

**QUEENSLAND FLOODS
COMMISSION OF INQUIRY**

ADDENDUM STATEMENT OF PETER HUGH ALLEN

I, **PETER HUGH ALLEN**, of c/- 41, George Street, Brisbane in the State of Queensland, Project Director (Dam Safety), Office of the Water Supply Regulator, Department of Environment and Resource Management (DERM), state on oath:

1. I was previously provided a letter dated 2 February 2012, which is attachment **PHA-62** from the Commissioner, Queensland Floods Commission of Inquiry (the "Commission") requiring a written statement under oath or affirmation and which details the topics my statement should cover ("Requirement").
2. I provided a sworn statement by the due date of 3 February 2012 in response to the Commission's Requirement ("Statement").
3. Subsequent to my sworn statement dated 3 February 2012, I continued to search for any relevant correspondence which may be relevant to the Requirement.
4. On the date of this statement, I discovered further email correspondence I had with Mr Cooper dated on 12 January 2011 when re-reviewing my emails in preparation for my upcoming appearance before the Floods Commission of Inquiry.
5. The email correspondence between myself and Mr Cooper may potentially be relevant to Item 3 of the Requirement as it discusses the report prepared by Mr Cooper for Seqwater. Attachment **PHA-63** is a copy of this email correspondence including attachments.
6. I provide this addendum statement pursuant to the Requirement issued to me by the Commission.

I make this solemn statement on oath conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867*.

Signed .

Peter Hugh Allen

Taken and declared before me, at Brisbane this 7th day of February 2012

.....
Solicitor/Barrister/Justice of the
Peace/Commissioner for Declarations

Our ref: Doc 1841564

2 February 2012

Mr Peter Allen
Dam Safety Regulator
Department of Environment and Resource Management
GPO Box 2454
BRISBANE QLD 4001

REQUIREMENT TO PROVIDE STATEMENT TO COMMISSION OF INQUIRY

I, Justice Catherine E Holmes, Commissioner of Inquiry, pursuant to section 5(1)(d) of the *Commissions of Inquiry Act 1950* (Qld), require Mr Peter Allen to provide a written statement, under oath or affirmation, to the Queensland Floods Commission of Inquiry, which the said Peter Allen gives an account of, and provides all records relating to:

1. His knowledge of the circumstances which led to the engagement of Mr Brian Cooper by the South East Queensland Water Grid Manager to conduct an independent review of the operation of Wivenhoe Dam (including controlled releases) for compliance against The Manual of Operational Procedures for Flood Mitigation at Wivenhoe Dam and Somerset Dam (Revision 7).
2. His involvement in the engagement of Mr Cooper.
3. Any communications Mr Allen had with Mr Cooper, including (but not limited to) any briefings or instructions he gave to Mr Cooper and any discussions with Mr Cooper about his report/s.
4. Any communications Mr Allen had with others about the engaging of Mr Cooper, Mr Cooper's report/s, and the use to be made of Mr Cooper's report/s.

In addressing these matters, Mr Allen is to:

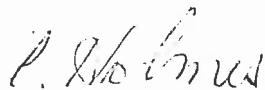
- provide all information in his possession and identify the source or sources of that information;
- make commentary and provide opinions he is qualified to give as to the appropriateness of particular actions or decisions and the basis of that commentary or opinion.

If any records relating to the above topics are before the Queensland Floods Commission of Inquiry, whether an exhibit or otherwise, it is sufficient for Mr Allen to identify where the record is contained by reference to exhibit, page and/or annexure number, or other information.

Mr Allen may also address other topics relevant to the Terms of Reference of the Commission in the statement, if he wishes.

The statement is to be provided to the Queensland Floods Commission of Inquiry by 10 am, Saturday, 4 February 2012.

The statement can be provided by post, email or by arranging delivery to the Commission by emailing info@floodcommission.qld.gov.au.

A handwritten signature in cursive script, appearing to read 'P. Holmes', is written above a horizontal line.

Commissioner
Justice C E Holmes

Kwong Darrell

From: Lumley Carol
Sent: Tuesday, 7 February 2012 11:23 AM
To: Hartwell Deborah
Subject: FW: Wivenhoe Dam - Flood Operations b

Deb,

Copy of email that Peter discussed with you.

cheers,

Carol Lumley
Principal Planning and Policy Officer, Office of the Water Supply Regulator
Telephone [REDACTED] **Facsimile** [REDACTED]
Email: Carol.Lumley [REDACTED]
www.derm.qld.gov.au
Department of Environment and Resource Management
Level 3 Mineral House, 41 George Street, Brisbane
GPO Box 2454, Brisbane Q 4001

From: Lumley Carol
Sent: Tuesday, 7 February 2012 9:29 AM
To: Allen Peter
Subject: FW: Wivenhoe Dam - Flood Operations b

Carol Lumley
Principal Planning and Policy Officer, Office of the Water Supply Regulator
Telephone [REDACTED] **Facsimile** [REDACTED]
Email: Carol.Lumley [REDACTED]
www.derm.qld.gov.au
Department of Environment and Resource Management
Level 3 Mineral House, 41 George Street, Brisbane
GPO Box 2454, Brisbane Q 4001

From: Allen Peter
Sent: Wednesday, 12 January 2011 10:57 AM
To: 'Brian Cooper Consulting'
Subject: RE: Wivenhoe Dam - Flood Operations b

Just a couple of comments after a very quick read of your report.

2nd page: Strategy W1 applies until the reservoir exceeds 68.5 and then it moves into W2 or W3. For the last day or so before yesterday's big rise, it would have been in W2. It moved into W4 at about EL 73.5 (before EL 74) when yesterday's heavy rain came on and the assessed they were in danger of blowing a fuse plug ... it was then a matter of juggling the discharge through the gates verses the likely discharge of gates plus fuse plug.

As I also indicated the discussions with me over the strategies and the use of discretion will have been logged in the FOC ... especially if it was applied. I will try to get a sample of the log and forward it to you later today.

Peter Allen

Director Dam Safety (Water Supply)
Office of the Water Supply Regulator

Telephone [REDACTED]

Email peter.allen@[REDACTED]

www.derm.qld.gov.au

From: Allen Peter

Sent: Wednesday, 12 January 2011 10:35 AM

To: 'Brian Cooper Consulting'

Subject: RE: Wivenhoe Dam - Flood Operations

Thank you Brian ... I will have a read and be in touch.

I have attached reports as discussed ... I don't seem to have report 40.

Peter Allen

Director Dam Safety (Water Supply)
Office of the Water Supply Regulator

Telephone [REDACTED]

Email peter.allen@[REDACTED]

www.derm.qld.gov.au

From: Brian Cooper Consulting [mailto:brian.cooper.consulting@[REDACTED]]

Sent: Wednesday, 12 January 2011 10:22 AM

To: Allen Peter

Subject: Wivenhoe Dam - Flood Operations

Peter,

My initial report to SEQ Water Grid Manager attached.

Regards,

Brian

Kwong Darrell

From: Lumley Carol
Sent: Tuesday, 7 February 2012 11:38 AM
To: Hartwell Deborah
Subject: FW: Wivenhoe Dam - Flood Operations
Attachments: Technical Situation Report W45.docx; Technical Situation Report W44.docx; Technical Situation Report W43.docx; Technical Situation Report W42.docx; Technical Situation Report W41.docx; Technical Situation Report W47.docx; Technical Situation Report W46.docx; Technical Situation Report W48.docx

Peter's email first email in response.

Carol Lumley
Principal Planning and Policy Officer, Office of the Water Supply Regulator
Telephone [REDACTED]
Email: Carol.Lumley@o.wsr.qld.gov.au
www.derm.qld.gov.au
Department of Environment and Resource Management
Level 3 Mineral House, 41 George Street, Brisbane
GPO Box 2454, Brisbane Q 4001

From: Allen Peter
Sent: Wednesday, 12 January 2011 10:35 AM
To: 'Brian Cooper Consulting'
Subject: RE: Wivenhoe Dam - Flood Operations

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I have attached reports as discussed ... I don't seem to have report 40.

Peter Allen
Director Dam Safety (Water Supply)
Office of the Water Supply Regulator
Telephone [REDACTED]
Email peter.allen@o.wsr.qld.gov.au
www.derm.qld.gov.au

From: Brian Cooper Consulting [mailto:brian.cooper.consulting@brian.cooper.consulting] [REDACTED]
Sent: Wednesday, 12 January 2011 10:22 AM
To: Allen Peter
Subject: Wivenhoe Dam - Flood Operations

Peter,

My initial report to SEQ Water Grid Manager attached.

Regards,

Brian

Kwong Darrell

From: Lumley Carol
Sent: Tuesday, 7 February 2012 11:37 AM
To: Hartwell Deborah
Subject: FW: Wivenhoe Dam - Flood Operations
Attachments: SEQ WGM PrelimRep 12012011.docx

First message

Carol Lumley
Principal Planning and Policy Officer, Office of the Water Supply Regulator
Telephone [REDACTED]
Email: Carol.Lumley [REDACTED]
www.derm.qld.gov.au
Department of Environment and Resource Management
Level 3 Mineral House, 41 George Street, Brisbane
GPO Box 2454, Brisbane Q 4001

From: Brian Cooper Consulting [mailto:brian.cooper.consulting@briancooperconsulting.com.au] [REDACTED]
Sent: Wednesday, 12 January 2011 10:22 AM
To: Allen Peter
Subject: Wivenhoe Dam - Flood Operations

Peter,

My initial report to SEQ Water Grid Manager attached.

Regards,

Brian

P.O. Box 205, BELROSE WEST NSW 2085
phone: ([REDACTED]
mobile: [REDACTED]
email: brian.cooper.consult [REDACTED]
ABN: 56154707619

brian
cooper
consulting

12 January 2011

Mr. Barry Dennien
CEO, SEQ Water Grid Manager
PO Box 16205
City East QLD 4002

Dear Barry,

This letter report:

- presents my preliminary findings on a review of the operation of Wivenhoe Dam (including controlled releases) for compliance against the Flood Mitigation Manual for the period 12 December 2010 to date (Flood Event), and;
- provides initial advice on the prudence and appropriateness of the decisions and actions taken during the Flood Event regarding the operation of Wivenhoe Dam in light of the Flood Mitigation Manual's requirements and the circumstances of the Flood Event.

The findings and advice are provided on the basis of information provided by SEQ Water Grid Manager which comprised the Flood Mitigation Manual and Technical Situation Reports. The latter were daily (sometimes twice daily) reports for the subject period. They gave a log of rainfall over the dam catchments and the downstream river (Lockyer Ck. And Bremer R.) catchments; inflows to Somerset and Wivenhoe Dams; storage levels; releases from the dams; details of the operation of gates and other outlets (gate openings/discharges); proposed changes in operating strategies and impacts on the various access crossings downstream of Wivenhoe Dam. In reviewing the Technical Situation Reports, I prepared a spreadsheet summarising the reports so that a timeline of the Flood Event could be seen at a glance. This provided a good overview of the Flood Event as it unfolded.

The main aspects of the Flood Mitigation Manual are the various strategies for operating Wivenhoe Dam and Somerset Dam as well as a number of requirements relating to flood operations personnel, flood preparedness and flood training.

At Wivenhoe Dam there are four main strategies for operating the dam (W1 to W4) and at Dam there are three (S1 to S3). These strategies are hierarchical and are based on a number of flood objectives. These in descending order of importance, are:

- Ensure the structural safety of the dams;
- Ensure the structural safety of the dams;
- Provide optimum protection of urbanised areas from inundation;
- Minimise disruption to rural life in the valleys of the Brisbane and Stanley Rivers;

- Retain the storage at Full Supply Level (FSL) at the conclusion of the Flood Event, and;
- Minimise impacts to riparian flora and fauna during the drain down phase of the Flood Event.

Normal procedures require a return to FSL within 7 days of the flood event peak passing through the dams so that the potential effects of closely spaced Flood Events can be allowed for.

It is apparent from the Technical Situation Reports that emphasis has been given to communicating changes in flood operations strategies with local authorities and the Bureau of Meteorology (BOM).

Until the last day or so, Wivenhoe Dam has been below EL74.0 and accordingly, would be operating under Strategy W1 i.e. make releases such that bridges downstream of the dam do not have to be closed prematurely. At various times during the Flood Event some of the downstream bridges have been closed. However, it is evident that action has been taken to vary dam releases such that various bridges could be re-opened as soon as possible. This appears to have been done in accordance with the flood operating strategies.

Over the last couple of days, the storage level in Wivenhoe Dam has increased to above EL 74.0 and the storage level in Somerset Dam is at EL 103.3 and is rising. This situation would demand strategy W3 for Wivenhoe Dam (*limit flow in the Brisbane River at Moggill to less than 4,000m³/s*) and strategy S2 for Somerset Dam (*The crest gates are raised to enable uncontrolled discharge. Operations are to target a correlation of water levels in Somerset Dam and Wivenhoe Dam as set out in a graph. The operations target line shown on this graph is to generally be followed as the flood event progresses. The release rate from Somerset Dam is generally not to exceed the peak inflow into the dam*). These strategies have been followed, although there appears to have been some discretion used in varying the releases from Somerset Dam (water has been held back in that dam). The last Technical Situation Report (W39 on 11/1/2011) however, indicated that there may need to be a move to Strategy W4 for Wivenhoe Dam (fuse plug triggering likely).

I conclude then, that the strategies as set out in the Flood Mitigation Manual have been followed, allowing for the discretion given to making variations in order to maximise flood mitigation effects. As a means of reviewing processes followed during a flood, it would be useful to present a timeline of the flood event showing graphs of storage levels, rainfall events, storage inflows, releases made and critical levels and discharges together with strategies adopted and projected strategies. The actions taken and decisions made during the Flood Event appear to have been prudent and appropriate in the context of the available knowledge available to those responsible for flood operations and the way events unfolded. I am informed by the Queensland Dam Safety Regulator (Peter Allen) that the various requirements of the Flood Mitigation Manual relating to requirements for flood operations personnel, flood preparedness and flood training have been adhered to.

Regards,



Brian Cooper

TECHNICAL SITUATION REPORT

TSR Number	W41	Date of TSR release	11.1.2011	Time of TSR release	6pm
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Maintain releases to keep Wivenhoe below fuse plug initiation and releases need to be made to ensure the dam security and minimise flood impacts downstream if possible 										
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe in excess of 12000 cumecs. Increase releases to maintain fuse plug and dam integrity. Close sluices at Somerset Dam to store more water however will affect upstream areas. 										
Key considerations	<table> <tr> <td>Storage levels:</td><td>Above FSL</td></tr> <tr> <td>Inflows:</td><td>Inflows expected well over 1,500,000ML.</td></tr> <tr> <td>Rainfall:</td><td>Continuing</td></tr> <tr> <td>Lockyer/Bremer:</td><td>Monitoring their inflows</td></tr> <tr> <td>Brisbane River:</td><td>Impact as below.</td></tr> </table>	Storage levels:	Above FSL	Inflows:	Inflows expected well over 1,500,000ML.	Rainfall:	Continuing	Lockyer/Bremer:	Monitoring their inflows	Brisbane River:	Impact as below.
Storage levels:	Above FSL										
Inflows:	Inflows expected well over 1,500,000ML.										
Rainfall:	Continuing										
Lockyer/Bremer:	Monitoring their inflows										
Brisbane River:	Impact as below.										

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. Somerset is at 104.41m holding 671,000ML and 176.6%.

In the last twelve hours totals of up to 370mm have fallen in the area around Wivenhoe Dam. In the last hour, rainfalls between 15 and 30mm have been recorded in the same area. At 1600, the BoM advised that falls between 50 to 100mm are still forecast for the 24hrs to 1600 Wednesday 12 January 2011 for the North Pine and Somerset/Wivenhoe catchments. Current inflows are about 9,000cumecs.

At 1730 Wivenhoe Dam was 74.92m AHD holding 2,200,000ML and 190% and rising slowly and releasing about 6,700m³/s.

The current expectation is that the dam will reach a steady state (outflow equals inflow) within the next 3 hours without further significant rainfall. At this time, release from the dam will be about 8,000 m³/s.

If there is no further rainfall, it may be possible to then slowly reduce this release overnight.

The dam is expected to peak below 75.5m AHD which is 100mmm below the first fuse plug initiation level.

Note that the automatic recorder as indicated on the BoM website is affected by drawdown and is not reflecting the actual lake level and tendency.

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is also maintaining close contact with warning agencies and local councils.

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

North Pine Dam:

Five gates are open, and will continue until at least Wednesday 12 January.

The local Council is being kept informed regarding Youngs Crossing.

Leslie Harrison Dam:

Gate releases are underway due to rainfall and inflows.

Hinze Dam:

A release of around 86cumecs or 7396 megalitres a day is being made through the emergency gates and this will increase to around 8,000 megalitres per day by 6pm Tuesday 11 January. There is no public access to the spillway.

Wyaralong Dam

As at 5:00pm today 9,680ML/day was passing over the spillway at Wyaralong Dam. This represents a water depth of 0.59m over the spillway. The water level is continuing to rise. Wyaralong Dam Alliance will continue to monitor and advise of water levels and flows.

Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current status.

BCC Technical Officer name	Chris Lavin
BCC Technical Officer position title	Disaster Operations Manager
BCC Technical Officer contact details	

Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current status.

ICC Technical Officer name	Tony Trace
ICC Technical Officer position title	Local Disaster Response Coordinator
ICC Technical Officer contact details	

Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current status.

SRC Technical Officer name	Tony Jacobs
SRC Technical Officer position title	Local Disaster Response Coordinator
SRC Technical Officer contact details	

Collated and distributed by (Agency)

Contact Officer signature	
Contact Officer name	Rob Drury
Contact Officer position title	Dam Operations Manager

Next TSR due	Date	11.1.2011	Time	PM	or Event	
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TECHNICAL SITUATION REPORT

TSR Number	W42	Date of TSR release	11.1.2011	Time of TSR release	7pm
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Maintain releases to keep Wivenhoe below fuse plug initiation and releases need to be made to ensure the dam security and minimise flood impacts downstream if possible 										
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe in excess of 12000 cumecs. Increase releases to maintain fuse plug and dam integrity. Close sluices at Somerset Dam to store more water however will affect upstream areas. 										
Key considerations	<table> <tr> <td>Storage levels:</td><td>Above FSL</td></tr> <tr> <td>Inflows:</td><td>Inflows expected well over 1,500,000ML.</td></tr> <tr> <td>Rainfall:</td><td>Continuing</td></tr> <tr> <td>Lockyer/Bremer:</td><td>Monitoring their inflows</td></tr> <tr> <td>Brisbane River:</td><td>Impact as below.</td></tr> </table>	Storage levels:	Above FSL	Inflows:	Inflows expected well over 1,500,000ML.	Rainfall:	Continuing	Lockyer/Bremer:	Monitoring their inflows	Brisbane River:	Impact as below.
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Rainfall:	Continuing										
Lockyer/Bremer:	Monitoring their inflows										
Brisbane River:	Impact as below.										

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. Somerset is at 104.6m holding 684,000ML and 180.0%.

Somerset should peak at around 105.2m (1974 peak level was 106.5m).

At 1900 Wivenhoe Dam was 74.97m AHD holding 2,227,000ML and 191.1% and rising slowly and releasing about 7,500m³/s.

Since the last update, there has only been an increase in release to 7,500cumecs. At this stage there is no planned increase in releases unless there are further inflows.

If there is no further rainfall, it may be possible to then slowly reduce this release overnight.

The dam is expected to peak below 75.5m AHD which is 100mmm below the first fuse plug initiation level.

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is also maintaining close contact with warning agencies and local councils.

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

North Pine Dam:

Five gates are open and continuing to drop. Releases may still continue until Wednesday 12 January.

The local Council is being kept informed regarding Youngs Crossing.

Leslie Harrison Dam:

Gate releases are underway due to rainfall and inflows.

Hinze Dam:

A release of around 8,000 megalitres a day is being made through the emergency gates. There is no public access to the spillway.

Wyalong Dam

As at 5:00pm today 9,680ML/day was passing over the spillway at Wyalong Dam. This represents a water depth of 0.59m over the spillway. The water level is continuing to rise. Wyalong Dam Alliance will continue to monitor and advise of water levels and flows.

Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld@bom.gov.au

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy

BCC Technical Officer name	Chris Lavin
----------------------------	-------------

BCC Technical Officer position title	Disaster Operations Manager
BCC Technical Officer contact details	

Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

ICC Technical Officer name	Tony Trace
ICC Technical Officer position title	Local Disaster Response Coordinator
ICC Technical Officer contact details	

Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

SRC Technical Officer name	Tony Jacobs
SRC Technical Officer position title	Local Disaster Response Coordinator
SRC Technical Officer contact details	

Collated and distributed by (Agency)

Contact Officer signature	
Contact Officer name	Rob Drury
Contact Officer position title	Dam Operations Manager

Next TSR due	Date	11.1.2011	Time	PM	or Event	
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TECHNICAL SITUATION REPORT

TSR Number	W43	Date of TSR release	11.1.2011	Time of TSR release	8pm
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Maintain releases to keep Wivenhoe below fuse plug initiation and releases need to be made to ensure the dam security and minimise flood impacts downstream if possible 										
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe in excess of 12000 cumecs. Increase releases to maintain fuse plug and dam integrity. Close sluices at Somerset Dam to store more water however will affect upstream areas. 										
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Somerset/Wivenhoe

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Sluices have been closed at Somerset and this will result in high upstream water levels affecting Kilcoy. Somerset is at 104.7m holding 691,500ML and 180.2%.

Somerset should peak at around 105.2m (1974 peak level was 106.5m).

At 2000 Wivenhoe Dam was 74.97m AHD holding 2,227,000ML and 191.1% and steady and releasing about 7,500m³/s.

The levels have stayed the same for an hour so there are no planned increases in releases.

As soon as the levels show they are dropping, releases will be reduced.

The dam is now expected to peak around 74.97m AHD which is around 600mm below the first fuse plug initiation level.

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is also maintaining close contact with warning agencies and local councils.

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

North Pine Dam:

Five gates are open and continuing to drop. Releases may still continue until Wednesday 12 January.

The local Council is being kept informed regarding Youngs Crossing.

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Gate releases are underway due to rainfall and inflows.

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Wyalong Dam

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Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy

BCC Technical Officer name	Chris Lavin
BCC Technical Officer position title	Disaster Operations Manager

BCC Technical Officer contact details



Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

ICC Technical Officer name

Tony Trace

ICC Technical Officer position title

Local Disaster Response Coordinator

ICC Technical Officer contact details



Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

SRC Technical Officer name

Tony Jacobs

SRC Technical Officer position title

Local Disaster Response Coordinator

SRC Technical Officer contact details



Collated and distributed by (Agency)

Contact Officer signature

Contact Officer name

Rob Drury

Contact Officer position title

Dam Operations Manager

Next TSR due

Date

11.1.2011

Time

PM

or Event

TECHNICAL SITUATION REPORT

TSR Number	W44	Date of TSR release	11.1.2011	Time of TSR release	8pm
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Initiate the gradual reduction of releases.
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe were in excess of 12000 cumecs. Maintain controlled releases. Keep sluices closed at Somerset Dam to store more water however will affect upstream areas.
Key considerations	Storage levels: Above FSL
	Inflows: Inflows expected well over 1,500,000ML.
	Rainfall: Continuing
	Lockyer/Bremer: Monitoring their inflows
	Brisbane River: Impact as below.

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. Somerset is at 104.78m holding 697,400ML and 183.6%.

Somerset should peak at around 105.2m (1974 peak level was 106.5m).

At 2100 Wivenhoe Dam was 74.95m AHD holding 2,223,000ML and 190.8% and slowly dropping.

The levels have now stabilized and commenced to fall slowly.

The FOC has begun an appropriate closure sequence to reduce releases.

Assuming no further rain, the dam has now peaked around 74.97m AHD which was around 600mm below the first fuse plug initiation level.

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is also maintaining close contact with warning agencies and local councils.

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

North Pine Dam:

Five gates are open and continuing to drop. Releases may still continue until Wednesday 12 January.

The local Council is being kept informed regarding Youngs Crossing.

Leslie Harrison Dam:

Gate releases are underway due to rainfall and inflows.

Hinze Dam:

A release of around 8,000 megalitres a day is being made through the emergency gates. There is no public access to the spillway.

Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy

BCC Technical Officer name	Chris Lavin
BCC Technical Officer position title	Disaster Operations Manager
BCC Technical Officer contact details	

Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

ICC Technical Officer name	Tony Trace
ICC Technical Officer position title	Local Disaster Response Coordinator
ICC Technical Officer contact details	

Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

SRC Technical Officer name	Tony Jacobs
SRC Technical Officer position title	Local Disaster Response Coordinator
SRC Technical Officer contact details	

Collated and distributed by (Agency)

Contact Officer signature	
Contact Officer name	Rob Drury
Contact Officer position title	Dam Operations Manager

Next TSR due	Date	11.1.2011	Time	PM	or Event	
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TECHNICAL SITUATION REPORT

TSR Number	W45	Date of TSR release	11.1.2011	Time of TSR release	10pm
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Gradual reduction of releases.
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe were in excess of 12000 cumecs. Maintain controlled releases. Keep sluices closed at Somerset Dam to store more water however will affect upstream areas.
Key considerations	Storage levels: Above FSL
	Inflows: Inflows expected well over 1,500,000ML.
	Rainfall: Continuing
	Lockyer/Bremer: Monitoring their inflows
	Brisbane River: Impact as below.

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. Somerset is at 104.85m holding 702,260ML and 185%.

Somerset should peak at around 105.2m (1974 peak level was 106.5m).

At 2200 Wivenhoe Dam was 74.95m AHD holding 2,223,000ML and 190.8%.

The FOC has begun an appropriate closure sequence to reduce releases. Releases will be reduced slowly throughout the night to track dropping levels. First reduction has been to around 7,100cumecs.

Assuming no further rain, the dam peaked around 74.97m AHD which was around 600mm below the first fuse plug initiation level.

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is also maintaining close contact with warning agencies and local councils.

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

North Pine Dam:

Five gates are open and continuing to drop. Releases may still continue until Wednesday 12 January.

The local Council is being kept informed regarding Youngs Crossing.

Leslie Harrison Dam:

Gate releases are underway due to rainfall and inflows.

Hinze Dam:

A release of around 8,000 megalitres a day is being made through the emergency gates. There is no public access to the spillway.

Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy

BCC Technical Officer name	Chris Lavin
BCC Technical Officer position title	Disaster Operations Manager
BCC Technical Officer contact details	

Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

ICC Technical Officer name	Tony Trace
ICC Technical Officer position title	Local Disaster Response Coordinator
ICC Technical Officer contact details	

Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

SRC Technical Officer name	Tony Jacobs
SRC Technical Officer position title	Local Disaster Response Coordinator
SRC Technical Officer contact details	

Collated and distributed by (Agency)

Contact Officer signature	
Contact Officer name	Rob Drury
Contact Officer position title	Dam Operations Manager

Next TSR due	Date	11.1.2011	Time	PM	or Event	
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TECHNICAL SITUATION REPORT

TSR Number	W46	Date of TSR release	11.1.2011	Time of TSR release	11pm
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Gradual reduction of releases.
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe were in excess of 12000 cumecs. Maintain controlled releases. Keep sluices closed at Somerset Dam to store more water however will affect upstream areas.
Key considerations	Storage levels: Above FSL
	Inflows: Inflows expected well over 1,500,000ML.
	Rainfall: Continuing
	Lockyer/Bremer: Monitoring their inflows
	Brisbane River: Impact as below.

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. Somerset is at 104.90m holding 705,730ML and 185.8%.

Somerset should peak at around 105.2m (1974 peak level was 106.5m).

At 2300 Wivenhoe Dam was 74.92m AHD holding 2,219,000ML and 190.4%.

The FOC has begun an appropriate closure sequence to reduce releases. Releases will be reduced throughout the night to track dropping levels. Another reduction will commence around 23:30 to 6,100cumecs. Further reductions will occur over night.

Assuming no further rain, the dam peaked around 74.97m AHD which was around 600mm below the first fuse plug initiation level.

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is also maintaining close contact with warning agencies and local councils.

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

North Pine Dam:

Five gates are open and continuing to drop. Releases may still continue until Wednesday 12 January.

The local Council is being kept informed regarding Youngs Crossing.

Leslie Harrison Dam:

Gate releases are underway due to rainfall and inflows.

Hinze Dam:

A release of around 8,000 megalitres a day is being made through the emergency gates. There is no public access to the spillway.

Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy

BCC Technical Officer name	Chris Lavin
BCC Technical Officer position title	Disaster Operations Manager
BCC Technical Officer contact details	

Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

ICC Technical Officer name	Tony Trace
ICC Technical Officer position title	Local Disaster Response Coordinator
ICC Technical Officer contact details	

Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

SRC Technical Officer name	Tony Jacobs
SRC Technical Officer position title	Local Disaster Response Coordinator
SRC Technical Officer contact details	

Collated and distributed by (Agency)

Contact Officer signature	
Contact Officer name	Rob Drury
Contact Officer position title	Dam Operations Manager

Next TSR due	Date	12.1.2011	Time	AM	or Event	
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TECHNICAL SITUATION REPORT

TSR Number	W47	Date of TSR release	12.1.2011	Time of TSR release	5am
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Gradual reduction of releases.
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe were in excess of 12000 cumecs. Maintain controlled releases. Keep sluices closed at Somerset Dam to store more water however will affect upstream areas.
Key considerations	Storage levels: Above FSL
	Inflows: Inflows expected well over 1,500,000ML.
	Rainfall: Continuing
	Lockyer/Bremer: Monitoring their inflows
	Brisbane River: Impact as below.

Somerset/Wivenhoe

Our strategy revolved ensuring dam security and was 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.

Only minimal falls occurred overnight in the order of mm.

Sluices have been closed at Somerset and this will result in high upstream water levels affecting Kilcoy. Somerset is at 105.1m holding 719730ML and 189.5%. Some flows are going over the Somerset spillway.

Somerset should peak at around 105.2m (1974 peak level was 106.5m).

At 0500 Wivenhoe Dam was 74.77m AHD holding 2,195,287ML and 188%.

The FOC has begun an appropriate closure sequence to reduce releases.

Current release rate is 4,300cumecs.
Further reductions will occur throughout the week..

Assuming no further rain, the dam peaked around 74.97m AHD which was around 600mm below the first fuse plug initiation level.

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is also maintaining close contact with warning agencies and local councils.

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

North Pine Dam:

Five gates are open and continuing to drop. Releases may still continue until Wednesday 12 January. The event magnitude is estimated to be a 1:10,000 year exceedance probability.

The local Council is being kept informed regarding Youngs Crossing.

Leslie Harrison Dam:

Gate releases are underway due to rainfall and inflows.

Hinze Dam:

A release of around 8,000 megalitres a day is being made through the emergency gates. There is no public access to the spillway.

Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy

BCC Technical Officer name	Chris Lavin
BCC Technical Officer position title	Disaster Operations Manager
BCC Technical Officer contact details	

Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

ICC Technical Officer name	Tony Trace
ICC Technical Officer position title	Local Disaster Response Coordinator
ICC Technical Officer contact details	

Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

SRC Technical Officer name	Tony Jacobs
SRC Technical Officer position title	Local Disaster Response Coordinator
SRC Technical Officer contact details	

Collated and distributed by (Agency)

Contact Officer signature	
Contact Officer name	Rob Drury
Contact Officer position title	Dam Operations Manager

Next TSR due	Date	12.1.2011	Time	PM	or Event	
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TECHNICAL SITUATION REPORT

TSR Number	W48	Date of TSR release	12.1.2011	Time of TSR release	8am
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Seqwater status of inflows and dam operations

Current status but could change based on inflows or rainfall.

Current objectives	<ul style="list-style-type: none"> Gradual reduction of releases. 										
Strategy	<ul style="list-style-type: none"> Peak inflows into Wivenhoe were in excess of 12000 cumecs. Develop and implement closing plan for next 7 or so days 										
Key considerations	<table> <tr> <td>Storage levels:</td><td>Above FSL</td></tr> <tr> <td>Inflows:</td><td>Inflows expected well over 2,000,000ML.</td></tr> <tr> <td>Rainfall:</td><td>Continuing</td></tr> <tr> <td>Lockyer/Bremer:</td><td>Monitoring their inflows</td></tr> <tr> <td>Brisbane River:</td><td>Impact as below.</td></tr> </table>	Storage levels:	Above FSL	Inflows:	Inflows expected well over 2,000,000ML.	Rainfall:	Continuing	Lockyer/Bremer:	Monitoring their inflows	Brisbane River:	Impact as below.
Storage levels:	Above FSL										
Inflows:	Inflows expected well over 2,000,000ML.										
Rainfall:	Continuing										
Lockyer/Bremer:	Monitoring their inflows										
Brisbane River:	Impact as below.										

Rainfall

No significant rain has fallen over the catchments in the past twelve hours. Less than 10 to 15 millimeters of rainfall is expected over the next 24-48 hours.

Somerset/Wivenhoe

Somerset Dam has peaked at 105.11 m AHD at 08:00 on 12 January 2011 and the dam is discharging 1,230 m³/s over the spillway. Sluice gates will be utilised to assist the draining of the flood storage compartment commencing later Wednesday. At 8am Somerset was 105.11m and 720,400ML at 189.7%.

Wivenhoe Dam peaked at 74.97 m AHD at 19:00 on 11 January 2011 with a corresponding discharge of 7,450 m³/s. Wivenhoe Dam was 74.75 m AHD at 2,192,000ML and 188.1% at 07:30 and generally falling slowly.

The releases from Wivenhoe Dam have been temporarily reduced to 2,500 m³/s at 07:30 to allow the peak of Lockyer Creek to enter the Brisbane River. After the downstream peak in the lower Brisbane River has passed, releases will be increased to maximum of 3,500 m³/s. This release will then be maintained to drain the flood storage component within the required 7 days.

The combined flood event volume in Somerset and Wivenhoe Dams is estimated to be in excess of 2 million megalitres.

North Pine

At 07:00 North Pine Dam was 39.78 m AHD falling and releasing about 105 m³/s. North Pine has

peaked at 41.11 mAHd at 14:00 on 11 January 1974 with peak release of 2,800 m3/s. The event has a volume of around 200,000 ML. It is expected that gates will be close later Wednesday or early Thursday

Strategy

The Flood Operations Centre is continuing to monitor rainfalls and water levels through the Brisbane and Pine catchments and reviewing operating strategy every 30 minutes. The FOC is maintaining close contact with warning agencies and local councils.

Leslie Harrison Dam:

Gate releases are underway due to rainfall and inflows.

Hinze Dam:

A release of around 8,000 megalitres a day is being made through the emergency gates. There is no public access to the spillway.

Seqwater Technical Officer name	Robert Drury
Seqwater Technical Officer position title	Dam Operations Manager

BoM assessment

(consisting of references to latest Flood Warning for the Brisbane River and other relevant Bureau forecasts and warnings (e.g. weather/rain forecasts, Tropical Cyclone Warning etc) and other updates/comments if needed)

BoM has been advised.

BoM Technical Officer name	Peter Baddiley
BoM Technical Officer position title	
BoM Technical Officer contact details	flood.qld

Brisbane City Council (BCC) assessment

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy

BCC Technical Officer name	Chris Lavin
BCC Technical Officer position title	Disaster Operations Manager
BCC Technical Officer contact details	

Ipswich City Council (ICC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

ICC Technical Officer name	Tony Trace
ICC Technical Officer position title	Local Disaster Response Coordinator
ICC Technical Officer contact details	

Somerset Regional Council (SRC) assessment (if required)

(to include predicted local inundation areas and depths of inundation based on the information)

Council has been advised of the current strategy.

SRC Technical Officer name	Tony Jacobs
SRC Technical Officer position title	Local Disaster Response Coordinator
SRC Technical Officer contact details	

Collated and distributed by (Agency)

Contact Officer signature	
Contact Officer name	Rob Drury
Contact Officer position title	Dam Operations Manager

Next TSR due	Date	12.1.2011	Time	11am	or Event	
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