: 'Rob Drury'

Subject: Somerset Directive #1

Attachments: OPS_Directive_Somerset #1.doc

Please find attached Somerset Directive #1, opening a regulator 100%

Terry Malone

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax:

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffinl

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 07/01/2011 Time: 17:00 Directive No: 01

This transmission comprises of this page and 0 other pages.

Message:

Please open a regulator 100%

Terry Malone

Duty Engineer

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From: Duty Engineer [redacted]
Sent: Friday, 7 January 2011 5:59 PM
To: adagan [redacted] Doug Grigg [redacted] gkeegan [redacted] Graham Francis [redacted] Jayam Tennakoon [redacted] Matthew O'Reilly [redacted]
Subject: Somerset Directive #2
Attachments: OPS_Directive_Somerset #2.doc

Please find attached Somerset Directive #2

Terry Malone
Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No. [redacted]
Answering Machine:
General:

FACSIMILE MESSAGE

Senior Flood Operations Engineer	Senior Flood Operations Engineer	Flood Operations Engineer	Flood Operations Engineer
John Rufffini	Rob Ayre	Terry Malone	John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 07/01/2011 Time: 18:00 Directive No: 02

This transmission comprises of this page and 0 other pages.

Message:

Given the headwater level in Wivenhoe is still rising and may impact upon the open regulator at Somerset in the next 12 hours, it is preferable to close the regulator and open a sluice.

At 1900, close Regulator #3 and open Sluice L.

Terry Malone

Duty Engineer

[Filename]

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From: Duty Engineer [redacted]
Sent: Saturday, 8 January 2011 11:23 AM
To: Agg Dagan; Doug Grigg; Graham Keegan; Graham Francis; Jayam Tennakoon; Matthew O'Reilly; flood.qld[redacted] John.Ruffini[redacted] John Tibaldi; Rob Drury; Rob.ayre[redacted] Terry Malone
Subject: Somerset Dam Directive # 3 at 11:30 on Saturday 8 January 2011
Attachments: OPS_Directive_Somerset #3.doc

Please find attached Directive # 3 for your action.

Regards

Rob Ayre

Duty Engineer
Flood Operations Centre

Phone[redacted]

Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:

[redacted]

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 08/01/2011 Time: 11:30 Directive No: 3

This transmission comprises of this page and 0 other pages.

Message:

Somerset Dam is expected to peak at around mid-day at about EL 100.48 m. As we have exceeded EL 100.45 m (fixed crest level), but Wivenhoe Dam is still rising we will need to implement Strategy S2.

This strategy is aimed at maximising the benefits of the mitigation storage in both Somerset and Wivenhoe dams. Consequently we will endeavour to follow the target line as defined in the manual.

- Please open Sluice M to 100% at 12:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

Rob Ayre

Duty Engineer

[Filename]

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From: Duty Engineer [redacted]
Sent: Sunday, 9 January 2011 8:14 AM
To: adagar[redacted] Doug Grigg[redacted]
gkeegan[redacted] Graham Francis[redacted] Jayam Tennakoon[redacted] Matthew O'Reilly
Cc: rdrury[redacted] john.ruffini[redacted]
jtibaldi[redacted] rob.ayre[redacted]
tmalone[redacted]
Subject: Somerset Directive #4
Attachments: OPS_Directive_Somerset #4.doc

Pleaser find attached Somerset Directive #4.

Terry Malone

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Ruffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 09/01/2011 Time: 08:15 Directive No: 4

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice K to 100% at 09:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

Terry Malone

Duty Engineer

[Filename]

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From: Duty Engineer [redacted]
Sent: Sunday, 9 January 2011 12:20 PM
To: Agg Dagan; Doug Grigg; Graham Keegan; Graham Francis; Jayam Tennakoon; Matthew O'Reilly; John.Ruffini [redacted] John Tibaldi; Rob.ayre [redacted] Terry Malone
Cc: Rob Drury
Subject: Somerset Directive #5
Attachments: OPS_Directive_Somerset #5.doc

Please find attached Somerset Directive #5

Terry Malone
Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax:

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 09/01/2011 Time: 12:30 Directive No: 5

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice N to100% at 13:00
- Please open Sluice J to 100% at 14:00

Please confirm this gate operation by fax once you have completed the opening.

Regards

Terry Malone

Duty Engineer

[Filename]

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From: Duty Engineer[redacted]
Sent: Tuesday, 11 January 2011 4:40 AM
To: Agg Dagan; Doug Grigg; Graham Keegan; Graham Francis; Jayam Tennakoon; Matthew O'Reilly; flood.qld[redacted] John.Ruffini[redacted] John Tibaldi; Rob Drury; Rob.ayre[redacted] Terry Malone
Subject: Somerset Dam Directive # 6 at 04:30 on Tuesday 11 January 2011
Attachments: OPS_Directive_Somerset #6.doc

Please find attached Directive # 6 for your action.

Regards

Rob Ayre

Duty Engineer
Flood Operations Centre

Phone[redacted]

Fax:

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:
[redacted]

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Ruffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 11/01/2011 Time: 04:30 Directive No: 6

This transmission comprises of this page and 0 other pages.

Message:

Significant rainfall has fallen in the Upper Brisbane River in the last 12 hours. This has resulted in further inflows into Wivenhoe Dam. To prevent Wivenhoe Dam exceeding the trigger level for implementation of strategy W4 (EL74.00 m AHD) we will need to store floodwater in Somerset Dam.

Therefore we need to reduce releases from Somerset Dam so as to equalise the relative volumes in flood storage.

Please undertake the following operations:-

- Please close Sluice J at 05:00
- Please close Sluice N at 06:00
- Please close Sluice K at 07:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Rob Ayre

Duty Engineer

[Filename]

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From: Duty Engineer [redacted]
Sent: Tuesday, 11 January 2011 8:33 AM
To: adagan [redacted] Doug Grigg [redacted]
gkeegan [redacted] Graham Francis [redacted] Jayam Tennakoon [redacted] Matthew O'Reilly [redacted]
Subject: Somerset Directive #11
Attachments: OPS_Directive_Somerset #7.doc

Please find attached Directive #11

Terry Malone

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General: [redacted]

FACSIMILE MESSAGE

Senior Flood Operations Engineer	Senior Flood Operations Engineer	Flood Operations Engineer	Flood Operations Engineer
John Rufffini	Rob Ayre	Terry Malone	John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 11/01/2011 Time: 08:30 Directive No: 7

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Please close Sluice M at 09:00
- Please close Sluice L at 10:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Terry Malone

Duty Engineer

[Filename]

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From: Duty Engineer [redacted]
Sent: Thursday, 13 January 2011 8:48 AM
To: adagan[redacted]; Doug Grigg [redacted]
'druryrj[redacted] gkeegan[redacted] Graham Francis
[redacted] Jayam Tennakoon [redacted]
Matthew O'Reilly [redacted]
Subject: Somerset Directive #9
Attachments: OPS_Directive_Somerset #9.doc

Please find attached Somerset Directive #9

Somerset Dam should fall below 103.5 m AHD by 20:00 Thursday

Another sluice will be opened early this afternoon and it is projected to get below 102.8 (Mary Smokes) by Friday morning.

Terry Malone
Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Ruffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date: 13/01/2011** **Directive No: 9** **Time: 8:15**

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice M at 08:30.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

John Tibaldi
Duty Engineer

[Filename]

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From: Duty Engineer [redacted]
Sent: Thursday, 13 January 2011 12:46 PM
To: adagan [redacted] Doug Grigg [redacted]
'druryrj [redacted] gkeegan [redacted] Graham Francis [redacted]; Jayam Tennakoon [redacted]
Matthew O'Reilly [redacted]
Cc: rdrury [redacted]
Subject: Somerset Directive #10 and Wivenhoe Directive #35
Attachments: OPS_Directive_Somerset #10.doc; OPS_Directive_Wivenhoe #35.doc

Please find attached Somerset Directive #10 and Wivenhoe Directive #35

Terry Malone

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:
[redacted]

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | **Senior Flood Operations Engineer** Rob Ayre | **Flood Operations Engineer** Terry Malone | **Flood Operations Engineer** John Tibaldi
[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date: 13/01/2011** **Directive No: 10** **Time: 12:30**

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice K at 13:00.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

John Tibaldi
Duty Engineer

[Filename]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:

[redacted]

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | **Senior Flood Operations Engineer** Rob Ayre | **Flood Operations Engineer** Terry Malone | **Flood Operations Engineer** John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Wivenhoe Dam Operators	**Date: 13/01/201** **Directive No: 35** **Time: 12:30**

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following gate operations commencing at 13:00 on 13/01/2011

- Open Gate 2 from 4.0 metres to 4.5 metres at 1300.
- Open Gate 4 from 4.0 metres to 4.5 metres at 1400.

Please advise the Flood Operations Centre by fax once you have completed this operation.

John Tibaldi
Duty Engineer

[Filename]

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From: Duty Engineer [redacted]
Sent: Thursday, 13 January 2011 8:32 PM
To: Agg Dagan; Doug Grigg; druryrj [redacted] Graham Keegan; Graham Francis; Jayam Tennakoon; Matthew O'Reilly; Rob Drury; flood.qld [redacted] John.Ruffini [redacted] John Tibaldi; Rob.ayre [redacted] Terry Malone
Subject: Somerset Dam Directive # 11 at 20:30 on 13 January 2011
Attachments: OPS_Directive_Somerset #11.doc

Please find attached a copy of Directive # 11 for your action.

Regards

Rob Ayre

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax:

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No.
Answering Machine:
General:

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Ruffini | **Senior Flood Operations Engineer** Rob Ayre | **Flood Operations Engineer** Terry Malone | **Flood Operations Engineer** John Tibaldi

Flood Event - Operations Directive

TO: Somerset Dam Operators	**Date:** 13/01/2011 **Directive No:** 11 **Time:** 20:45

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice N at 21:00.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Rob Ayre
Duty Engineer

[Filename]

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Zissis, Michael

From: Duty Engineer [redacted]

Sent: Sunday, 16 January 2011 9:17 AM

To: Glenn Patterson [redacted]; adagan [redacted] Doug Grigg [redacted] gkeegan [redacted] Graham Francis [redacted] Jayam Tennakoon [redacted] Matthew O'Reilly [redacted]; rdrury [redacted]

Subject: Somerset Dam Directive #12 at 09:30 on Sunday 16 January 2011

Attachments: ~$S_Directive_Somerset #12.doc

Please find attached Directive #12 for your action

Regards

Rob Ayre

Duty Engineer
Flood Operations Centre

Phone: [redacted]

Fax: [redacted]

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From: Agg Dagan [redacted]
Sent: Sunday, 16 January 2011 9:58 AM
To: Duty Seq
Subject: RE: Somerset Dam Flood releases

Could not open Attachment Do you want us to close sluice N.

Agg Dagan
Dam Operator
QLD Bulk Water Supply Authority *trading as* Seqwater

QLD Bulk Water Supply Authority *trading as*
Ph [redacted]
Murrumba Terrace Somerset Dam 4312 Q Australia
Website | www.seqwater.com.au

From: DutyEngineer [redacted]
Sent: Sunday, 16 January 2011 9:47 AM
To: Agg Dagan
Subject: RE: Somerset Dam Flood releases

Agg

Expect to close Sluice N today at 10:00 or when you can as soon as possible. But no other gate operations until tonight.

Regards

Rob Ayre

From: Agg Dagan [redacted]
Sent: Sunday, 16 January 2011 8:21 AM
To: Duty Seq
Subject: Somerset Dam Flood releases

Rob can you give me a up date on gate status for Somerset dam as we are going to be doing clean up around the dam and as we have no phones I have to check the Computer on the hour for Directives Thanks

Agg Dagan
Dam Operator
QLD Bulk Water Supply Authority *trading as* Seqwater

QLD Bulk Water Supply Authority *trading as*
Ph [redacted]
Murrumba Terrace Somerset Dam 4312 Q Australia
Website | www.seqwater.com.au

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Zissis, Michael

From: Duty Engineer [redacted]
Sent: Sunday, 16 January 2011 10:17 AM
To: 'Agg Dagan'
Subject: RE: Somerset Dam Flood releases
Attachments: OPS_Directive_Somerset #12.doc

Agg

Yes please – sorry will try to resend.

Regards

Rob Ayre

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax:

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From: Agg Dagan [redacted]
Sent: Sunday, 16 January 2011 9:58 AM
To: Duty Seq
Subject: RE: Somerset Dam Flood releases

Could not open Attachment Do you want us to close sluice N.

Agg Dagan
Dam Operator
QLD Bulk Water Supply Authority *trading as* Seqwater

seqwater
WATER FOR LIFE

QLD Bulk Water Supply Authority *trading as*
Ph [redacted]
Murrumba Terrace Somerset Dam 4312 Q Australia
Website | www.seqwater.com.au

From: DutyEngineer [redacted]
Sent: Sunday, 16 January 2011 9:47 AM
To: Agg Dagan
Subject: RE: Somerset Dam Flood releases

Agg

Expect to close Sluice N today at 10:00 or when you can as soon as possible. But no other gate operations until tonight.

Regards

Rob Ayre

From: Agg Dagan [redacted]
Sent: Sunday, 16 January 2011 8:21 AM
To: Duty Seq
Subject: Somerset Dam Flood releases

Rob can you give me a up date on gate status for Somerset dam as we are going to be doing clean up around the dam and as we have no phones I have to check the Computer on the hour for Directives Thanks

Agg Dagan
Dam Operator
QLD Bulk Water Supply Authority *trading as* Seqwater
seqwater
WATER FOR LIFE

QLD Bulk Water Supply Authority *trading as*
Ph [redacted]
Murrumba Terrace Somerset Dam 4312 Q Australia
Website | www.seqwater.com.au

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----------Safe Stamp----------
Your Anti-virus Service scanned this email. It is safe from known viruses.
For more information regarding this service, please contact your service provider.
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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 16/01/2011 Directive No: 12 Time: 09:30

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Close Sluice N at 10:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

Rob Ayre

Duty Engineer

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From: Duty Engineer [redacted]
Sent: Sunday, 16 January 2011 9:31 PM
To: adagan[redacted] Doug Grigg [redacted]
'drurvr[redacted] gkeegan[redacted] Graham Francis [redacted]; Jayam Tennakoon [redacted]
Matthew O'Reilly [redacted]
Subject: Somerset Directive #13
Attachments: OPS_Directive_Somerset #13.doc

Please find attached Somerset Directive # 13.

John Tibaldi
Duty Engineer
Flood Operations Centre

Phone: [redacted]
Fax: [redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

Fax No. [redacted]
Answering Machine:
General:

FACSIMILE MESSAGE

Senior Flood Operations Engineer	Senior Flood Operations Engineer	Flood Operations Engineer	Flood Operations Engineer
John Rufffini	Rob Ayre	Terry Malone	John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 16/01/2011
	Directive No: 13
	Time: 21:30

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Close Sluice K at 22:00 on 16/01/2011
- Fully Close Sluice M at 03:00 on 17/01/2011
- Fully Close Sluice L at 07:00 on 17/01/2011
- Fully Open Regulator 12 at 07:15 on 17/01/2011

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

John Tibaldi
Duty Engineer

[Filename]

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PB-12

From: Dam Levels [redacted]
Sent: Tuesday, 11 January 2011 8:02 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Tuesday, January 11, 2011 8:02:17 AM
To: Dam Levels; Rohan Thorogood; Christopher Hine
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	08:00hours							
EL Gauge Board *(m AHD)*	103.46							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened 100%	Opened 100%			
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments								

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PB-13

From: Dam Levels [redacted]
Sent: Tuesday, 11 January 2011 9:44 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Tuesday, January 11, 2011 9:43:50 AM
To: Dam Levels; Christopher Hine; Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	09.45hours							
EL Gauge Board *(m AHD)*	103.53							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened 100%				
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Closed Sluice M							

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PB-14

From: Dam Levels [redacted]
Sent: Tuesday, 11 January 2011 10:17 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Tuesday, January 11, 2011 10:16:58 AM
To: Dam Levels
Cc: Christopher Hine; Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	10:15hours							
EL Gauge Board *(m AHD)*	103.56							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*								
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Closed Sluice L							

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PB-15

From: Dam Levels [redacted]
Sent: Friday, 7 January 2011 5:24 PM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Friday, January 07, 2011 5:23:52 PM
To: Dam Levels
Cc: Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	07/01/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	17:30 hours							
EL Gauge Board *(m AHD)*	100.08							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*								
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
			Opened at 100%					
Comments	Opened Regulator 100%							

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From: Dam Levels [redacted]
Sent: Friday, 7 January 2011 7:05 PM
To: DG-Ops Dam Levels; DG-Ops duty engineers; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Friday, January 07, 2011 7:05:06 PM
To: Dam Levels
Cc: Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	07/01/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	19:00 hours							
EL Gauge Board *(m AHD)*	100.15							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened 100%				
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Opened Sluice L. Closed regulator 3.							

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From: Dam Levels [redacted]
Sent: Saturday, 8 January 2011 12:08 PM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Saturday, January 08, 2011 12:08:25 PM
To: Dam Levels
Cc: Rohan Thorogood; Christopher Hine
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	08/01/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	12:00 hours							
EL Gauge Board *(m AHD)*	100.45							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened 100%	Opened 100%			
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Opened Sluice M.							

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From: Dam Level[redacted]
Sent: Sunday, 9 January 2011 9:03 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Sunday, January 09, 2011 9:03:23 AM
To: Dam Levels
Cc: Rohan Thorogood; Christopher Hine
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	09/01/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	09.00 am hours							
EL Gauge Board *(m AHD)*	100.28							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*			Opened 100%	Opened 100%	Opened 100%			
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Opened Sluice K							

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From: Dam Levels [redacted]
Sent: Sunday, 9 January 2011 2:09 PM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Sunday, January 09, 2011 2:09:24 PM
To: Dam Levels
Cc: Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date ***(dd/mm/yyyy)***	09/01/2011							
Time of reading (hh:mm) ***(24 hour format Eg 16:59)***	14:00 hours							
EL Gauge Board ***(m AHD)***	100.47							
Crest Gates ***(Open/Closed)***	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates ***(% Open)***		Opened 100%	Opened 100%	Opened 100%	Opened 100%	Opened 100%		
Regulators ***(% Open)***	**2**		**3**		**12**		**13**	
Comments	Opened Sluices N and J and still raining							

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From: Dam Levels
Sent: Tuesday, 11 January 2011 5:05 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Graham Francis
Sent: Tuesday, January 11, 2011 5:04:41 AM
To: Dam Levels; Duty Seq
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	04:00hours							
EL Gauge Board *(m AHD)*	103.28							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*			Opened 100%	Opened 100%	Opened 100%	Opened 100%		
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Shut Sluice J at 05:00Hours							

From: Dam Levels [redacted]
Sent: Tuesday, 11 January 2011 6:09 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Graham Francis
Sent: Tuesday, January 11, 2011 6:08:37 AM
To: Dam Levels; Duty Seq
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	06:00hours							
EL Gauge Board *(m AHD)*	103.34							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*			Opened 100%	Opened 100%	Opened 100%			
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Shut Sluice N at 06:00Hours							

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From: Dam Level[redacted]
Sent: Tuesday, 11 January 2011 7:00 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Tuesday, January 11, 2011 7:00:20 AM
To: Dam Levels
Cc: Christopher Hine; Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	07:00hours							
EL Gauge Board *(m AHD)*	103.40							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened 100%	Opened 100%			
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Shut Sluice K at 07:00Hours							

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From: Dam Levels [redacted]
Sent: Tuesday, 11 January 2011 9:44 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Tuesday, January 11, 2011 9:43:50 AM
To: Dam Levels; Christopher Hine; Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	09.45hours							
EL Gauge Board *(m AHD)*	103.53							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened 100%				
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Closed Sluice M							

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From: Dam Levels [redacted]
Sent: Tuesday, 11 January 2011 10:17 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Tuesday, January 11, 2011 10:16:58 AM
To: Dam Levels
Cc: Christopher Hine; Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	11/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	10:15hours							
EL Gauge Board *(m AHD)*	103.56							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*								
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Closed Sluice L							

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From: Dam Levels [redacted]
Sent: Wednesday, 12 January 2011 11:08 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Wednesday, January 12, 2011 11:07:38 AM
To: Dam Levels
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	12/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	11:00hours							
EL Gauge Board *(m AHD)*	105.06							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened				
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Opened Sluice L							

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From: Dam Levels [redacted]
Sent: Thursday, 13 January 2011 9:59 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Thursday, January 13, 2011 9:58:53 AM
To: Dam Levels
Cc: Christopher Hine; Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	13/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	10:00hours							
EL Gauge Board *(m AHD)*	104.09							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*				Opened	Opened			
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments								

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From: Dam Levels [redacted]
Sent: Thursday, 13 January 2011 1:03 PM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Thursday, January 13, 2011 1:03:07 PM
To: Dam Levels; Christopher Hine
Cc: Rohan Thorogood
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Agg

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	13/01/11							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	13:00hours							
EL Gauge Board *(m AHD)*	103.91							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*			Opened	Opened	Opened			
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Opened Sluice K							

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From: Dam Levels [redacted]
Sent: Thursday, 13 January 2011 9:11 PM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Graham Francis
Sent: Thursday, January 13, 2011 9:10:36 PM
To: Dam Levels; Duty Seq
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	13/11/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	2100hours							
EL Gauge Board *(m AHD)*	103.40							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*	0	0	Opened	Opened	Opened	Opened	0	0
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Directive 11 Opened Sluice N							

d

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From: Dam Levels [redacted]
Sent: Sunday, 16 January 2011 10:18 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Sunday, January 16, 2011 10:17:48 AM
To: Dam Levels
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	16/11/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	10.20hours							
EL Gauge Board *(m AHD)*	99.76							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*	0	0	Opened	Opened	Opened		0	0
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	No Phones. Closed Sluice N.							

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From: Agg Dagan [redacted]
Sent: Sunday, 16 January 2011 10:26 AM
To: Duty Seq
Subject: FW: Directive No 12
Attachments: [Untitled].pdf

Please open Attachment Thanks.

Agg Dagan
Dam Operator
QLD Bulk Water Supply Authority trading as Seqwater

QLD Bulk Water Supply Authority trading as
Ph [redacted]
Murrumba Terrace Somerset Dam 4312 Q Australia
Website | www.seqwater.com.au

-----Original Message-----
From: Somerset Dam [redacted]
Sent: Sunday, 16 January 2011 10:23 AM
To: Agg Dagan
Subject:

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QLD Bulk Water Supply Authority ABN75450239876 (Trading as Seqwater).

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 16/01/2011 Directive No: 12 Time: 09:30

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Close Sluice N at 10:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards SOMERSET DAM.
CLOSED SLUICE N 10:00 HRS.
10.20 HRS EL 99.76
agg.

Rob Ayre
Duty Engineer

C:\Documents and Settings\adagan\Local Settings\Temporary Internet Files\Content.Outlook\4U1MNJN6\OPS_Directive_Somerset #12.doc

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From: Dam Levels [redacted]
Sent: Sunday, 16 January 2011 10:04 PM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Graham Francis
Sent: Sunday, January 16, 2011 10:04:08 PM
To: Dam Levels; Duty Seq
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	16/11/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	22:00hours							
EL Gauge Board *(m AHD)*	99.25							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*	0	0	0	Opened	Opened	0	0	0
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
Comments	Shut Sluice K at 22:00 hours Directive 13							

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From: Dam Levels [redacted]
Sent: Monday, 17 January 2011 3:15 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Graham Francis
Sent: Monday, January 17, 2011 3:15:25 AM
To: Dam Levels; Duty Seq
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam ***(FSL 99.00 m AHD)***

Date ***(dd/mm/yyyy)***	17/11/2011							
Time of reading (hh:mm) ***(24 hour format Eg 16:59)***	03:00hours							
EL Gauge Board ***(m AHD)***	99.11							
Crest Gates ***(Open/Closed)***	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates ***(% Open)***	0	0	0	Opened	0	0	0	0
Regulators ***(% Open)***	**2**		**3**		**12**		**13**	
Comments	Shut Sluice M at 03:00 hours Directive 13							

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From: Dam Levels [redacted]
Sent: Monday, 17 January 2011 7:05 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Monday, January 17, 2011 7:04:32 AM
To: Dam Levels
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	17/11/ 2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	07:00hours							
EL Gauge Board *(m AHD)*	99.07							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*	0	0	0		0	0	0	0
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
					Opened 100%			
Comments	Closed Sluice L , Opened Regulator 12 100%.							

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From: Dam Levels [redacted]
Sent: Monday, 17 January 2011 8:02 AM
To: DG-Ops Dam Levels; DG-Ops duty enginners; DG-Ops Dam Levels Central
Subject: FW: Somerset Dam

From: Agg Dagan
Sent: Monday, January 17, 2011 8:02:18 AM
To: Dam Levels
Subject: FW: Somerset Dam
Auto forwarded by a Rule

Somerset Dam *(FSL 99.00 m AHD)*

Date *(dd/mm/yyyy)*	17/11/2011							
Time of reading (hh:mm) *(24 hour format Eg 16:59)*	08:00hours							
EL Gauge Board *(m AHD)*	99.06							
Crest Gates *(Open/Closed)*	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
	opened	opened	opened	opened	opened	opened	opened	opened
Sluice Gates *(% Open)*	0	0	0		0	0	0	0
Regulators *(% Open)*	**2**		**3**		**12**		**13**	
					Opened 100%			
Comments								

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PB-16

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 11/01/2011 Time: 08:30 Directive No: 7

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Please close Sluice M at 09:00
- Please close Sluice L at 10:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

Terry Malone

Duty Engineer

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EQWATER FLOOD OPERATIONS CENTRE

PB - 17

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 07/01/2011 Time: 17:00 Directive No: 01

This transmission comprises of this page and 0 other pages.

Message:

Please open a regulator 100%

[redacted]

Terry Malone

Duty Engineer

FAXED

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EQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 07/01/2011 Time: 18:00 Directive No: 02

This transmission comprises of this page and 0 other pages.

Message:

Given the headwater level in Wivenhoe is still rising and may impact upon the open regulator at Somerset in the next 12 hours, it is preferable to close the regulator and open a sluice.

At 1900, close Regulator #3 and open Sluice L.

[redacted]

Terry Malone

Duty Engineer

FAXED

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EQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 08/01/2011 Time: 11:30 Directive No: 3

This transmission comprises of this page and 0 other pages.

Message:

Somerset Dam is expected to peak at around mid-day at about EL 100.48 m. As we have exceeded EL 100.45 m (fixed crest level), but Wivenhoe Dam is still rising we will need to implement Strategy S2.

This strategy is aimed at maximising the benefits of the mitigation storage in both Somerset and Wivenhoe dams. Consequently we will endeavour to follow the target line as defined in the manual.

- Please open Sluice M to 100% at 12:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

[redacted]

Rob Ayre

Duty Engineer

FAXED 8/1/11 11:20 AM

E:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #3.doc

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer	Senior Flood Operations Engineer	Flood Operations Engineer	Flood Operations Engineer
John Rufffini	Rob Ayre	Terry Malone	John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 09/01/2011 Time: 08:15 Directive No: 4

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice K to 100% at 09:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

FAXED 8:15 Sun 9-1-11

[redacted]

Terry Malone

Duty Engineer

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EQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 09/01/2011 Time: 12:30 Directive No: 5

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice N to100% at 13:00
- Please open Sluice J to 100% at 14:00

Please confirm this gate operation by fax once you have completed the opening.

Regards

[redacted]

FAXED 12:32 Sun 9-1-11

Terry Malone

Duty Engineer

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EQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 11/01/2011 Time: 04:30 Directive No: 6

This transmission comprises of this page and 0 other pages.

Message:

Significant rainfall has fallen in the Upper Brisbane River in the last 12 hours. This has resulted in further inflows into Wivenhoe Dam. To prevent Wivenhoe Dam exceeding the trigger level for implementation of strategy W4 (EL74.00 m AHD) we will need to store floodwater in Somerset Dam.

Therefore we need to reduce releases from Somerset Dam so as to equalise the relative volumes in flood storage.

Please undertake the following operations:-

- Please close Sluice J at 05:00
- Please close Sluice N at 06:00
- Please close Sluice K at 07:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

FAXED 11/1/11 4:30

Rob Ayre

Duty Engineer

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EQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 11/01/2011 Time: 08:30 Directive No: 7

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Please close Sluice M at 09:00
- Please close Sluice L at 10:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

Terry Malone

Duty Engineer

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EQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date:	12/01/2011
	Directive No:	8
	Time:	10:15

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice L at 10:30.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

John Tibaldi

Duty Engineer

FAXED

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini
Senior Flood Operations Engineer
Rob Ayre
Flood Operations Engineer
Terry Malone
Flood Operations Engineer
John Tibaldi
[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date:	13/01/2011
	Directive No:	9
	Time:	8:15

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice M at 08:30.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

John Tibaldi
Duty Engineer

FAXED 13/01 8:15

Y:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #9.doc

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EQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer [redacted] | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 13/01/2011 Directive No: 10 Time: 12:30

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice K at 13:00.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

John Tibaldi

Duty Engineer

FAXED 13/1 12:30

Y:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #10.doc

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?QWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Rufffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
Terry Malone

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 13/01/2011 Directive No: 11 Time: 20:45

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Open Sluice N at 21:00.

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

Rob Ayre

Duty Engineer

FAXED 13/1 5:32pm

[redacted]

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi
[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 16/01/2011
	Directive No: 12
	Time: 09:30

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Close Sluice N at 10:00

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

Rob Ayre

Duty Engineer

FAXED 16/01/11 [redacted]

E:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #12.doc

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Rufffini | Senior Flood Operations Engineer Rob Ayre | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 16/01/2011
	Directive No: 13
	Time: 21:30

This transmission comprises of this page and 0 other pages.

Message:

Please undertake the following operations:-

- Fully Close Sluice K at 22:00 on 16/01/2011
- Fully Close Sluice M at 03:00 on 17/01/2011
- Fully Close Sluice L at 07:00 on 17/01/2011
- Fully Open Regulator 12 at 07:15 on 17/01/2011

Please confirm this gate operation by fax once you have completed the requested operations.

Regards

[redacted]

John Tibaldi

Duty Engineer

FAXED

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PB-18

seqwater
WATER FOR LIFE

Queensland Bulk Water Supply Authority (trading as Seqwater)
ABN 75 450 239 876

FACSIMILE TRANSMISSION

Corporate Office
Level 9 240 Margaret Street
Brisbane Qld Australia
Ph (07) 3228 3999
Fax (07) 3228 7926

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO flood centre DATE 11/1/11

ATTENTION YOUR FAX

FROM Somerset Dam PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 09.45 Hours

EL 103.53

SLUICE L open

Directive NO:7 closed SLUICE M

A. Weller

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11-Jan-2011 09:53 AM Seqwater +61730355500

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PB-19

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ABN 75 450 239 876

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Fax (07) 3229 7826

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO Flood centre DATE 11/1/11

ATTENTION YOUR FAX

FROM Somerset Dam PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 10.15 Hours

EL 103.56

Directive NO. 7 closed sluice L

All sluices closed

All crest Gates open

A. Weller

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11-Jan-2011 10:11 AM Seqwater +61730355500

1/1

PB-20

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Ruffini

Senior Flood Operations Engineer
Rob Ayre

Flood Operations Engineer
[redacted]

Flood Operations Engineer
John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 07/01/2011 Time: 17:00 Directive No: 01

This transmission comprises of this page and 0 other pages.

Message:

Please open a regulator 100%

[redacted]

Terry Malone
Duty Engineer

FAXED

SOMERSET DAM
OPENED REGULATOR 100% NO 3. AT [redacted]HRS. 17:00
EL 900.03

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Ruffini
[redacted]

Senior Flood Operations Engineer
Rob Ayre
[redacted]

Flood Operations Engineer
Tami Malone
[redacted]

Flood Operations Engineer
John Tibaldi
[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 08/01/2011 Time: 11:30 Directive No: 3

This transmission comprises of this page and 0 other pages.

Message:

Somerset Dam is expected to peak at around mid-day at about EL 100.48 m. As we have exceeded EL 100.45 m (fixed crest level), but Wivenhoe Dam is still rising we will need to implement Strategy S2.

This strategy is aimed at maximising the benefits of the mitigation storage in both Somerset and Wivenhoe dams. Consequently we will endeavour to follow the target line as defined in the manual.

- Please open Sluice M to 100% at 12:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

[redacted]

Rob Ayre
Duty Engineer

SOMERSET DAM DIRECTIVE NO: 3.
OPENED SLUICE M. AT 12:00 HRS
EL 100.45.
agg.

E:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #3.doc

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer John Ruffini | Senior Flood Operations Engineer [redacted] | Flood Operations Engineer Terry Malone | Flood Operations Engineer John Tibaldi

[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 09/01/2011 Time: 08:15 Directive No: 4

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice K to 100% at 09:00.

Please confirm this gate operation by fax once you have completed the opening.

Regards

FAXED 8:15 Sun 9-1-11

[redacted]

Terry Malone
Duty Engineer

SOMERSET DIRECTIVE NO. 4

SLUICE K OPENED AT 0900 HRS

EL 100.28

E:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #4.doc

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09-Jan-2011 08:51 AM Seqwater +61730355500

1/1

SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Ruffini
[redacted]

Senior Flood Operations Engineer
Rob Ayre
[redacted]

Flood Operations Engineer
Terry Malone
[redacted]

Flood Operations Engineer
John Tibaldi
[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 09/01/2011 Time: 12:30 Directive No: 5

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice N to100% at 13:00
- Please open Sluice J to 100% at 14:00

Please confirm this gate operation by fax once you have completed the opening.

Regards

[redacted]

Terry Malone
Duty Engineer

SLUICE N OPENED AT 1300 HRS
EL 100.45 [redacted]

E:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #5.doc

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SEQWATER FLOOD OPERATIONS CENTRE

FACSIMILE MESSAGE

Senior Flood Operations Engineer
John Ruffini
[redacted]

Senior Flood Operations Engineer
Bob Ayre
[redacted]

Flood Operations Engineer
Terry Malone
[redacted]

Flood Operations Engineer
John Tibaldi
[redacted]

Flood Event - Operations Directive

TO: Somerset Dam Operators	Date: 09/01/2011 Time: 12:30 Directive No: 5

This transmission comprises of this page and 0 other pages.

Message:

Inflows to Somerset Dam are expected to increase in the next few hours due to rain in the last 6 hours with falls up to 75mm

- Please open Sluice N to100% at 13:00
- Please open Sluice J to 100% at 14:00

Please confirm this gate operation by fax once you have completed the opening.

Regards

[redacted]

Terry Malone

Duty Engineer

SLUICE N OPENED AT 1300 HRS
EL 100.45
[redacted]

SLUICE J OPENED AT 1400 HRS
EL 100.48
[redacted]

E:\20110102\Wivenhoe-Somerset\Gate_Operations_Directives\Directives\OPS_Directive_Somerset #5.doc

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09-Jan-2011 01:56 PM Seqwater +61730355500

1/1

seqwater
WATER FOR LIFE

Queensland Bulk Water Supply Authority (trading as Seqwater)
ABN 75 460 239 876

Corporate Office
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Brisbane Qld Australia
Ph (07) 3228 3399
Fax (07) 3229 7928

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

FACSIMILE TRANSMISSION

TO FLOOD CENTRE DATE 11/1/11

ATTENTION YOUR FAX

FROM SOMERSET DAM. PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 5.00 am
EL. 103.28
SLUICES LINK OPEN

SHUT SLUICES AT 05.00 HOURS

DIRECTIVE No 6

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ABN 75 450 239 876

FACSIMILE TRANSMISSION

Corporate Office
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Brisbane Qld Australia
Ph (07) 3229 8999
Fax (07) 3229 7828

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO FLOOD CENTRE DATE 11/1/11

ATTENTION YOUR FAX

FROM SOMERSET DAM PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 6.00 am

EL. 103.34

SLUICES OPEN 4m 4K

CLOSE SLUICE N AT 0600 HOURS

DIRECTIVE NO6

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Brisbane Qld Australia
Ph (07) 3229 8999
Fax (07) 3229 7926

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO FLOOD CENTRE DATE 11/1/11

ATTENTION YOUR FAX

FROM SEQWATER PAGES 1 INC

ORIGINAL TO FOLLOW REF.

SUBJECT 07.00 hrs

EL 103.40

SLUICES LM open

Directive NO 6 closed SLUICE K

A. Weller

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Level 9 240 Margaret Street
Brisbane Qld Australia
Ph (07) 3228 3999
Fax (07) 3228 7926

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO flood centre DATE 11/1/11

ATTENTION YOUR FAX

FROM Somerset Dam PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 09.45 Hours

EL 103.53

SLUICE L open

Directive NO:7 closed SLUICE M

A. Weller

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Brisbane Qld Australia
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City East
Qld 4002 Australia

FACSIMILE TRANSMISSION

TO Flood centre DATE 11/1/11

ATTENTION YOUR FAX

FROM Somerset Dam PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 10.15 Hours

EL 103.56

Directive NO. 7 closed sluice L

All sluices closed

All crest Gates open

A. Webber

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Level 3 240 Margaret Street
Brisbane Qld Australia
Ph (07) 3229 8999
Fax (07) 3229 7925

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO flood centre DATE 12/1/11

ATTENTION YOUR FAX

FROM Somerset Dam PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 10.00 Hours

EL 105.06

Directive NO. 8 opened SLUICE L 11.00

A. Weller

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Brisbane Qld Australia
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Fax (07) 3229 7928

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO flood centre DATE 13/1/11

ATTENTION YOUR FAX

FROM Somerset Dam PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 0900 Hours

EL 104.14

Directive No. 9 opened sluice 11 at 08.30 Hours

A. Weller

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13-Jan-2011 08:49 AM Seqwater +61730355500

1/1

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ABN 75 450 239 876

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Level 3 240 Margaret Street
Brisbane Qld Australia
Ph (07) 3229 3399
Fax (07) 3229 7928

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO FLOOD CENTRE. DATE 13/1/2011

ATTENTION JOHN YOUR FAX

FROM SOMERSET DAM PAGES 1

ORIGINAL TO FOLLOW REF.

SUBJECT DIRECTIVE.

OPENED SLUICE K AT 13:00 HRS.

SLUICES L, M, K OPENED.

EL 103.91.

agf

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Fax (07) 3229 7928

All correspondence to
PO Box 16146
City East
Qld 4002 Australia

TO FLOOD CENTRE DATE 13/1/11

ATTENTION YOUR FAX

FROM SOMERSET DAM. PAGES

ORIGINAL TO FOLLOW REF.

SUBJECT 21.00 HOURS.

EL. 103.40

SLUICES OPEN KLM N OPEN

OPENED SLUICE N AT 21.00 HOURS.

ON DIRECTIVE NO. 11.

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PB-21

FLOOD EVENT LOG

Somerset Dam

Events Monitoring

Sh .... of ....

Date	Time	ACTION	Logged by:	Entry
		NO3 REGULATOR OPEN 50%	[redacted]	1
6/12/11	19.00	COL GILLAN + GRAHAM FRANCIS ON DUTY		
		EMAIL FLOOD CENTRE		2
6/12/11	20.00	NO3 REGULATOR OPEN 50%		
				3
6/12/11	21.00	~~EMAIL~~ ✓ EMAIL SDMS		
				4
6/12/11	22.01	✓		
				5
6/12/11	23.00	✓		
				6
6/12/11	24.00	✓		
				7
7/1/11	3.00	99.5^ EMAILING ONLY	[redacted]	
		SHUT & ONE VALVE NO3 EL 100.15		8
7/1/11	19.00	OPEN SLUICE L DIRECTIVE NO2		
		EL 100.17		9
7/1/11	20.00	SLUICE L OPEN		
		EL 100.21		10
7/1/11	21.00	SLUICEL OPEN		
		EL 100.25		11
7/1/11	22.00	SLUICE.L. OPEN.		
		EL 100.28		12
7/1/11	23.00	SLUICE.L. OPEN		

DATE	TIME	ACTION	INITS
		EL 100.31	
7/1/11	24.00	SLUICE L OPEN	GF
		EL 100.34	
8/1/11	01.00	SLUICE L OPEN	GF
		EL 100.36	
8/1/11	02.00	SLUICE L OPEN	GF
		EL 100.39	
8/1/11	03.00	SLUICE L OPEN	GF
		EL. 100.41	
8/1/11	04.00	SLUICE . L. OPEN	[redacted]
		EL 100.42.	
8/1/11	05.00	SLUICE . L. OPEN	
		EL. 100.43.	
8/1/11	06.00	SLUICE. L. OPEN	
		EL 100.44	
8/1/11	07.00	SLUICE L OPEN	GF.
		EL 100.46	
8/1/11	08.00	SLUICE L OPEN	GB
		EL 100.47	
8/1/11	1000	SLUICE L OPEN	GB
		EL 100.46	
08/01/11	1100	SLUICE L OPEN	GB
		EL 100.45.	
08/01/11	1200	OPANK SLUICE M.	
		EL 100.42	
08/01/11	1520	SLUICE L&M OPEN	
		EL 100.41	
08/01/11	1600	SLUICE L&M OPEN	

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INIT
8/1/11	19.00	EL 100.37 L+M SLUICE OPEN	GF
8/1/11	20.00	EL 100.36 L+M SLUICE OPEN	GF
8/1/11	21 00	EL 100.35 L+M SLUICE OPEN	GF
8/1/11	22.00	EL.100.34 L&M SLUICE OPEN	NS
8/1/11	23.00	EL 100.33 L+M SLUICE OPEN	GF
8/1/11	24.0	EL 100.32 L&M SLUICE OPEN	NS
9/1/11	01.00	EL 100.32 L+M SLUICE OPEN	GF
9/1/11	03.00	EL.100.30 L&M SLUICE OPEN	NS
9/1/11	04.00	EL 100.28 L&M SLUICE OPEN	NS
9/1/11	5.00	EL.100.27 L&M SLUICE OPEN	NS
9/1/11	6.00	EL.100.27 L+M SLUICE OPEN	GF
9/01/11	0700	EL 100.27 L+M SLUICE OPEN	GF
9/01/11	0900	EL 100.28 SLUICE K OPENED SLUICES L, K & M OPEN	GF

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INIT
09/01/11	1200	EL 100.38 SLUICES K, L & M OPEN	
09/01/11	1310	EL 100.44 SLUICES N OPENED SLUICES K,L,M,N OPEN	
09/01/11	1400	EL 100.48 SLUICE J OPENED SLUICES K,L,M,N,J OPEN	
09/01/11	16.00	EL 100.75. FUCKING STILL RAINING SENT FAX. SLUICE K L M N J OPEN.	
9/01/11	17.00	EL 101. SLUICE K L M N J OPEN SENT FAX + EMAIL	
9/01/11	18.00	EL 101.14 SLUICE K L M N J OPEN SENT FAX + EMAIL	
9/01/11	19.00	EL 101.43 SLUICE K L M N J OPEN	
9/01/11	20.00	EL 101.68 SLUICES K L M N J OPEN.	
9/1/11	21.00	EL 101.89 SLUICES K L M N J OPEN	
9/1/11	22.00	EL 102.06 FAX + EMAIL SLUICES J K L M N OPEN	
9/1/11	23.00	EL 102.22 FAX EMAIL SENT SLUICES OPEN J K L M N	
9/1/11	24.00	EL 102.38 SLUICES K L M N J OPEN	
10 9/1/11	1.00	EL 102.51 SLUICES K L M N J OPEN	

monday

DATE	TIME	ACTION		INI
		EL. 102. 61		
10/1/11	02.00	SLUICES J K L M N	OPEN	NB
		EL 102.70		
10/1/11	03.00	SLUICES J K L M N	OPEN	NB
		EL 102.78		
10/1/11	04.00	SLUICES J K L M N	OPEN	GF
		EL 102.84		
10/1/11	05.00	SLUICES J K L M N	OPEN	NB
		EL 102.93		
10/1/11	06.00	SLUICES J K L M N	OPEN	GF
		EL 102.98		
10/1/11	07.00	SLUICES J K L M N	OPEN	NB
10/1/11	08.00	EL 103.02 SLUICES J K L M N	open	AW
10/1/11	09.20	EL 103.09 SLUICES J K L M N	open	AW
10/1/11	10.00	EL 103.11 SLUICES J K L M N	open	AW
10/1/11	11.00	EL 103.16 SLUICES J K L M N open Silverton Bridge @ 10:K EL 73.34 Osheas crossing EL 73.70		AW
10/1/11	~~10.00~~ 12.00	EL 103.27 SLUICES J K L M N	open	AW
10/1/11	13.00	EL 103.36 SLUICES J K L M N	open	AW
10/1/11	14.30	EL 103.41 SLUICES J K L M N open silver ton Bridge EL 73.50 Osheas crossing EL 73.55		AW

DATE	TIME	ACTION		INI
10/1/11	1600	EL 103.45 SLUICES JKLMN open	HYDRO WENT UNDER	AW
10/1/11	17.00	EL 103.45 FAX ONLY SLUICES J.K.L.M.N OPEN	BLOCK OFF PIPE HYDRO	GF
10/1/11	18.00	EL 103.46 SLUICES JKLMN OPEN	MARK LEVEL ON WALL HYDRO (DROPPING)	GF
10/1/11	14.00	EL 103.45 SLUICES JKLMN open		AW
10/1/11	20.00	EL. 103.46 SLUICES JKLMN	OPEN	NB
10/1/11	21.00	EL. 103.44 SLUICES JKLMN	OPEN	NB
10/1/11	22.00	EL. SLUICES JKLMN	OPEN	NB
10/1/11	23.00	EL. 103.40 SLUICES JKLMN	OPEN	NB
10/1/11	24.00	EL. 103.37 SLUICES JKLMN	OPEN	NB
10/1/11	1.00	EL. 103.36 SLUICES. JKLMN	OPEN	NB
11/1/11	2.00	EL. 103.31 SLUICES JKLMN	OPEN	NB
11/1/11	3.00	EL. 103. 27 SLUICES JKLMN	OPEN	NB
11/1/11	4.00	EL. 103. 23 SLUICES JKLMN	OPEN	NB

DATE	TIME	ACTION		INI
11/1/11	5.00	EL 103.29 SHUT SLUICE J AT 0500 HRS SLUICES L M N K	(DIRECTIVE No 6)	GF
11/1/11	0600	EL 103.34 SLUICES M L K CLOSE SLUICE N	DIRECTIVE No 6	GF
11/1/11	07.00	EL. 103.40 closed SLUICE K SLUICE L M open		AW
11/1/11	09.45	EL 103.53 closed SLUICE M SLUICE L open	Directive No.6	AW
11/1/11	10.15	EL 103.56 All crest gates open closed SLUICE L All sluices closed		AW
11/1/11	10.00	EL 103.61		AW
11/1/11	1200	EL 103.68		AW
11/1/11	1330	EL 103.91		AW
11/1/11	14.00	RL 103.96		AW
11/1/11	1500	EL 104.14		AW
11/1/11	1600	EL 104.31		AW
11/1/11	1700	RL 104.41		AD
11/1/11	1830	EL 104.56		AW

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INITS
11/1/11	19.00	EL. 104.61.	RB
11/1/11	20.00	EL. 104.70	RB.
11/1/11	21.00	EL. 104.78	RB
11/1/11	22.00	EL. 104.85	RB.
11/1/11	23.00	EL. 104.90	RB
11/1/11	24.00	EL. 104.96	RB
12/1/11	1.00	EL 105.00	RB
12/1/11	2.00	EL 105.04	RB
12/1/11	3.00	EL. 105.07	GF
12/1/11	4.00	EL 105.09	RB
12/1/11	5.00	EL 105.10	RB
12/1/11	6.00	EL 105.11	RB
12/1/11	7.00	EL. 105.11	RB

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INITS
12/1/11	0600	EL 105.11	AW
12/1/11	0900	EL 105.10	AW
12/1/11	1000	EL 105.09	AW
12/1/11	1100	EL 105.06 Directive NO.8 opend Sluice L	AW
12/1/11	1200	EL 105.05	AW
12/1/11	1300	EL 105.01	AW
12/1/11	1400	EL 104.98	AW
12/1/11	1500	EL 104.94.	AD
12/1/11	1600	EL 104.90	AD
12/1/11	1700	EL 104.87	AW
12/1/11	1800	EL 104.83	AW
12/1/11	19:00	SLUICE L OPEN FAXES ONLY NOW EL 104.78	CF
12/1/11	20 00	SLUICE L OPEN EL 104.73	CF

DATE	TIME	ACTION		INI
12/1/11	21.00HR	SLUICE L OPEN EL 104.69		
12/1/11	22.00	SLUICE L OPEN EL 104.65		
12/1/11	23.00			
12/1/11	24.00	EL. 104.56 SLUICE L OPEN		
13/1/11	01.00	EL 104.51 SLUICE L OPEN		
13/1/11	02.00	EL 104.45 SLUICE L OPEN		
13/1/11	03.00	EL 104.42 SLUICE L OPEN		
13/1/11	04.00	EL 104.37 SLUICE L OPEN		
13/1/11	05.00	EL 104.32 SLUICE L OPEN		
13/1/11	06.00	EL 104.28		
13/1/11	07.00	EL 104.24		
13/1/11	08.00	EL 104.19		
13/1/11	0900	EL 104.14 Directive NO.9 opened sluice M 0630 Hours		

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INITS
13/1/11	1000	EL 104.09	AW
13/1/11	1100	EL 104.03	AW
13/1/11	12-15	EL 103.96	AW
13/1/11	1300	EL 103.91 Directive NO.10 opened Sluice K	AW
13/1/11	1400	EL 103.87	AW
13/1/11	1530	EL 103.75	AW
13/1/11	1600	EL 103.72	AW
13/1/11	1700	EL 103.66	AW
13/1/11	1800	EL 103.6	AW
13/1/11	19.00	EL 103.54 SENTING FAX +EMAIL	[redacted]
13/1/11	20.00	EL 103.47	
13/1/11	21 00	EL.103.40 opened N ON Directive NO11	RD
13/1/11	2200	EL.103.34	RD

SOMERSET DAM - EVENT LOG

Page of

DATE	TIME	ACTION	INITS
3/1/11	23·00		
3/1/11	24·00	EL. 103.22	RB
4/1/11	01·00	EL. 103·13	RB
4/1/11	2·00	EL. 103·06	RB
4/1/11	3·00	EL 129·99	RB
4/1/11	4·00	EL 102.93	CF
1/1/11	5·00	EL 102.87 SLUICES KLMN OPEN	CF
1/1/11	6·00	EL 102·79 SLUICES KLMN OPEN EO	GF
1/1/11	7·00	EL 102.73 FAX EMAIL FOR NIGHT SHIFT SLUICES KLMN OPENED	GF
4/1/11	0500	EL 102.67	AW
4/1/11	0900	EL 102.61	AW
4/1/11	1000	EL 102·54	AD
4/1/11	11·00	EL 102·48	AD

SOMERSET DAM - EVENT LOG

Page of

DATE	TIME	ACTION	INITS
14/1/11	12.30	EL. 102.39.	AD
14/1/11	1300	EL 102.36	AD
14/1/11	1400	EL 102.30	AD
14/1/11	1500	EL 102.23	AW
14/1/11	1600	EL 102.17	AW
14/1/11	1700	EL 102.12	AW
14/1/11	18:30	EL 102.02	AD.
14/1/11	19.00	EL. 101 99	RB
14/1/11	20.00	EL. 101.93	CP
14/1/11	21.00	EL 101.87	RB
14/1/11	22.00	EL 101.82.	RB
14/1/11	23.00	EL 101.76	RB
14/1/11	24.00	EL 101.70	RB

SOMERSET DAM - EVENT LOG

Page of

DATE	TIME	ACTION	INITS
15/1/11	1:00	EL 101.64	NB
15/1/11	2:00	EL 101.58	NB
15/1/11	3:00	EL 101.53	NB
15/1/11	4:00	EL 101.46	NB
15/1/11	5:00	EL 101.42	GF
15/1/11	6:00	EL 101.35	NB
15/1/11	7:00	EL 101.29	AW
15/1/11	0800	EL 101.24	AW
15/1/11	0900	EL 101.18	AD
15/1/11	10:00	EL 101.12	AD
15/1/11	11.15	EL 101.07	AW
15/1/11	1200	EL 101.01	AW
15/1/11	1300	EL 100.97	AW

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INITS
15/1/11	1400	EL 100.91	AW
15/1/11	1500	EL 100.86	AW
15/1/11	1600	EL 100.80	AP
15/1/11	1700	EL 100.75	AP
15/1/11	1810	EL 100.68	AW
15/1/11	19.00	EL 100.64	NB
15/1/11	20.00	EL. 100.58 FAX FAIL	NB.
15/1/11	21.00	EL : 100.53 FAX FAIL LET ~~SOAH~~ FLOOD CENTRE KNOW FAX IS FAILING.	NB
15/1/11	22.00	EL 100.47 FAX FAIL	GF
15/1/11	23.00	EL 100.41	GF
15/1/11	24.00	EL 100.36	RB
16/1/11	01.00	EL	RB
16/1/11	0200	EL 100.24	RB

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INITS
		EL 100.13 FAX FAIL.	
16/1/11	0300	SLUICES KLMN OPEN	[redacted]
		EL 100.13 FAX FAIL	
16/1/11	0400	SLUICES KLMN OPEN	RB
		EL 100.08	
16/1/11	0500	SLUICES KLMN OPEN	RB
		EL 100.01	
16/1/11	0600	SLUICES KLMN OPEN	GF
		EL 99.96	
16/1/11	0700	SLUICES KLMN OPEN	AW
		EL 99.90	
16/1/11	0800	SLUICES KLMN OPEN	AD.
16/1/11	10.15	EL 99.76 SLUICES KLM open Directive NO.12 closed SLUICE N	AW
16/1/11	11.10	EL 99.72. SLUICES KLM. OPEN	AD
16/1/11	1200	EL 99.69 SLUICES KLM open	AW
16/1/11	1300	EL 99.65 SLUICES KLM open	AW
16/1/11	1415	EL 99.59 SLUICES KLM open	AW
16/1/11	1500	EL 99.56 SLUICES KLM open	AW
16/1/11	1600	~~SLUICES~~ EL 99.51 SLUICES KLM open	AW

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INITS
16/1/11	1700	EL 99.47 SLUICES KLM open	AW
16/1/11	1800	EL99.43 SLUICES KLM open	AW
16/1/11	19.00	EL 99.38 SLUICES KLM OPEN	NB
16/1/11	20.00	EL 99.34 SLUICES KLM OPEN	NB
16/1/11	21.00	EL. 99.30 SLUICES KLM OPEN	NB
16/1/11	22.00	EL. 99.25 L+M OPEN SHUT SLUICE K DIRECTIVE 13	GF
16/1/11	23.00		
16/1/11	24.00		
16/1/11	3.00	EL 99.081 CLOSED SLUICE M	NB
16/1/11	4.00	EL 99.08 SLUICE L OPEN	NB
16/1/11	5.00	EL. 99.08 ~~Est~~ SLUICE L OPEN	NB
17/1/11	6.00	EL 99.06 SLUICE L OPEN	GF
17/1/11	7.00	EL 99.07 SLUICE L Closed Opened Regulator 12.	NB

SOMERSET DAM - EVENT LOG

DATE	TIME	ACTION	INITS
17/1/11	8.00	RL 99.06.	AP
17/1/11	9.20	RL 99.05	AD
17/1/11	10:00	RL 99.05	AD
17/1/11	12.00	RL 99.04	AD
17/1/11	14.00	RL 99.04	AD.
17/1/11	16.00	RL 99.02	AD.

PB-22

FLOOD OPERATING LOG

STORAGE MANAGEMENT

Storage Behaviour

SHEET 1

113

Somerset Dam

Date: 2/1/13

Storage Monitoring	Release Monitoring

	Storage		Time		Settings																					
					REGULATORS *(% Open)*				SLUICES *(% Open)* (Open or Shut - Keep symmetrical about Sluices L/M)								CREST GATES *(100 % Open)* Normally OPEN - Keep symmetrical about Gates L/M)								Discharge	
Entry	Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh.mm)	2	3	12	13	I	J	K	L	M	N	O	P	I	J	K	L	M	N	O	P	Total m3/sec	Logged by:
1	100·15		19·00			Sat/S						X					✓	✓	✓	✓	✓	✓	✓	✓		GF
2	100·17		20·00			"						✓														
3	100·21		21·00			"						✓														
4	100·25		22·00			"						✓														
5	100·28		23·00			"						✓														
6	100·31		24·00								✓	✓														
7	100·34		01·00									✓														
8	100·36		02·00									✓						✓								
9	100·38		03·00									✓														
10	100·41		04·00									✓														
11	100·42		05·00									✓														
12	100·43		06·00									✓														
13	100·44		07·00									✓														
14	100·46		08·00									✓														
15	100·47		10·00									✓														
16	100·45		12·00									✓	✓													
17	100·48		520									✓	✓													
18	100·41		1620									✓	✓													
19	100·37		19·00									✓	✓													GF
20	100·36		20·00									✓	✓													GF
21	100·35		21·00									✓	✓													GF
22	100·34		22·00									✓	✓													AB
23	100·33		23·00									✓	✓													GF
24	100·32		24·00									✓	✓													

FLOOD LOG

(OPERATIONS - Sh.....of.....)

SHEET 2

Somerset Dam

Date: 9/1/11

Monitoring | **Release Management**

Storage | **Time** | **Settings** | **Discharge**

Line	Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	REGULATORS *(% Open)* 2	3	12	13	SLUICES *(% Open)* (Open or Shut - Keep symmetrical about Sluices L/M) I	J	K	L	M	N	O	P	CREST GATES *(100 % Open)* Normally OPEN - Keep symmetrical about Gates L/M) I	J	K	L	M	N	O	P	Total m3/sec	Logged by:	Line
1	100.32		01.00									X	X				X	X	X	X	X	X	X	X			1
2	100.30		3.00									✓	✓														2
3	100.28		4.00									✓	✓														3
4	100.27		5.00									—	—														4
5	100.27		6.00									✗	✗														5
6	100.27		7.00									✓	—														6
7	100.28		0900								✓	✓	✓														7
8	100.38		1200								✓	✓	✓														8
9	100.44		1300								✓	✓	✓	—													9
10	100.48		1400							✓	✓	✓	✓	✓													10
11	100.48		15.00							✓	✓	✓	✓	✓													11
12	100.75		16.00							✓	✓	✓	✓	✓													12
13	100.91		17.00							✓	✓	✓	✓	✓													13
14	101.14		18.00							✓	✓	✓	✓	✓													14
15	101.43		19.00							✓	✓	✓	✓	✓													15
16	101.68		20.00							✓	✓	✓	✓	✓													16
17	101.89		21.00							✓	✓	✓	✓	✓													17
18	102.06		22.00							✓	✓	✓	✓	✓													18
19	102.22		23.00							✓	✓	✓	✓	✓													19
20	102.38		24.00							✓	✓	✓	✓	✓													20
21	102.51		1.00							✓	✓	✓	✓	✓													21
22	102.61		2.00							✓	✓	✓	✓	✓													22
23	102.70		3.00							✓	✓	✓	✓	✓													23
24	102.78		4.00							✓	✓	✓	✓	✓													24

FLOOD LOG

(OPERATIONS - Sh 3 of .....)

Somerset Dam

Date 10/1/11

Monitoring | **Release Management**

Storage | **Time** | **Settings**

Line	Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	REGULATORS (% Open) 2	3	12	13	SLUICES (% Open) (Open or Shut - Keep symmetrical about Sluices L/M) I	J	K	L	M	N	O	P	CREST GATES (100 % Open) Normally OPEN - Keep symmetrical about Gates L/M) I	J	K	L	M	N	O	P	Discharge Total m3/sec	Logged by:	Li
1	102.84		05.00							X	X	X	X	X			✓	✓	✓	✓	✓	✓	✓	✓			
2	102.93		06.00							X	X	X	X	X												GF	
3	102.98		07.00							X	X	X	X	X												GF	
4	103.02		08.00							/	/	/	/	/												NB	
5	103.04		0920							/	/	/	/	/												AW	
6	103.11		10.00							/	/	/	/	/												AW	
7	103.16		11.00							/	/	/	/	/												AW	
8	103.27		12.00							/	/	/	/	/												AW	
9	103.36		13.00							/	/	/	/	/												AW	
10	103.41		1430							/	/	/	/	/												AW	
11	103.45		1600							/	/	/	/	/												AW	
12	103.45		17.00							/	/	/	/	/												AW	
13	103.46		18.00							✓	✓	✓	✓	✓												GF	
14	103.45		1900							✓	✓	✓	✓	✓												GF	
15	103.46		20.00							/	/	/	/	/												AW	
16	103.44		21.00							/	/	/	/	/												NB	
17			22.00							/	/	/	/	/												NB	
18	103.40		23.00							/	/	/	/	/													
19	103.37		24.00							/	/	/	/	/												NB	
20	103.36		1.00							/	/	/	/	/												NB	
21	103.31		2.00							/	/	/	/	/												NB	
22	103.27		3.00							/	/	/	/	/												NB	
23	103.23		4.00							/	/	/	/	/												NB	
24	103.29		5.00							X	✓	✓	✓	✓												GF	
																										GP	

FLOOD LOG

(OPERATIONS - Sh. 4 of.....)

Somerset Dam

Date: 10/1/11

Monitoring | **Release Management**

Storage | **Time** | **Settings**

Line	Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	REGULATORS *(% Open)* 2	3	12	13	SLUICES *(% Open)* (Open or Shut - Keep symmetrical about Sluices L/M) I	J	K	L	M	N	O	P	CREST GATES *(100 % Open)* Normally OPEN - Keep symmetrical about Gates L/M) I	J	K	L	M	N	O	P	**Discharge** Total m3/sec	Logged by:
1	103.34		06:00								✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓		
2	[redacted]		[redacted]																								
3	103.40		0700																								
4	103.33		0945									✓	✓														
5	103.56		1015									✓															
6	103.61		1100																								
7	103.68		1700																								
8	103.41		1330																								
9	103.96		1460																								
10	104.14		1500																								
11	104.31		1650																								
12	104.[redacted]		1700																								
13	104.56		1630																								
14	104.61		1900																								
15	104.70		2000																								
16	104.[redacted]		2100																								
17	104.[redacted]		2200																								
18	104.90		2300																								
19	104.96		2400																								
20	105.00		0100																								
21	105.01		0200																								
22	105.07		0300																								
23	105.04		0400																								
24	105.10		0500																								

LOOD LOG

(OPERATIONS - Sh. 5 of.....)

Somerset Dam

Date: 12/1/11

Monitoring — **Release Management**

Line	Storage: Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	Regulators (% Open) 2	3	12	13	Sluices (% Open) I	J	K	L	M	N	O	P	Crest Gates (100 % Open) I	J	K	L	M	N	O	P	Discharge Total m3/sec	Logged by
1 (12/1/11)	105.11		0600																							
2	105.11		0700														✓	✓	✓	✓	✓	✓	✓	✓		AW
3	105.11		0800														✓	✓	✓	✓	✓	✓	✓	✓		AW
4	105.10		0900														✓	✓	✓	✓	✓	✓	✓	✓		AW
5	105.08		1000														✓	✓	✓	✓	✓	✓	✓	✓		AW
6	105.06		1100									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
7	105.05		1200									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
8	105.01		1300									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
9	104.98		1400									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
10	104.94		1500									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
11	104.90		1600									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
12	104.87		1700									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
13	104.83		1800									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
14	104.78		19.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		AW
15	104.73		20.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		GF
16	104.69		21.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		GF
17	104.68		22.00									✓					✓	✓		✓	✓	✓	✓	✓		GF
18			23.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		GF
19 (3/1/11)	104.56		00.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		GF
20	104.51		01.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		GF
21	104.45		02.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		GF
22	104.42		03.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		GF
23	104.37		04.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		NB
24	104.32		05.00									✓					✓	✓	✓	✓	✓	✓	✓	✓		NB

FLOOD LOG

(OPERATIONS - Sht ..of.....)

Somerset Dam

Date: 13/1/11

Monitoring | **Release Management**

Storage | **Time** | **Settings** | **Discharge**

Line	Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	REGULATORS *(% Open)* 2	3	12	13	SLUICES *(% Open)* (Open or Shut - Keep symmetrical about Sluices L/M) I	J	K	L	M	N	O	P	CREST GATES *(100 % Open)* Normally OPEN - Keep symmetrical about Gates L/M) I	J	K	L	M	N	O	P	Total m3/sec	Logged by:
1	104.28		06 00									/					/	/	/	/	/	/	/	/		
2	104.24		07.00									/					/	/	/	/	/	/	/	/		RB
3	104.19		0800									/					/	/	/	/	/	/	/	/		RB
4	104.14		0900									/	/				/	/	/	/	/	/	/	/		AW
5	104.09		10000									/	/				/	/	/	/	/	/	/	/		AW
6	104.03		1100									/	/				/	/	/	/	/	/	/	/		AW
7	103.96		1215									/	/				/	/	/	/	/	/	/	/		AW
8	103.91		1300									/	/				/	/	/	/	/	/	/	/		AW
9	103.87		1400								/	/	/				/	/	/	/	/	/	/	/		AW
10	103.75		1530								/	/	/				/	/	/	/	/	/	/	/		AW
11	103.72		1600								/	/	/				/	/	/	/	/	/	/	-		AW
12	103.66		1700								/	/	/				/	/	/	/	/	/	/	/		AW
13	103.60		1800								/	/	/				/	/	/	/	/	/	/	/		AW
14	103.53		19.00								√	√	√													AW
15	103.47		20.00								/	/	/													TCB
16	103.40		21.00								/	/	/	/												RAS
17	103.34		22.00								/	/	/	/												GF
18			23.00								/	/	/	/												GF
19	103.21		24.00								/	/	/	/												GF
20	103.13		1.00								/	/	/	/												GF
21	103.06		2.00								/	/	/	/												GF
22	102.99		3.00								/	/	/	/												GF
23	102.93		4.00								/	/	/	/												RB
24	102.87		5.00								/	/	/	/												RB
																										GF

FLOOD LOG

(OPERATIONS - Sh.....of.....)

Somerset Dam

Date: 4/1/11

Monitoring | **Release Management**

Storage | Time | Settings

Line	Lake Level FL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	REGULATORS (% Open) 2	3	12	13	SLUICES (% Open) (Open or Shut - Keep symmetrical about Sluices L/M) I	J	K	L	M	N	O	P	CREST GATES (100 % Open) Normally OPEN - Keep symmetrical about Gates L/M) I	J	K	L	M	N	O	P	Discharge Total m3/sec	Logged by:	Li
1	102.79		06.00								✓	✓	✓	✓			✓	✓	/	/	/	/	✓	✓			GF	
2	102.73		07.00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
3	102.67		08:00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
4	102.61		0900								/	/	/	/			/	/	/	/	/	/	/	/			AW	
5	102.54		10 00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
6	102.48		11.00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
7	102.39		12.20								/	/	/	/			/	/	/	/	/	/	/	/			AW	
8	102.36		1300								/	/	/	/			/	/	/	/	/	/	/	/			AW	
9	102.30		1400								/	/	/	/			/	/	/	/	/	/	/	/			AW	
10	102.23		1500								/	/	/	/			/	/	/	/	/	/	/	/			AW	
11	102.17		1600								/	/	/	/			/	/	/	/	/	/	/	/			AW	
12	102.12		1700								/	/	/	/			/	/	/	/	/	/	/	/			AW	
13	102.02		18.30								/	/	/	/			/	/	/	/	/	/	/	/			AW	
14	101.93		20.0								/	/	/	/			/	/	/	/	/	/	/	/			AW	
15	101.87		21.0								/	/	/	/			/	/	/	/	/	/	/	/			AW	
16	101.82		22.0								/	/	/	/			/	/	/	/	/	/	/	/			AW	
17	101.76		23.0								/	/	/	/			/	/	/	/	/	/	/	/			AW	
18	101.70		24.0								/	/	/	/			/	/	/	/	/	/	/	/			AW	
19	~~101.65~~																											
20	101.62		1.00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
21	101.58		2.00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
22	101.53		3.00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
23	101.46		4.00								/	/	/	/			/	/	/	/	/	/	/	/			AW	
24	101.42		5.00								/	/	/	/			/	/	/	/	/	/	/	/			GF	

FLOOD LOG

(OPERATIONS - Sh. 2 of .....)

Somerset Dam

Date 16/1/11

Monitoring | **Release Management**

Storage | **Time** | **Settings**

Line	Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	REGULATORS (% Open) 2	3	12	13	SLUICES (% Open) (Open or Shut - Keep symmetrical about Sluices L/M) I	J	K	L	M	N	O	P	CREST GATES (100 % Open) Normally OPEN - Keep symmetrical about Gates L/M) I	J	K	L	M	N	O	P	Discharge Total m3/sec	Logged by:	Li
1	101.35		06:00								✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓				
2	101.29		07:00								✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓				
3	101.24		0800								/	/	/	/			/	/	/	/	/	/	/	/				
4	101.18		0900								/	/	/	/			/	/	/	/	/	/	/	/				AW
5	101.12		1000								/	/	/	/			/	/	/	/	/	/	/	/				AW
6	101.07		1115								/	/	/	/			/	/	/	/	/	/	/	/				AD
7	101.01		1200								/	/	/	/			/	/	/	/	/	/	/	/				AW
8	100.97		1300								/	/	/	/			/	/	/	/	/	/	/	/				AW
9	100.91		1400								/	/	/	/			/	/	/	/	/	/	/	/				AW
10	100.86		1500								/	/	/	/			/	/	/	/	/	/	/	/				AW
11	100.80		1600								/	/	/	/			/	/	/	/	/	/	/	/				AW
12	100.75		1700								-	-	-	-			-	-	-	-	-	-	-	-				AD
13	100.69		1800								-	-	-	-			-	-	-	-	-	-	-	-				AD
14	100.64		19:00								/	/	/	/			/	/	/	/	/	/	/	/				AW
15	100.58		20:00																									RB
16	100.53		21:00																									RB
17	100.47		22:00																									G.
18	100.41		23:00																									GF
19	100.36		24:00								/	/	/	/														GF
20	100.30		1:00								/	/	/	/														RB
21	100.24		2:00								/	/	/	/														KF
22	100.18		3:00								/	/	/	/														RG
23	100.13		4:00								/	/	/	/														RG
24	100.08		5:00								/	/	/	/														RG

FLOOD LOG

(OPERATIONS - Sh. 8 of ....)

Somerset Dam

Date: 16/1/11

Monitoring | **Release Management**

Storage | Time | Settings

Line	Lake Level EL (m AHD)	Rainfall since 9am (mm)	Time Advised (hh:mm)	Time Open/Shut (hh:mm)	REGULATORS (% Open) 2	3	12	13	SLUICES (% Open) (Open or Shut - Keep symmetrical about Sluices L/M) I	J	K	L	M	N	O	P	CREST GATES (100 % Open) Normally OPEN - Keep symmetrical about Gates L/M) I	J	K	L	M	N	O	P	Discharge Total m3/sec	Logged by:
1	100.01		06.00								✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
2	99.96		07.00								✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
3	99.90		08.00								✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
4	99.76		1015								—	—	—	—			—	—	—	—	—	—	—	—	—	—		AD
5	99.72		11.10								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
6	99.69		12.00								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AD
7	99.65		1300								✓	—	✓				✓	—	✓	✓	✓	✓	✓	✓	✓	✓		AW
8	99.59		1415								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
9	99.56		1500								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
10	99.51		1600								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
11	99.47		1700								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
12	99.43		1800								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
13	99.38		19.00								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
14	99.34		20.00								✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		AW
15	99.30		21.00								✓	✓	✓				✓	✓	✓									NB
16	99.25		22.00								✓	✓	✓				✓	✓	✓									NB
17	99.06		06.00								✓	✓	✓				✓	✓	✓									AD
18	99.07		7.00		✓						✓	✓	✓				✓	✓	✓									AD
19	99.06		8.00		✓						✓	✓	✓				✓	✓	✓									AD
20	99.05		9.20		✓															—	—	—	—	—	—	—	—		AD
21	99.05		10.00		✓															—	—	—	—	—	—	—	—		AD
22	99.04		12.00		✓															—	—	—	—	—	—	—	—		AD
23	99.04		14.00		✓															—	—	—	—	—	—	—	—		AD
24	99.02		16.00		✓															—	—	—	—	—	—	—	—		AD

PB-23

9.3 Somerset Dam

Table 9.2.1 provides full details of inflows into and releases from Somerset Dam over the duration of the Flood Event. Details of the strategies used in determining these releases and how these strategies comply with the Manual are contained in Section 7 of this Report. Table 9.2.1 also shows the gate operation sequence was in accordance with the Manual over the duration of the Event.

Some points to note in relation to Table 9.2.1 are:

- Inflow and flood release calculations are based on manual gauge board readings shown in the table that provide the lake level. During the Event, these manual gauge board readings were normally provided by the Dam operators to the Flood Operations Centre on an hourly basis. However, with prior approval from the Flood Operations Centre, during non-critical periods, the operators occasionally would miss a reading to complete higher priority site activities. In these instances, the table value has been interpolated from the closest available actual readings.
- Release calculations use the discharge rating formulae contained in the Manual.
- Inflow calculations are derived using a reverse routing technique assuming level pool. For each time step, inflow is based on the rate of change of the storage calculated from the manual gauge board readings and the Dam storage curve plus the releases. The method tends to underestimate the rising limb and overestimate the falling limb of the inflow. The erratic shape of the inflow is due to small level differences resulting in large inflow volumes.
- The table shows inflow rates and releases on the hour throughout the event. In some instances, gate operations may have occurred between hours or at less than one-hourly intervals. In these instances, the table shows the actual gate openings as at the time indicated.
- The flood release from Somerset Dam associated with the flood event prior to the January 2011 Flood Event was completed at 13:00 on 31 December 2010. The lake level in Somerset Dam at this time was 98.99m or 0.01m below the FSL. The Dam continued to release 3,000ML per day to account for base flow into the Dam from the previous flood event, with the expectation being that the Dam would slowly fall below FSL in the days following 31 December 2011. However, due to rainfall and further Dam inflows, the lake level rose steadily after 31 December 2011 and was above FSL at the commencement of the Event.

9 DAM INFLOW AND FLOOD RELEASE DETAILS (continued)

Date/time	Lake level	Storage	Incremental inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
06/01/2011 09:00	99.37	395716	435	121	0.5	0	8	0	35	155
06/01/2011 10:00	99.38	396151	435	121	0.5	0	8	0	35	155
06/01/2011 11:00	99.39	396587	435	121	0.5	0	8	0	35	155
06/01/2011 12:00	99.40	397022	435	121	0.5	0	8	0	35	155
06/01/2011 13:00	99.41	397457	435	121	0.5	0	8	0	35	155
06/01/2011 14:00	99.42	397893	435	121	0.5	0	8	0	35	156
06/01/2011 15:00	99.43	398328	435	121	0.5	0	8	0	35	156
06/01/2011 16:00	99.44	398764	472	131	0.5	0	8	0	35	166
06/01/2011 17:00	99.45	399199	218	60	0.5	0	8	0	35	95
06/01/2011 18:00	99.46	399634	-73	-20	0.5	0	8	0	35	14
06/01/2011 19:00	99.46	399634	181	50	0.5	0	8	0	35	85
06/01/2011 20:00	99.46	399634	689	191	0.5	0	8	0	35	226
06/01/2011 21:00	99.47	400070	948	263	0.5	0	8	0	35	298
06/01/2011 22:00	99.49	400941	627	174	0.5	0	8	0	35	209
06/01/2011 23:00	99.51	401821	669	186	0.5	0	8	0	35	220
07/01/2011 00:00	99.52	402267	668	186	0.5	0	8	0	35	220
07/01/2011 01:00	99.54	403157	668	186	0.5	0	8	0	35	220
07/01/2011 02:00	99.55	403603	668	186	0.5	0	8	0	35	220
07/01/2011 03:00	99.57	404493	742	206	0.5	0	8	0	35	241
07/01/2011 04:00	99.58	404939	186	52	0.5	0	8	0	35	86
07/01/2011 05:00	99.60	405829	-186	-52	0.5	0	8	0	35	0
07/01/2011 06:00	99.59	405384	1002	278	0.5	0	8	0	35	313
07/01/2011 07:00	99.60	405829	1225	340	0.5	0	8	0	35	375
07/01/2011 08:00	99.63	407165	482	134	0.5	0	8	0	35	169
07/01/2011 09:00	99.65	408056	1298	361	0.5	0	8	0	35	395
07/01/2011 10:00	99.66	408501	2339	650	0.5	0	8	0	35	684
07/01/2011 11:00	99.71	410728	2485	690	0.5	0	8	0	35	725
07/01/2011 12:00	99.76	412964	2774	770	0.5	0	8	0	35	805
07/01/2011 13:00	99.82	415697	2694	748	0.5	0	8	0	35	783
07/01/2011 14:00	99.88	418429	3038	844	0.5	0	8	0	35	879
07/01/2011 15:00	99.94	421162	2803	779	0.5	0	8	0	35	814
07/01/2011 16:00	100.01	424360	2297	638	0.5	0	8	0	35	673
07/01/2011 17:00	100.06	426690	2175	604	1.0	0	8	0	70	674
07/01/2011 18:00	100.11	429020	1282	356	1.0	0	8	0	70	426
07/01/2011 19:00	100.15	430885	1320	367	0.0	1	8	0	205	572
07/01/2011 20:00	100.17	431817	1978	549	0.0	1	8	0	206	755
07/01/2011 21:00	100.21	433681	1648	458	0.0	1	8	0	206	663
07/01/2011 22:00	100.25	435545	1395	388	0.0	1	8	0	206	593
07/01/2011 23:00	100.28	436976	1471	409	0.0	1	8	0	206	615

9 DAM INFLOW AND FLOOD RELEASE DETAILS (continued)

Date/time	Lake level	Storage	Incremental Inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
08/01/2011 00:00	100.31	438408	1153	320	0.0	1	8	0	206	526
08/01/2011 01:00	100.34	439839	1193	331	0.0	1	8	0	206	538
08/01/2011 02:00	100.36	440794	1272	353	0.0	1	8	0	206	560
08/01/2011 03:00	100.39	442225	676	188	0.0	1	8	0	206	394
08/01/2011 04:00	100.41	443180	437	121	0.0	1	8	0	206	328
08/01/2011 05:00	100.42	443657	437	121	0.0	1	8	0	206	328
08/01/2011 06:00	100.43	444134	795	221	0.0	1	8	0	207	427
08/01/2011 07:00	100.44	444611	517	144	0.0	1	8	0	207	350
08/01/2011 08:00	100.46	445565	-40	-11	0.0	1	8	0	207	196
08/01/2011 09:00	100.46	445565	-278	-77	0.0	1	8	0	207	129
08/01/2011 10:00	100.46	445565	-278	-77	0.0	1	8	0	207	129
08/01/2011 11:00	100.45	445088	80	22	0.0	1	8	0	207	229
08/01/2011 12:00	100.45	445088	-239	-66	0.0	2	8	0	413	347
08/01/2011 13:00	100.45	445088	-477	-133	0.0	2	8	0	413	281
08/01/2011 14:00	100.44	444611	-756	-210	0.0	2	8	0	413	203
08/01/2011 15:00	100.43	444134	-756	-210	0.0	2	8	0	413	203
08/01/2011 16:00	100.41	443180	-398	-110	0.0	2	8	0	413	302
08/01/2011 17:00	100.40	442702	-756	-210	0.0	2	8	0	413	203
08/01/2011 18:00	100.39	442225	-756	-210	0.0	2	8	0	413	203
08/01/2011 19:00	100.37	441271	-437	-121	0.0	2	8	0	413	291
08/01/2011 20:00	100.36	440794	-477	-133	0.0	2	8	0	413	280
08/01/2011 21:00	100.35	440317	-477	-133	0.0	2	8	0	412	280
08/01/2011 22:00	100.34	439839	-517	-144	0.0	2	8	0	412	269
08/01/2011 23:00	100.33	439362	-199	-55	0.0	2	8	0	412	357
09/01/2011 00:00	100.32	438885	-199	-55	0.0	2	8	0	412	357
09/01/2011 01:00	100.32	438885	-477	-133	0.0	2	8	0	412	280
09/01/2011 02:00	100.31	438408	-795	-221	0.0	2	8	0	412	191
09/01/2011 03:00	100.30	437931	-477	-133	0.0	2	8	0	412	280
09/01/2011 04:00	100.28	436976	-199	-55	0.0	2	8	0	412	357
09/01/2011 05:00	100.28	436976	-318	-88	0.0	2	8	0	412	324
09/01/2011 06:00	100.27	436499	318	88	0.0	2	8	0	412	500
09/01/2011 07:00	100.27	436499	159	44	0.0	2	8	0	412	456
09/01/2011 08:00	100.28	436976	676	188	0.0	2	8	0	412	600
09/01/2011 09:00	100.28	436976	1471	409	0.0	3	8	0	618	1027
09/01/2011 10:00	100.31	438408	1948	541	0.0	3	8	0	618	1159
09/01/2011 11:00	100.34	439839	2227	619	0.0	3	8	0	619	1237

9 DAM INFLOW AND FLOOD RELEASE DETAILS (continued)

Date/time	Lake level	Storage	Incremental inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
09/01/2011 12:00	100.39	442225	1624	451	0.0	3	8	0	619	1070
09/01/2011 13:00	100.43	444134	3050	847	0.0	4	8	0	826	1673
09/01/2011 14:00	100.47	446043	6159	1711	0.0	5	8	0	1034	2744
09/01/2011 15:00	100.57	450891	15529	4314	0.0	5	8	0	1038	5352
09/01/2011 16:00	100.75	459677	14602	4056	0.0	5	8	0	1052	5108
09/01/2011 17:00	101.14	479305	6013	1670	0.0	5	8	0	1098	2768
09/01/2011 18:00	101.29	487007	10402	2890	0.0	5	8	0	1121	4011
09/01/2011 19:00	101.43	494310	12977	3605	0.0	5	8	0	1145	4750
09/01/2011 20:00	101.68	507564	10237	2844	0.0	5	8	0	1193	4037
09/01/2011 21:00	101.89	518935	8954	2487	0.0	5	8	0	1238	3725
09/01/2011 22:00	102.06	528282	8964	2490	0.0	5	8	0	1277	3768
09/01/2011 23:00	102.22	537207	9522	2645	0.0	5	8	0	1317	3962
10/01/2011 00:00	102.38	546296	6927	1924	0.0	5	8	0	1359	3283
10/01/2011 01:00	102.54	555472	4284	1190	0.0	5	8	0	1403	2593
10/01/2011 02:00	102.62	560135	4775	1327	0.0	5	8	0	1426	2752
10/01/2011 03:00	102.70	564798	3989	1108	0.0	5	8	0	1449	2557
10/01/2011 04:00	102.78	569498	4566	1268	0.0	5	8	0	1473	2741
10/01/2011 05:00	102.84	573067	4361	1211	0.0	5	8	0	1491	2703
10/01/2011 06:00	102.93	578421	2387	663	0.0	5	8	0	1519	2182
10/01/2011 07:00	102.98	581395	3125	868	0.0	5	8	0	1535	2403
10/01/2011 08:00	103.02	583798	2731	759	0.0	5	8	0	1548	2306
10/01/2011 09:00	103.08	587437	2021	561	0.0	5	8	0	1567	2128
10/01/2011 10:00	103.11	589257	4647	1291	0.0	5	8	0	1577	2868
10/01/2011 11:00	103.16	592289	6747	1874	0.0	5	8	0	1593	3468
10/01/2011 12:00	103.26	598367	3979	1105	0.0	5	8	0	1627	2732
10/01/2011 13:00	103.36	604553	1908	530	0.0	5	8	0	1661	2191
10/01/2011 14:00	103.39	606410	2011	559	0.0	5	8	0	1672	2230
10/01/2011 15:00	103.43	608884	516	143	0.0	5	8	0	1686	1829
10/01/2011 16:00	103.45	610122	-103	-29	0.0	5	8	0	1693	1664
10/01/2011 17:00	103.45	610122	0	0	0.0	5	8	0	1693	1693
10/01/2011 18:00	103.45	610122	52	14	0.0	5	8	0	1693	1707
10/01/2011 19:00	103.45	610122	-155	-43	0.0	5	8	0	1693	1650
10/01/2011 20:00	103.45	610122	-1753	-487	0.0	5	8	0	1693	1206
10/01/2011 21:00	103.44	609503	-1650	-458	0.0	5	8	0	1689	1231
10/01/2011 22:00	103.40	607028	-825	-229	0.0	5	8	0	1675	1446
10/01/2011 23:00	103.39	606410	-773	-215	0.0	5	8	0	1672	1457
11/01/2011 00:00	103.37	605172	-1856	-516	0.0	5	8	0	1665	1149
11/01/2011 01:00	103.36	604553	-2992	-831	0.0	5	8	0	1661	830
11/01/2011 02:00	103.31	601460	-2871	-797	0.0	5	8	0	1644	847

9 DAM INFLOW AND FLOOD RELEASE DETAILS (continued)

Date/time	Lake level	Storage	Incremental inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
11/01/2011 03:00	103.27	598985	258	72	0.0	5	8	0	1630	1702
11/01/2011 04:00	103.23	596535	3851	1070	0.0	5	8	0	1617	2686
11/01/2011 05:00	103.28	599604	3766	1046	0.0	4	8	0	1417	2463
11/01/2011 06:00	103.34	603316	3815	1060	0.0	3	8	0	1220	2280
11/01/2011 07:00	103.40	607028	3089	858	0.0	2	8	0	1023	1881
11/01/2011 08:00	103.46	610740	2239	622	0.0	1	8	0	826	1448
11/01/2011 09:00	103.50	613215	3477	966	0.0	0	8	0	622	1588
11/01/2011 10:00	103.54	615741	4149	1152	0.0	0	8	0	636	1788
11/01/2011 11:00	103.61	620161	7098	1972	0.0	0	8	0	660	2631
11/01/2011 12:00	103.68	624582	9233	2565	0.0	0	8	0	684	3249
11/01/2011 13:00	103.83	634158	9145	2540	0.0	0	8	0	738	3278
11/01/2011 14:00	103.96	642535	12173	3381	0.0	0	8	0	786	4167
11/01/2011 15:00	104.12	652997	9800	2722	0.0	0	8	0	846	3569
11/01/2011 16:00	104.31	665556	6259	1739	0.0	0	8	0	921	2659
11/01/2011 17:00	104.41	672250	6365	1768	0.0	0	8	0	961	2729
11/01/2011 18:00	104.51	678957	6540	1817	0.0	0	8	0	1001	2818
11/01/2011 19:00	104.60	685093	6264	1740	0.0	0	8	0	1039	2779
11/01/2011 20:00	104.70	691910	5179	1439	0.0	0	8	0	1081	2519
11/01/2011 21:00	104.78	697401	3938	1094	0.0	0	8	0	1115	2208
11/01/2011 22:00	104.85	702259	4742	1317	0.0	0	8	0	1145	2462
11/01/2011 23:00	104.90	705729	3524	979	0.0	0	8	0	1167	2145
12/01/2011 00:00	104.98	711281	1818	505	0.0	0	8	0	1202	1707
12/01/2011 01:00	105.00	712669	2650	736	0.0	0	8	0	1211	1947
12/01/2011 02:00	105.04	715493	1765	490	0.0	0	8	0	1228	1719
12/01/2011 03:00	105.07	717612	1000	278	0.0	0	8	0	1242	1520
12/01/2011 04:00	105.09	719024	706	196	0.0	0	8	0	1251	1447
12/01/2011 05:00	105.10	719730	353	98	0.0	0	8	0	1255	1353
12/01/2011 06:00	105.11	720436	0	0	0.0	0	8	0	1260	1260
12/01/2011 07:00	105.11	720436	-353	-98	0.0	0	8	0	1260	1162
12/01/2011 08:00	105.11	720436	-647	-180	0.0	0	8	0	1260	1080
12/01/2011 09:00	105.10	719730	-1530	-425	0.0	0	8	0	1255	830
12/01/2011 10:00	105.09	719024	-1353	-376	0.0	0	8	0	1251	875
12/01/2011 11:00	105.06	716906	-1593	-442	0.0	1	8	0	1461	1018
12/01/2011 12:00	105.05	716200	-3389	-941	0.0	1	8	0	1456	515
12/01/2011 13:00	105.01	713375	-3184	-884	0.0	1	8	0	1438	554
12/01/2011 14:00	104.96	709893	-2659	-739	0.0	1	8	0	1416	677
12/01/2011 15:00	104.92	707117	-3181	-884	0.0	1	8	0	1398	515
12/01/2011 16:00	104.88	704341	-3124	-868	0.0	1	8	0	1380	513
12/01/2011 17:00	104.83	700871	-3120	-867	0.0	1	8	0	1359	492

9 DAM INFLOW AND FLOOD RELEASE DETAILS (continued)

Date/time	Lake level	Storage	Incremental Inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
12/01/2011 18:00	104.79	698095	-3149	-875	0.0	1	8	0	1341	466
12/01/2011 19:00	104.74	694637	-2609	-725	0.0	1	8	0	1320	595
12/01/2011 20:00	104.70	691910	-3125	-868	0.0	1	8	0	1303	435
12/01/2011 21:00	104.66	689183	-3125	-868	0.0	1	8	0	1286	418
12/01/2011 22:00	104.61	685774	-2615	-727	0.0	1	8	0	1264	538
12/01/2011 23:00	104.57	683047	-3114	-865	0.0	1	8	0	1248	382
13/01/2011 00:00	104.53	680320	-3086	-857	0.0	1	8	0	1231	374
13/01/2011 01:00	104.48	676936	-2563	-712	0.0	1	8	0	1210	498
13/01/2011 02:00	104.44	674258	-3068	-852	0.0	1	8	0	1194	342
13/01/2011 03:00	104.40	671581	-3012	-837	0.0	1	8	0	1177	341
13/01/2011 04:00	104.35	668233	-3016	-838	0.0	1	8	0	1157	320
13/01/2011 05:00	104.31	665556	-3051	-847	0.0	1	8	0	1141	294
13/01/2011 06:00	104.26	662208	-2521	-700	0.0	1	8	0	1121	421
13/01/2011 07:00	104.22	659568	-3010	-836	0.0	1	8	0	1105	269
13/01/2011 08:00	104.18	656940	-2902	-806	0.0	1	8	0	1090	284
13/01/2011 09:00	104.13	653655	-3180	-883	0.0	2	8	0	1290	407
13/01/2011 10:00	104.09	651026	-4466	-1240	0.0	2	8	0	1275	34
13/01/2011 11:00	104.03	647084	-3936	-1093	0.0	2	8	0	1251	158
13/01/2011 12:00	103.96	642535	-3004	-835	0.0	2	8	0	1225	390
13/01/2011 13:00	103.91	639313	-3870	-1075	0.0	3	8	0	1425	350
13/01/2011 14:00	103.86	636091	-4656	-1293	0.0	3	8	0	1406	113
13/01/2011 15:00	103.79	631580	-4127	-1146	0.0	3	8	0	1380	233
13/01/2011 16:00	103.72	627108	-3679	-1022	0.0	3	8	0	1354	332
13/01/2011 17:00	103.66	623319	-4160	-1156	0.0	3	8	0	1332	176
13/01/2011 18:00	103.60	619530	-4090	-1136	0.0	3	8	0	1311	175
13/01/2011 19:00	103.53	615109	-4139	-1150	0.0	3	8	0	1286	136
13/01/2011 20:00	103.47	611359	-3245	-901	0.0	3	8	0	1265	363
13/01/2011 21:00	103.40	607028	-3562	-990	0.0	4	8	0	1458	468
13/01/2011 22:00	103.36	604553	-5179	-1439	0.0	4	8	0	1444	6
13/01/2011 23:00	103.28	599604	-4562	-1267	0.0	4	8	0	1417	150
14/01/2011 00:00	103.20	594715	-4193	-1165	0.0	4	8	0	1390	225
14/01/2011 01:00	103.13	590470	-4295	-1193	0.0	4	8	0	1367	174
14/01/2011 02:00	103.06	586224	-3901	-1084	0.0	4	8	0	1344	261
14/01/2011 03:00	102.99	581990	-3415	-949	0.0	4	8	0	1322	374
14/01/2011 04:00	102.93	578421	-4265	-1185	0.0	4	8	0	1303	119
14/01/2011 05:00	102.87	574852	-4255	-1182	0.0	4	8	0	1285	103
14/01/2011 06:00	102.79	570093	-3420	-950	0.0	4	8	0	1261	311
14/01/2011 07:00	102.73	566547	-3445	-957	0.0	4	8	0	1243	286
14/01/2011 08:00	102.67	563050	-3840	-1067	0.0	4	8	0	1226	159

9 DAM INFLOW AND FLOOD RELEASE DETAILS (continued)

Date/time	Lake level	Storage	Incremental Inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
14/01/2011 09:00	102.61	559552	-3829	-1064	0.0	4	8	0	1208	145
14/01/2011 10:00	102.54	555472	-3397	-944	0.0	4	8	0	1189	245
14/01/2011 11:00	102.48	551999	-3418	-949	0.0	4	8	0	1172	223
14/01/2011 12:00	102.42	548577	-3423	-951	0.0	4	8	0	1156	205
14/01/2011 13:00	102.36	545155	-3375	-937	0.0	4	8	0	1140	202
14/01/2011 14:00	102.30	541733	-3749	-1041	0.0	4	8	0	1124	83
14/01/2011 15:00	102.24	538323	-3295	-915	0.0	4	8	0	1109	194
14/01/2011 16:00	102.17	534418	-3302	-917	0.0	4	8	0	1091	174
14/01/2011 17:00	102.12	531629	-3718	-1033	0.0	4	8	0	1079	46
14/01/2011 18:00	102.05	527724	-3256	-905	0.0	4	8	0	1062	158
14/01/2011 19:00	101.99	524390	-3313	-920	0.0	4	8	0	1049	128
14/01/2011 20:00	101.93	521117	-2955	-821	0.0	4	8	0	1035	214
14/01/2011 21:00	101.87	517844	-2960	-822	0.0	4	8	0	1022	199
14/01/2011 22:00	101.82	515116	-3289	-914	0.0	4	8	0	1011	97
14/01/2011 23:00	101.76	511843	-3202	-889	0.0	4	8	0	998	109
15/01/2011 00:00	101.70	508631	-3244	-901	0.0	4	8	0	986	85
15/01/2011 01:00	101.64	505430	-2849	-791	0.0	4	8	0	974	182
15/01/2011 02:00	101.58	502230	-3266	-907	0.0	4	8	0	962	55
15/01/2011 03:00	101.53	499562	-2841	-789	0.0	4	8	0	953	164
15/01/2011 04:00	101.46	495875	-2779	-772	0.0	4	8	0	940	168
15/01/2011 05:00	101.42	493789	-3566	-990	0.0	4	8	0	933	0
15/01/2011 06:00	101.35	490137	-2781	-773	0.0	4	8	0	921	149
15/01/2011 07:00	101.29	487007	-2785	-774	0.0	4	8	0	912	138
15/01/2011 08:00	101.24	484410	-3144	-873	0.0	4	8	0	904	30
15/01/2011 09:00	101.18	481347	-2807	-780	0.0	4	8	0	895	115
15/01/2011 10:00	101.12	478284	-2512	-698	0.0	4	8	0	886	188
15/01/2011 11:00	101.07	475732	-2496	-693	0.0	4	8	0	879	186
15/01/2011 12:00	101.02	473180	-2796	-777	0.0	4	8	0	873	96
15/01/2011 13:00	100.97	470661	-2786	-774	0.0	4	8	0	867	93
15/01/2011 14:00	100.91	467665	-2413	-670	0.0	4	8	0	860	190
15/01/2011 15:00	100.86	465169	-2752	-764	0.0	4	8	0	855	90
15/01/2011 16:00	100.81	462673	-3085	-857	0.0	4	8	0	850	0
15/01/2011 17:00	100.75	459677	-2313	-642	0.0	4	8	0	844	201
15/01/2011 18:00	100.69	456748	-2685	-746	0.0	4	8	0	839	93
15/01/2011 19:00	100.65	454796	-3013	-837	0.0	4	8	0	836	0
15/01/2011 20:00	100.58	451379	-2828	-786	0.0	4	8	0	832	46
15/01/2011 21:00	100.53	448938	-1048	-291	0.0	4	8	0	829	538
15/01/2011 22:00	100.47	446043	-2582	-717	0.0	4	8	0	827	110
15/01/2011 23:00	100.47	446043	-4494	-1248	0.0	4	8	0	827	0

9 DAM INFLOW AND FLOOD RELEASE DETAILS (continued)

Date/time	Lake level	Storage	Incremental inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
16/01/2011 00:00	100.36	440794	-2663	-740	0.0	4	8	0	825	85
16/01/2011 01:00	100.30	437931	-2862	-795	0.0	4	8	0	824	29
16/01/2011 02:00	100.24	435079	-2559	-711	0.0	4	8	0	823	113
16/01/2011 03:00	100.18	432283	-2214	-615	0.0	4	8	0	822	207
16/01/2011 04:00	100.13	429953	-2877	-799	0.0	4	8	0	822	22
16/01/2011 05:00	100.08	427622	-2816	-782	0.0	4	8	0	821	39
16/01/2011 06:00	100.01	424360	-2429	-675	0.0	4	8	0	820	145
16/01/2011 07:00	99.96	422072	-2769	-769	0.0	4	8	0	819	50
16/01/2011 08:00	99.90	419340	-2772	-770	0.0	4	8	0	818	48
16/01/2011 09:00	99.84	416608	-2534	-704	0.0	4	8	0	817	113
16/01/2011 10:00	99.78	413875	-1979	-550	0.0	3	8	0	612	62
16/01/2011 11:00	99.73	411618	-1705	-473	0.0	3	8	0	612	138
16/01/2011 12:00	99.69	409837	-2041	-567	0.0	3	8	0	611	44
16/01/2011 13:00	99.65	408056	-2004	-557	0.0	3	8	0	611	54
16/01/2011 14:00	99.60	405829	-2006	-557	0.0	3	8	0	610	53
16/01/2011 15:00	99.56	404048	-2027	-563	0.0	3	8	0	610	47
16/01/2011 16:00	99.51	401821	-1671	-464	0.0	3	8	0	609	145
16/01/2011 17:00	99.47	400070	-1995	-554	0.0	3	8	0	609	55
16/01/2011 18:00	99.43	398328	-1996	-554	0.0	3	8	0	608	54
16/01/2011 19:00	99.38	396151	-1669	-464	0.0	3	8	0	608	144
16/01/2011 20:00	99.34	394410	-2034	-565	0.0	3	8	0	607	42
16/01/2011 21:00	99.30	392668	-1763	-490	0.0	3	8	0	607	117
16/01/2011 22:00	99.25	390491	-1238	-344	0.0	2	8	0	404	60
16/01/2011 23:00	99.22	389214	-1029	-286	0.0	2	8	0	404	118
17/01/2011 00:00	99.19	387937	-1029	-286	0.0	2	8	0	404	118
17/01/2011 01:00	99.17	387086	-1313	-365	0.0	2	8	0	403	39
17/01/2011 02:00	99.14	385809	-1383	-384	0.0	2	8	0	403	19
17/01/2011 03:00	99.11	384531	-568	-158	0.0	1	8	0	202	44
17/01/2011 04:00	99.08	383254	-426	-118	0.0	1	8	0	201	83
17/01/2011 05:00	99.08	383254	-213	-59	0.0	1	8	0	201	142
17/01/2011 06:00	99.06	382403	106	30	0.0	1	8	0	201	231
17/01/2011 07:00	99.07	382829	-532	-148	1.0	0	8	0	69	0
17/01/2011 08:00	99.06	382403	-177	-49	1.0	0	8	0	69	19
17/01/2011 09:00	99.05	381977	-213	-59	1.0	0	8	0	69	10
17/01/2011 10:00	99.05	381977	-248	-69	1.0	0	8	0	69	0
17/01/2011 11:00	99.04	381552	35	10	1.0	0	8	0	69	79
17/01/2011 12:00	99.04	381552	35	10	1.0	0	8	0	69	79
17/01/2011 13:00	99.04	381552	-213	-59	1.0	0	8	0	69	10
17/01/2011 14:00	99.04	381552	-497	-138	1.0	0	8	0	69	0

Date/time	Lake level	Storage	Incremental inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
17/01/2011 15:00	99.03	381126	-177	-49	1.0	0	8	0	69	19
17/01/2011 16:00	99.02	380700	-213	-59	1.0	0	8	0	69	10
17/01/2011 17:00	99.02	380700	-248	-69	1.0	0	8	0	69	0
17/01/2011 18:00	99.01	380275	35	10	1.0	0	8	0	69	78
17/01/2011 19:00	99.01	380275	35	10	1.0	0	8	0	69	78
17/01/2011 20:00	99.01	380275	-248	-69	1.0	0	8	0	69	0
17/01/2011 21:00	99.01	380275	-248	-69	1.0	0	8	0	69	0
17/01/2011 22:00	99.00	379849	35	10	1.0	0	8	0	69	78
17/01/2011 23:00	99.00	379849	35	10	1.0	0	8	0	69	78
18/01/2011 00:00	99.00	379849	-243	-68	1.0	0	8	0	69	1
18/01/2011 01:00	99.00	379849	-243	-68	1.0	0	8	0	69	1
18/01/2011 02:00	98.99	379432	69	19	1.0	0	8	0	69	88
18/01/2011 03:00	98.99	379432	-243	-68	1.0	0	8	0	69	1
18/01/2011 04:00	98.99	379432	-243	-68	1.0	0	8	0	69	1
18/01/2011 05:00	98.98	379016	35	10	1.0	0	8	0	69	78
18/01/2011 06:00	98.98	379016	35	10	1.0	0	8	0	69	78
18/01/2011 07:00	98.98	379016	-243	-68	1.0	0	8	0	69	1
18/01/2011 08:00	98.98	379016	-243	-68	1.0	0	8	0	69	1
18/01/2011 09:00	98.97	378599	69	19	1.0	0	8	0	69	88
18/01/2011 10:00	98.97	378599	-243	-68	1.0	0	8	0	69	1
18/01/2011 11:00	98.97	378599	-243	-68	1.0	0	8	0	69	1
18/01/2011 12:00	98.96	378182	69	19	1.0	0	8	0	69	88
18/01/2011 13:00	98.96	378182	-243	-68	1.0	0	8	0	69	1
18/01/2011 14:00	98.96	378182	-243	-68	1.0	0	8	0	69	1
18/01/2011 15:00	98.95	377766	35	10	1.0	0	8	0	69	78
18/01/2011 16:00	98.95	377766	0	0	1.0	0	8	0	69	69
18/01/2011 17:00	98.95	377766	0	0	1.0	0	8	0	69	69
18/01/2011 18:00	98.95	377766	0	0	1.0	0	8	0	69	69
18/01/2011 19:00	98.95	377766	-35	-10	1.0	0	8	0	69	59
18/01/2011 20:00	98.95	377766	243	68	1.0	0	8	0	69	136
18/01/2011 21:00	98.95	377766	208	58	1.0	0	8	0	69	126
18/01/2011 22:00	98.96	378182	208	58	0.0	0	8	0	0	58
18/01/2011 23:00	98.96	378182	208	58	0.0	0	8	0	0	58
19/01/2011 00:00	98.97	378599	208	58	0.0	0	8	0	0	58
19/01/2011 01:00	98.97	378599	208	58	0.0	0	8	0	0	58
19/01/2011 02:00	98.98	379016	208	58	0.0	0	8	0	0	58
19/01/2011 03:00	98.98	379016	208	58	0.0	0	8	0	0	58
19/01/2011 04:00	98.99	379432	208	58	0.0	0	8	0	0	58
19/01/2011 05:00	98.99	379432	243	68	0.0	0	8	0	0	68

Date/time	Lake level	Storage	Incremental inflow		Outflow					Inflow
	m AHD	ML	ML	m^3/s	Total regulators	Total sluices	Total radial	Hydro	Total m^3/s	m^3/s
19/01/2011 06:00	99.00	379849	-70	-19	0.0	0	8	0	0	0
19/01/2011 07:00	99.00	379849	248	69	0.0	0	8	0	0	69
19/01/2011 08:00	99.00	379849	248	69	0.0	0	8	0	0	69
19/01/2011 09:00	99.01	380275	-71	-20	0.0	0	8	0	0	0

Table 9.2.1 – Somerset Dam inflow and release data for the January 2011 Flood Event

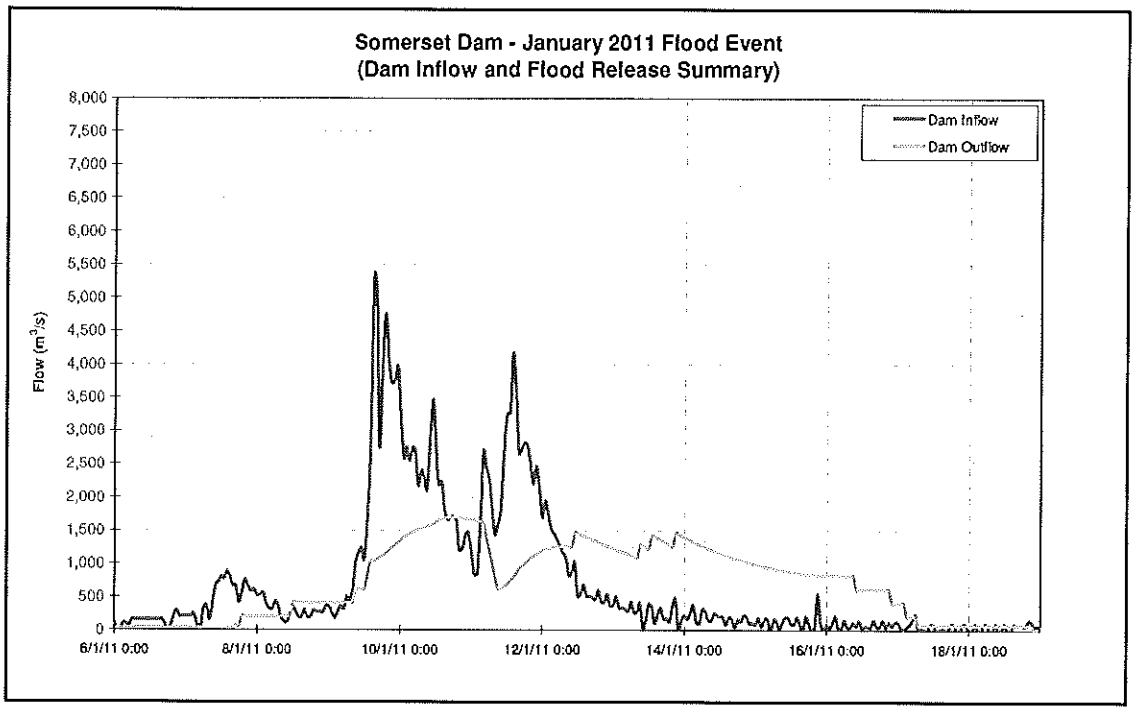

Figure 9.2.2 – Somerset Dam inflow and release summary for the January 2011 Flood Event

PB-24

Zissis, Michael

From: Duty Engineer [redacted]

Sent: Saturday, 8 January 2011 5:53 PM

To: David Roberts [redacted] flood.qld [redacted] 'mfoste [redacted]
Paul Bird [redacted] Peter Allen (peter.allen [redacted]
rdrury [redacted] Rohan Thorogood; (Ken.Price [redacted]
(kim.hang [redacted] Al Navaruk [redacted] Bill Stephens
[redacted] David Pokarier [redacted] John West;
Lou van Blerk [redacted] Mark Tan; Nev Ablitt [redacted]
john.ruffini [redacted] jtibaldi [redacted] rob.ayre [redacted]
tmalone [redacted] bschultz [redacted] Glenn Patterson
[redacted] mlane [redacted] Murray Dunstan
[redacted] Rob Gorjan
adagan [redacted] Doug Grigg [redacted] gkeegan [redacted]
Graham Francis [redacted] Jayam Tennakoon [redacted]
Matthew O'Reilly [redacted]

Cc: Deb Chandler [redacted] Mailbox [redacted] Chris Lavin; Craig Logan; Don Carroll; Evan Caswell; James Charalambous; Ken Morris; Robert McGlinn; Santina Pennisi; Tony Trace [redacted]

Subject: FOC Situation Report at 18:00 on Saturday 8 January 2011

Rainfall

Some rain has fallen over the dam catchments in the past 12 hours. Catchment average rainfall for this period for North Pine Dam is 6 mm; Stanley River has received 12 mm; and the Upper Brisbane River 4 mm. This has resulted in minor increases in runoff into Somerset dam.

Advice from BoM indicates that SE Qld can expect further high rainfall totals over the next 4 days.

The forecast for the Somerset-Wivenhoe catchment for the next 24 hours is 30 to 50 mm, whilst North Pine is expected to receive 40 to 60 mm in the next 24 hours

The outlook for the following days are:-

Sunday:	Widespread rain with totals between 50-100mm
Monday:	Widespread rain again with totals between 50-150mm
Tuesday:	Rain easing with totals between 25-50mm

Given the saturated conditions of the catchments, significant inflows to Seqwater dams will be generated, especially following the forecast rainfall on Sunday/Monday.

North Pine (Full Supply Level 39.60 m AHD)

At 1700 Saturday, North Pine Lake Level was 39.47 m AHD and steady. Currently two gates are open to release runoff generated from rainfall over the last three days. Given the very high likelihood of significant runoff during the next 4 days, gates will be kept open to match inflows over the next few days, rather than opening and closing at various times with short notice. Lake Kurwongbah spillway flows are also contributing to the adverse impacts experienced at Youngs Crossing.

Youngs Crossing will remain adversely impacted for the duration of the gates being open.

Moreton Bay Regional Council has been advised and concurs with this strategy.

Somerset (Full Supply Level 99.00 m AHD)

Somerset Dam level peaked at 100.47m AHD at 10:00 today and is now slowly falling. At 1700 it is now 100.41m. Somerset Dam is releasing into Wivenhoe through two open sluice gates and over the fixed crest at a rate of about 415 m3/s.

Since the commencement of the event on 02/01/2011, approximately 95,000ML has flowed into Somerset

Dam with a further 20,000ML expected based on the recorded rainfall to date. Approximately 38,000ML has been released into Wivenhoe.

Wivenhoe (Full Supply Level 67.00 m AHD)

At 1800 Saturday, Wivenhoe Dam was 68.65 m AHD and rising slowly with all five gates open and releasing about 1,250 m3/s. River levels upstream of Wivenhoe Dam have peaked and are now receding. However the further inflows may result from any additional rainfall. The current gate operation strategy will maintain flows of up to 1,600 m3/s in the mid-Brisbane River throughout the evening.

Since the commencement of the event on 02/01/2011, approximately 227,000ML has flowed into Wivenhoe Dam (including Somerset releases) with a further 200,000ML expected based on the recorded rainfall to date. Approximately 93,000ML has been released from Wivenhoe via the radial gates, hydro and regulator.

Impacts downstream of Wivenhoe

The current Wivenhoe release of 1,250m3/s combined with Lockyer flows and local runoff will mean that all low level crossings downstream of Wivenhoe (Twin Bridges, Savages Crossing, Burtons Bridge, Kholo Bridge and Colleges Crossing) will be adversely impacted for several days (until Wednesday 12 January). At this stage Fernvale and Mt Crosby Weir Bridge are not expected to be affected, but they could potentially be affected if the predicted rainfall totals eventuate and higher releases from Wivenhoe Dam are considered necessary.

The current available assessments indicate that the combined flow in the lower Brisbane River would only add 50mm to an upper limit of 100mm to the recorded water levels in the City Reach of the Brisbane River. However, it is noted that tides in the lower Brisbane R will be 0.4 to 0.5 metres higher than predicted tides. The tide level at the Port Office Gauge at 1700 Saturday was 0.06 m and falling.

Somerset Regional, Ipswich City and Brisbane City Councils have been advised of the Wivenhoe operating strategy.

Forecast Scenario – Based upon mid-range rainfall forecasts.

Assessments have been undertaken to determine possible increases to releases given the high likelihood of significant inflows in the next few days. The interaction with runoff from the Bremer River and Warrill Creek catchment is an important consideration as the event magnitude will require the application of Wivenhoe Dam flood operation strategy W2 (Transition strategy between minimizing downstream impacts and maximizing protection to urban areas).

Projections based upon the forecast rainfalls suggest flows of up to 1,200 m3/s will emanate from the Bremer River catchment. If similar rainfall magnitudes occur in the Upper Brisbane and Stanley Rivers then increased releases may be required from both Somerset Dam and Wivenhoe Dam. Preliminary projections suggest that such a forecast will extend the release duration until next Saturday 15 January, but mid-Brisbane River flows will be kept to a maximum of 1,800 m3/s. However, if falls are greater than those forecast releases from Wivenhoe Dam may need to adversely impact Mt Crosby Weir Bridge (1,900 m3/s) and possibly Fernvale Bridge (2,100 m3/s) but will be maintained below 3,500 m3/s.

The assessments will be updated as the event progresses.

Regards

Rob Ayre

Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax:

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PB-25

From: Duty Engineer [redacted]
Sent: Monday, 10 January 2011 2:58 PM
To: Duty Seq; Ruffini24[redacted] David Roberts; flood.qld[redacted] Mike Foster; Paul Bird; Peter Allen; Rob Drury; Rohan Thorogood; Ken.Price[redacted] kim.han[redacted] Al Navaruk; Bill Stephens; David Pokarier; John West; Louw Van Blerk; Mark Tan; Neville Ablitt; John.Ruffini[redacted] John Tibaldi; Rob.ayre[redacted] Terry Malone; Brett Schultz; Glenn Patterson; Malcolm Lane; Murray Dunstan; Rob Gorlan; Agg Dagan; Doug Grigg; Graham Keegan; Graham Francis; Jayam Tennakoon; Matthew O'Reilly
Cc: Andy Bickerton; Deb Chandler; Mailbox; Tony Trace; Chris Lavin; Craig Logan; Don Carroll; Evan Caswell; James Charalambous; Ken Morris; Robert McGlinn; Santina Pennisi; Peter Borrows
Subject: RE: FOC Situation Report at 12:00 on Monday 10 January 2011

Rainfall

Significant rainfall has fallen in the Wivenhoe Dam catchment over the last 3 hours, with falls exceeding 100mm. This rainfall will significantly increase inflows into the dam. A severe weather warning remains current for heavy rainfall in the dam catchment areas. The QPF issued by BOM at 10:00 estimates rainfalls for the 24 hours to 10:00 Tuesday as North Pine Dam (75mm to 150mm); Wivenhoe/Somerset Dam Catchments (50mm – 100mm). Potentially significant rain moving towards the dam catchments is currently evident on the BOM radar.

Somerset Dam (Full Supply Level 99.00 m AHD)

The dam level is 103.41m AHD and rising. Peak inflow to the dam is estimated to be about 4,200 m3/s. Five sluice gates are open releasing about 1,100m3/s (95,000ML/day) into Wivenhoe Dam. At this stage the dam lake level will reach about 103.5m AHD on Monday afternoon. Areas around Kilcoy will continue to be adversely affected.

Wivenhoe Dam (Full Supply Level 67.00 m AHD)

The dam level is 72.41m AHD and rising quickly. The rainfall experienced over the last 2 to 3 hours will result in significant further inflows into the dam and releases from the dam will need to be increased in accordance with Flood Mitigation procedures and to ensure that a fuse plug is not initiated. The initiation of a fuse plug will result in a rapid uncontrolled outflow from the dam of 2,000m3/s being added to the gate release outflow. Outflows into the Brisbane River from both Lockyer Creek and the Bremer River are also increasing.

Five radial gates are currently open at the dam releasing about 2,000m3/s into the Brisbane River and this will need to be increased steadily to an outflow of 2,800m3/s over the next 9 hours (commencing at 1500). At this stage, the dam will reach about 73.8m AHD during Tuesday morning.

The objective for dam operations is currently to minimise the impact of urban flooding in areas downstream of the dam and to keep river flows in the lower Brisbane River below 4,000m3/s if possible. This is significantly less than the current estimated combined pre-dam peak inflow of 12,000m3/s. If further rainfall occurs, dam releases may need to be increased further and this may result in river flows in the lower Brisbane River approaching or exceeding 5,000m3/s.

Impacts downstream of Wivenhoe Dam

The projected Wivenhoe Dam releases combined with Lockyer Creek flows and local runoff will mean that all crossings downstream of Wivenhoe (Twin Bridges, Fernvale, Savages Crossing, Burtons Bridge, Kholo Bridge, Mt Crosby Weir and Colleges Crossing) will be adversely impacted until at least Sunday 16 January in varying degrees.

Water levels in the lower Brisbane River will be impacted by the combined flows of Lockyer Creek, Bremer River, local runoff and releases from Wivenhoe Dam.

Outlook

Heavy rainfall continues throughout South East Queensland and the situation could deteriorate rapidly over the next

24 hours. The flood operation centre will continue to monitor the situation and provide every six hours until the situation stabilizes.

Terry Malone
Duty Engineer
Flood Operations Centre

Phone [redacted]

Fax:

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PB-26

From: Duty Engineer [redacted]
Sent: Tuesday, 11 January 2011 2:19 PM
To: Peter Borrows; Stan Stevenson; Rob Drury; John.Ruffin [redacted] John Tibaldi; Rob.ayre [redacted] Terry Malone
Cc: David Roberts; flood.qld [redacted] Mike Foster; Paul Bird; Peter Allen; Rohan Thorogood; 'Tony Jacobs (private)'; Ken.Price [redacted] kim.hang [redacted] Al Navaruk; Bill Stephens; David Pokarier; John West; Louw Van Blerk; Mark Tan; Neville Ablitt; Brett Schultz; Glenn Patterson; Malcolm Lane; Murray Dunstan; Rob Gorian; Agg Dagan; Doug Grigg; Graham Keegan; Graham Francis; Jayam Tennakoon; Matthew O'Reilly
Subject: Wivenhoe Dam Update

Importance: High

Somerset/Wivenhoe

Our strategy revolves ensuring dam security and is around trying to prevent initiation of the first fuse plug at EL 75.6m. If this happens we will get a rapid increase of about 2,000m3/s in outflow from the dam in addition to the gate release which could be as high as 10,000m3/s at the time. Sluices have been closed at Somerset and this will result in high upstream water levels affecting Kilcoy.

Wivenhoe Dam is rising very quickly and rapid gate openings are required to manage this increase. Based on the current rate of rise, inflow rate is in excess of 12,000m3/s. The situation is being revised constantly and releases will be increased hourly until the water level starts to stabilize. It is possible that the releases will be as high as 10,000m3/s in the next few hours. Heavy rainfall continues in the catchment especially around the dam.

It should be noted that the flow in the lower Brisbane R in 1974 was about 9,500m3/s

North Pine

Inflows and outflows are at record levels and increasing within inflows nearing 3,000m3/s, and is approaching an extreme event (possibly as high as 1 in 10,000 AEP)

Terry Malone
Duty Engineer
Flood Operations Centre

Phone [redacted]
Fax: [redacted]

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