QUEENSLAND FLOODS
COMMISSION OF INQUIRY

STATEMENT OF TERRY WILLIAM WALL

I, **Terry William Wall**, of c/- 400 George Street Brisbane in the State of Queensland, Acting Director-General, Department of Environment and Resource Management (**DERM**), make oath and state as follows:-

1. I have seen a copy of two letters dated 1 June 2011 (**Attachment TWW-1**) from the Commissioner, Queensland Floods Commission of Inquiry requiring a statement and documents from the Director-General of DERM.

2. I am the Acting Director-General of DERM as of 6 June 2011.

3. As the Director-General of DERM, I am the chief executive for a suite of legislation with regard to water management, the principal act being the *Water Act 2000.*

4. DERM regulates prescribed activities that occur within watercourses, lakes and springs. DERM's regulatory role is to assess applications under the *Water Act 2000, Sustainable Planning Act 2009, Vegetation Management Act 1999* and associated planning instruments.

5. For example, section 266 of the *Water Act 2000* provides:

> "**266 Applying for permit to destroy vegetation, excavate or place fill in a watercourse, lake or spring**
>
> (1) A person may apply to the chief executive for a permit to do any or all of the following activities—
>
> (a) destroy vegetation in a watercourse, lake or spring;
>
> (b) excavate in a watercourse, lake or spring;
>
> (c) place fill in a watercourse, lake or spring.
>
> ..."

6. The relevant area is within the plan area for the *Moreton Resource Operations Plan 2009* (ROP). The ROP implements the *Water Resource (Moreton) Plan 2007* (WRP) and was prepared by the chief executive under section 95 of the *Water Act 2000*. The final ROP was approved by the Governor-in-Council under section 103 of that Act. A map of the relevant area has been attached and is marked as **Attachment TWW-2**.

7. The WRP was prepared by the Minister under section 38 of the *Water Act 2000* and the final WRP was approved by the Governor-in-Council under section 50 of that Act. The purposes of the WRP is set out in section 2 of the WRP. Section 50 of the *Water Act 2000* provides that the WRP is subordinate legislation. In contrast to a WRP, a ROP is not stated to be subordinate legislation.

Item 1: The current state and stability of the banks of the Brisbane River within the Somerset Regional Council area and the Brisbane City Council area from its western border to Mount Crosby Road ("the relevant area")

8. DERM's current information regarding the state and stability of the banks of the Brisbane River within the relevant area is generally obtained:

   (i) when applications are made to undertake regulated prescribed activities by private persons and entities, and
   (ii) as a result of regulated persons or entities providing information pursuant to a reporting obligation.

9. Seqwater holds a Resouce Operations Licence (ROL) under the ROP. The ROP places obligations on Seqwater to undertake inspections of the streams within the Central Brisbane River and Stanley River water supply schemes for evidence of bank slumping resulting from the operation of Seqwater's water infrastructure. The ROP details operating, monitoring and reporting arrangements that are associated with the operation of the Central Brisbane River and Stanley River water supply scheme infrastructure for water supply purposes. The ROP does not regulate activities associated with the operation of Wivenhoe and Somerset dams for flood mitigation purposes, i.e. the ROP does not provide rules for operation of Wivenhoe or Somerset dams for the release of waters above

the full supply level. These flood mitigation operational procedures, including monitoring and reporting requirements, are managed in accordance with the flood operations manual.

10. The relevant provisions of the ROP are set out below.

"**159 Bank condition**

(1) The resource operations licence holder must inspect banks for evidence of collapse or erosion within the ponded areas and downstream of the relevant infrastructure listed in Attachments 5, 6 and 7 following instances of—

(a) rapid water level changes;

(b) large flows through infrastructure; or

(c) other occasions when collapse or erosion of banks may be likely.

(2) For subsection 1, downstream of the relevant infrastructure means the distance of influence of infrastructure operations.

...

162 Quarterly report

(1) The resource operations licence holder must submit a quarterly report to the chief executive after the end of each quarter, of every water year.

(2) The report must contain the following data—

(a) stream flow and infrastructure water levels—all records referred to in section 152 of this plan;

(b) the total volume of water for each quarter—

(i) taken for each zone;

(ii) entitled to be taken from each zone;

(c) water quality—all records referred to in section 158 of this plan;

(d) a summary of bank condition monitoring and incidences of slumping, undertaken in accordance with section 159 of this plan; and

(e) the details and status of any programs implemented under section 13 of this plan.

...

165 Impact of infrastructure operation on natural ecosystems—Annual report

The resource operations licence holder must include in the annual report under section 163—

(a) a summary of environmental considerations made by the resource operations licence holder in making operational and release decisions;

(b) a summary of the environmental outcomes of the decision including any adverse environmental impacts;

(c) a summary of bank condition and fish stranding monitoring and assessment, including—

(i) results of investigations of bank slumping or erosion identified in ponded areas or downstream of infrastructure;

(ii) results of investigations of fish stranding downstream of infrastructure; and

(iii) changes to the operation of infrastructure to reduce instances of bank slumping, erosion or fish stranding;

...

...

166 Operational report

The resource operations licence holder must—

(a) notify the chief executive within one business day of becoming aware of any of the following operational incidents—

(i) a non-compliance by the resource operations licence holder with the rules in this plan; and

(ii) instances of fish stranding or bank slumping within the impounded areas or downstream of infrastructure listed in Attachment 9, Table 1 or watercourses associated with the operation of the Central Brisbane River, Cressbrook Creek, Pine Valleys and Stanley River water supply schemes;

..."

11. Seqwater submitted to the chief executive a quarterly report dated 31 March 2011 pursuant to section 162 of the ROP, which provides a summary of bank condition monitoring and incidences of slumping, undertaken in accordance with section 159 of the

ROP. A copy of that Seqwater quarterly report is attached and marked **Attachment TWW-3**.

12. Further, under section 166 of the ROP, Seqwater is required to provide an Operational Report to the Chief Executive within one day of becoming aware, amongst other things, of instances of bank slumping within the impounded areas or downstream of its infrastructure.

13. Pursuant to the requirement of section 166 of the ROP, on 31 May 2011 Seqwater submitted to the chief executive its current Operational Incident Report Notification and a copy is provided as **Attachment TWW-4**. This report details, inter alia, where Seqwater has undertaken stream bank monitoring and stated that instances of bank slumping have occurred within the Central Brisbane River water supply scheme.

14. To date, Seqwater is not yet required to submit to the Chief Executive any further information relating to instances of bank slumping for the relevant period. Pursuant to section 165 of the ROP, Seqwater is required to provide an Annual Report summarising bank condition, monitoring and assessment, results of investigations of bank slumping or erosion in ponded areas or downstream of its infrastructure and changes to the operation of its infrastructure to reduce instances of bank slumping and erosion.

15. The Annual Report which relates to the 2010/2011 flood events is not required to be provided to the Chief Executive until after 30 June 2011. Accordingly, this report has not, as yet, been received.

16. Other knowledge of the current state and stability of the banks of the Upper Brisbane River within the relevant area following the January 2011 flood events was obtained by officers of DERM having undertaken aerial inspections of the Upper Brisbane catchment for erosion and bank slumping that occurred following the January 2011 flood events. This type of inspection would not normally occur, however, it was considered appropriate due to the magnitude of the flooding events. The results of this inspection are provided in **Attachment TWW-5**.

17. On a day-to-day basis, DERM is not a manager of watercourses but is a regulator of prescribed activities undertaken or sought to be undertaken by third parties. DERM has undertaken an inspection of areas following requests from members of the community who are concerned about the level of erosion or slumping that has occurred on their property. This occurred when DERM responded to members of the Harlin community on the Upper Brisbane River, being upstream of the Wivenhoe Dam ponded area, who were concerned about the level of erosion that occurred in that reach of the river. **Attachment TWW-6** provides details of DERM's investigation.

Item 2 – Any difference in the current state or stability of the banks of the Brisbane River in the relevant area as compared to their state and stability prior to 31 December 2010.

18. Seqwater provided DERM with its "Quarterly Submission 1 October to 31 December 2010/2011 Water Year Summary Report IROL/ROP Reporting Queensland Bulk Water Supply Authority t/as Seqwater", dated 31 March 2011 and marked as Attachment TWW-3. This report was submitted pursuant section 162 of the ROP in accordance with Seqwater's obligations under the ROP.

19. Seqwater is not required to submit its Annual Report until after 30 June 2011 and, until I receive that report, I am unable to provide information relating to the difference in the current state or stability of the banks of the Brisbane River within the Central Brisbane River water supply scheme as compared to their state and stability prior to 31 December 2010.

20. DERM has aerial photography, available from one of its spatial information databases, of the relevant area prior to 31 December 2010 which may indicate a difference between the current state of stability of the banks as compared to their state and stability prior to 31 December 2010. These photographs were taken over many years and are available upon request.

Item 3 – Whether the operation of Wivenhoe and Somerset Dams during the period 1 October 2010 to 31 March 2011 caused or contributed to instability, slumping or erosion of the banks of the Brisbane River in the relevant area

21. As stated above and pursuant to the ROP, Seqwater is the Resource Operations Licence (ROL) holder for the Central Brisbane River and Stanley River water supply schemes which contain the Wivenhoe and Somerset Dams.

22. Pursuant to section 165 of the ROP, Seqwater is required to provide an Annual Report to the Chief Executive which, amongst other things, must provide a summary of the bank condition and the results of investigations of bank slumping or erosion in ponded areas or downstream of their infrastructure. This report, which has not yet been received, must also detail any changes to the operation of Seqwater's infrastructure to reduce instances of bank slumping and erosion.

23. I am unable to provide an opinion as to whether the operation of Wivenhoe and Somerset Dams during the period 1 October 2010 to 31 March 2011 caused or contributed to instability, slumping or erosion of the banks of the Brisbane River in the relevant area.

24. The Seqwater Annual Report may provide some insights into whether the operation of the dams contributed to the bank erosion. However, given the magnitude and intensity of the January 2011 flooding, it is likely that a definitive answer to this question would require a more comprehensive geomorphological assessment than Seqwater are likely to provide in accordance with the annual reporting requirements.

Item 4 – The extent to which factors other than the operation of Wivenhoe and Somerset Dams during the period 1 October 2010 to 31 March 2011 caused or contributed to instability, slumping or erosion of the banks of the Brisbane River in the relevant area

25. While there are a range of land management, infrastructure and in-river activities that can accelerate or contribute to riverine erosion, it is important to appreciate that river erosion is largely a natural process that occurs as a consequence of high-intensity flooding. In this respect, instances of riverine and floodplain erosion are evident in virtually all parts of Queensland that were affected by the recent wet season flooding.

26. DERM regulates prescribed activities in watercourses such as removal of quarrying material, vegetation and silt. These activities are regulated as they can have an impact on

the stability of banks and can contribute to erosion and bank slumping. I am unable to provide an opinion as to the extent to which these factors caused or contributed to instability, slumping or erosion of the banks of the Brisbane River in the relevant area.

27. In the normal course of its regulatory role, DERM does not undertake an investigation as to the extent to which factors other than the operation of Wivenhoe and Somerset Dams caused or contributed to instability, slumping or erosion of the banks of the Brisbane River in the relevant area including during the period 1 October 2010 to 31 March 2011.

28. DERM may undertake investigations on a case by case basis in response to requests by members of the community. To date, I am not aware of DERM receiving any requests to investigate instances of instability, slumping or erosion of the Brisbane River downstream of the Wivenhoe or Somerset Dams.

Item 5 – The effect and contribution, if any, of the draw down of Wivenhoe Dam during the period 12 to 19 January 2011 to the state and stability of the banks of the Brisbane River in the relevant area

29. I am not in a position to provide a qualified opinion as to the effect and contribution, if any, of the draw down of Wivenhoe Dam during the period 12 to 19 January 2011 to the state and stability of the banks of the Brisbane River in the relevant area.

30. I attach for your information a fact sheet titled "What causes bank erosion?" (**Attachment TWW-7**).

31. It is my view that it is important to distinguish between rapid draw downs of flow rates below dams during damaging flow events and non-damaging flow events. During times of damaging flow events, it is paramount that flow rates are returned to non-damaging flows as quickly as possible for the safety of the downstream community and infrastructure. It is not desirable to maintain damaging flow rates by gradually and incrementally reducing flow rates in order to minimise bank instability, slumping and erosion. Different constraints apply during non-damaging flow events where gradual and incremental changes are possible and preferable to minimise occurrences of bank instability, slumping and erosion.

32. The documents relevant to this Requirement received by DERM are attached and marked as **Attachment TWW-8:**

(a) Seqwater Summary of Operational Alerts/Investigations as at 21 January 2011;
(b) Correspondence to Mr Alex Fisher, Executive General Manager from Gary Burgess A/General Manager Water Allocation and Planning dated 3 December 2010;
(c) Document entitled "Seqwater Interim Program – Moreton Resources Plan current as at 25 May 2010";
(d) Document entitled "Dams and catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM" dated 31 January 2011;
(e) Document entitled "Dams and catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM" dated 25 March 2011; and
(f) Document entitled "Dams and catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM" dated 29 April 2011.
(g) Document entitled "South East Queensland Catchments Inc. – Caring for our Country Emergency Provisions Investment Proposal for the 2011 Flood Recovery"

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

Signed . [redacted] . . . .
Terry William Wall

Taken and declared before me, at Brisbane this 9th day of June 2011

. . . [redacted] . Solicitor / ~~Barrister / Justice of the Peace / Commissioner for Declarations~~

TWW-1

Our ref: Doc 1619076

1 June 2011

Director-General
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 the Director-General of the Department of Environment and Resource Management to provide a written statement, under oath or affirmation, to the Queensland Floods Commission of Inquiry, in which the Director-General:

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

in respect of the following topics:

1. the current state and stability of the banks of the Brisbane River within the Somerset Regional Council area and the Brisbane City Council area from its western border to Mount Crosby Road ('the relevant area');

2. any difference in the current state or stability of the banks of the Brisbane River in the relevant area as compared to their state and stability prior to 31 December 2010;

3. whether the operation of Wivenhoe and Somerset Dams during the period 1 October 2010 to 31 March 2011 caused or contributed to instability, slumping or erosion of the banks of the Brisbane River in the relevant area;

4. the extent to which factors other than the operation of Wivenhoe and Somerset Dams during the period 1 October 2010 to 31 March 2011 caused or contributed to instability, slumping or erosion of the banks of the Brisbane River in the relevant area; and

5. the effect and contribution, if any, of the draw down of Wivenhoe Dam during the period 12 to 19 January 2011 to the state and stability of the banks of the Brisbane River in the relevant area.

The Director-General may also address other topics relevant to the Terms of Reference of the Commission in the statement, if he wishes.

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Queensland 4001 Australia
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www.floodcommission.qld.gov.au

The statement is to be provided to the Queensland Floods Commission of Inquiry by 7 June 2011.

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

[redacted]

Commissioner
Justice C E Holmes

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Our ref: Doc 1619004

1 June 2011

Director-General
Department of Environment and Resource Management
GPO Box 2454
BRISBANE QLD 4001

REQUIREMENT TO PROVIDE INFORMATION TO COMMISSION OF INQUIRY

I, Justice Catherine E Holmes, Commissioner of Inquiry, require the Director-General of the Department of Environment and Resource Management, to provide the following information, documents, records and other things to the Queensland Floods Commission of Inquiry pursuant to section 5 of the *Commissions of Inquiry Act* 1950 (Qld):

1. any report, study, opinion or investigation about the stability of the banks of the Brisbane River within the Somerset Regional Council area and the Brisbane City Council area from its western border to Mount Crosby Road ('the relevant area'), including the extent of slumping or erosion of the Brisbane River's banks, since 1 October 2010;

2. any report, study, opinion or investigation about the extent to which the operation of Wivenhoe and Somerset Dams during the period 1 October 2010 to 31 March 2011 caused or contributed to instability, slumping or erosion of the banks of the Brisbane River within the relevant area; and

3. any report, study, opinion or investigation about the extent to which factors other than the operation of Wivenhoe and Somerset Dams during the period 1 October 2010 to 31 March 2011 caused or contributed to instability, slumping or erosion of the banks of the Brisbane River within the relevant area.

Material is to be provided to the Queensland Floods Commission of Inquiry by 7 June 2011.

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

[redacted]

Commissioner
Justice C E Holmes

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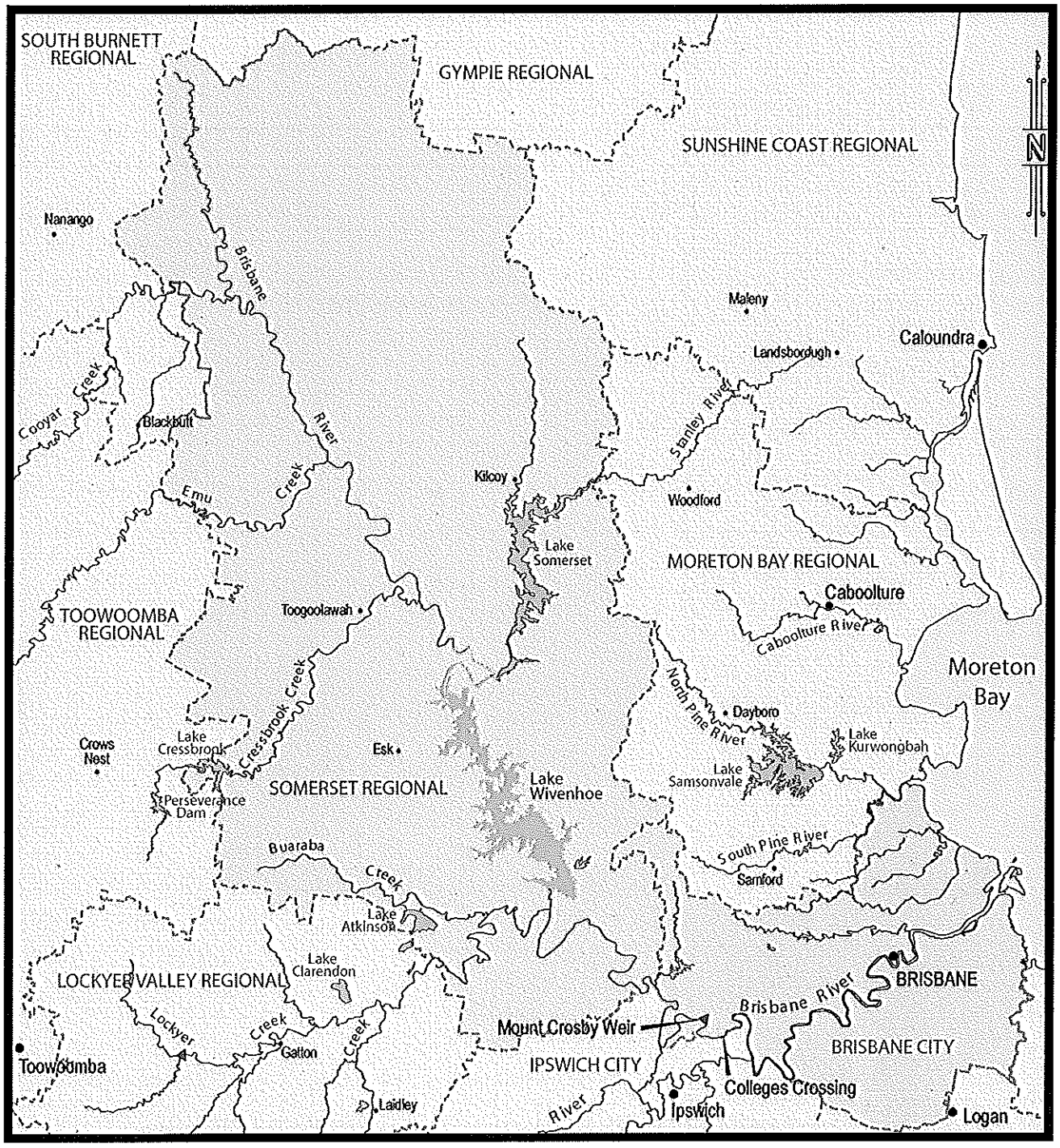
TWW-2



LEGEND

- Somerset Regional Council
- Brisbane City
- IPSWICH — Local Government name and boundary
- Major Stream
- Section of Brisbane River for request

Summary Report IROL/ROP Reporting

Queensland Bulk Water Supply Authority t/as

seqwater
WATER FOR LIFE

Quarterly Submission
1 October to
31 December
2010/2011 Water Year

Document Information

Compiled by:		Date:
Karen Burgh	ROP ROL Compliance Reporting Coordinator	31 March 2011

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Introduction

Seqwater is required to provide data for all river catchments within South East Queensland that operate under either a ROL or IROL. Water quantity and water quality data is required to be collected and reported to the Department of Environment and Resource Management within three months after the end of each quarter, of every water year. This report consolidates the data reporting requirements from each ROL and IROL.

Reporting Period

1 October 2010 to 31 December 2010

Quarterly Data Transfers

All data collected under the monitoring and reporting responsibilities must be reported to the Department of Environment and Resource Management within three months of collection.
The following data transfers were submitted to wms.reporting@derm.qld.gov.au for the second quarter of the 2010/2011 water year.

- *BankCondition_Q_20101001*
- *Cyanobacteria_Q_20101001*
- *RFSDailyVolume_Q_20101001*
- *StorageHeight_Q_20101001*
- *StorageHeightNot_Q_20101001*
- *StorageInflowNot_Q_20101001*
- *Streamflow_Q_20101001*
- *Streamheight_Q_20101001*
- *WaterDiversion_Q_20101001*
- *WaterQuality_Q_20101001*
- *WaterQuality_Q_20101001.Ext*
- *WaterTakenCH_Q_20101001*
- *WaterTakenGW_Q_20101001*
- *WaterTakenSW_Q_20101001*
- *WaterEntitlement_Q_20101001*

Exception Report

The **Exception Report** is based on information available at the time of preparation for the quarterly data transfers. The details contained in this report list circumstances whereby;

a) the measurement, collection, analysis and storage of data may not be consistent with Queensland Water Monitoring Data Collection Standards

b) the transfer of data is not consistent with Queensland Government Water Monitoring Data Reporting Standards or

c) data collected under the monitoring responsibilities of the ROP or IROL could not be supplied

Summary of Exceptions

Reporting Requirement	Section	Scheme
Continuous levels in dams and weirs	S4.1A (i)	Baroon Pocket Water Supply Scheme
	S3.1A (i)	Lower Lockyer Water Supply Scheme
	Section 137	Logan River Water Supply Scheme
	Section 118	Nerang River Water Supply Scheme
	S3.1A (i)	Warrill Valley Water Supply Scheme
	S3.1A (i)	Upper Mary Water Supply Scheme
	Section 152	Mid Brisbane Water Supply Scheme
Inflow	Section 152	Mid Brisbane Water Supply Scheme
	Section 152	Pine Valley Water Supply Scheme
	Section 152	Stanley River Water Supply Scheme

Detailed Listing of Exceptions

Continuous Water Levels

- Storage Height
- Stream Height
- Stream Flow

Scheme	Site ID	Site Description	Details
Baroon Pocket	513	Baroon Pocket HW	Data has been provided in the file StorageHeightNot_Q_20100401
Baroon Pocket	514	Baroon Pocket TW	Data has been provided in the file StorageHeightNot_Q_20100401
Lower Lockyer	n/a	Buaraba Creek Weir	No Gauging station exists to monitor continuous levels for Buaraba Creek Weir
Lower Lockyer	108	O'Reilys Weir HW	Data is provided in the file StorageHeightNot_Q_20100401 for this site.
Lower Lockyer	113	Atkinson's Dam H/W	Logger malfunctioned, time restarted. Adjustments made and daily data entered to fill missing data.
Logan River	555	South McLean Weir HW	Data supplied in this dataset is unverified after 30/11/2010
Nerang River	525	Hinze Dam HW	Data is supplied in StorageHeightNot_Q_20100701
Nerang River	528	Little Nerang Dam HW	Data is supplied in StorageHeightNot_Q_20100701
Nerang River	526	Hinze Dam TW	No data to report. Hinze Dam is controlled by the Alliance Group until handover. Temporary measure in place to use scour valve for flood releases only
Nerang River	529	Little Nerang Dam TW	No data to report. Discharge from the valve is estimated via the rated discharge through the scour valve.
Warrill Valley	103	Churchbank Weir HW	Data supplied for this dataset is unverified data
Warrill Valley	106	Junction Weir HW	Data supplied for this dataset is unverified data
Warrill Valley	107	Junction Weir HW	Data supplied for this dataset is unverified data
Upper Mary	102	Borumba Dam TW	Numerous peaks not captured as water level is above sensor range
Mid Brisbane	564	Wivenhoe Dam TW	Data is unverified from 15/10/2010. No streamflow data due to backwater influence form Lockyer Creek.

Continuous inflow derivation technique			
Scheme	**Site ID**	**Site Description**	**Details**
STANLEY	585	Inflow to Somerset Dam	Testing and verification by Seqwater complete.
BRISBANE	586	Inflow to Wivenhoe Dam	Testing and verification by Seqwater complete.
BRISBANE	587	Inflow to Mt Crosby Weir	Testing and verification by Seqwater complete.

ROP Interim Program Summary

Logan ROP

The Interim Program for the Logan ROP was submitted to DERM on 27 August 2010 and approval was confirmed by DERM on 3 December 2010. Details confirming the status of any programs implemented under Section 14, Logan ROP has been provided in Appendix A

Moreton ROP

The Interim Program for the Moreton ROP was submitted to DERM on 27 August 2010 and approval was confirmed by DERM on 3 December 2010. Details confirming the status of any programs implemented under Section 13 of the Moreton ROP has been provided in Appendix B

Gold Coast ROP

The amendment to the Gold Coast Resource Operation Plan was finalised on the 28 October 2010. A statement of current programs has been submitted and an interim program for the Gold Coast ROP is in preparation and will be submitted in April 2011.

Compliance Summary

Seqwater is committed to achieving 100% compliance in relation to its reporting obligations under the Water Act 2000. The reporting responsibilities listed under an IROL or ROP have been met and provided to DERM.

All data was collected and reported in accordance with the Water Monitoring Data Collection and Reporting standards published by DERM. Any exceptions have been reported accordingly. Seqwater will endeavour to provide updated information should errors or omissions be identified.

Appendix A

Seqwater Interim Program Report for the Logan Basin Resource Operations Plan

The Logan Basin Resource Operations Plan 2009 (the ROP) commenced on 7 December 2009. The Queensland Bulk Water Supply Authority (trading as Seqwater) is a Resource Operations Licence Holder under the ROP for the Logan River Water Supply Scheme.
Where Seqwater, as the ROL holder, is unable to meet requirements of the ROP, a structured process is available whereby a statement of programs currently in existence can be prepared and submitted to the Department of Environment and Resource Management, to be followed by an Interim Program. The box below sets out the relevant provisions under the ROP.

Relevant ROP Requirement

Interim Program

s14(1) The chief executive and the resource operations licence holder must implement requirements of this plan as soon as is practicable.
s14(2) Subsections 3 to 11 apply where a resource operations licence holder is unable to meet the requirements of this plan on the day this plan commences.
s14(3) The resource operations licence holder must –

(a) within two months of commencement of this plan, submit a statement of programs currently in existence, to the chief executive for approval; and
(b) **within six months of commencement of this plan, submit a program for meeting the requirements of this plan to the chief executive for approval, including a timetable and interim methods to be used.**

s14(4) The resource operations licence holder may, where an emergency or operational incident results in an inability to comply with any rules or requirements of this plan, submit an interim program for meeting the requirements of this plan to the chief executive for approval, **including timetable and interim methods to be used.**
s14(5) Where the submitted program relates to the Water Monitoring Data Collection Standards, the program must include the accuracy of methods currently used.
s14(6) The chief executive, in considering any submitted program, may request additional information.
s14(7) The chief executive, in considering any submitted program, may either–

(a) approve the program with or without conditions;
(b) amend and approve the amended program; or
(c) require the resource operations licence holder to submit a revised program.

s14(8) Within 10 business days of making a decision on a program submitted under this section the chief executive must notify the resource operations licence holder of the decision.
s14(9) Following approval of the program by the chief executive, the resource operations licence holder must–

(a) implement and operate in accordance with the approved program; and
(b) make public details of the approved program on their internet site.

s14(10) Where there is conflict between the provisions of this plan and the provisions of an approved program, the approved program prevails for the time that the approved program is in place.
s14(11) Where this section applies, the resource operations licence holder may continue to operate under the existing program until the program submitted under this section is approved.

Seqwater submitted a Statement of Current Programs to DERM on 5 February 2010, in accordance with Section 14 of the ROP.
The following document sets out Seqwater's Interim Program for the Logan ROP, as provided for under s14 of the ROP. It is submitted to the Department of Environment and Resource Management for approval

Seqwater Interim Program – Logan Basin Resource Operations Plan
Current as at 30 December 2010

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Departmental water monitoring data collection standards 12(1) Where this plan requires monitoring by a resource operations licence holder, including measurement, collection, analysis and storage of data, the resource operations licence holder must ensure the monitoring is consistent with the Water Monitoring Data Collection Standards.	Refer ss137-145	Seqwater applies the Queensland Government Water Monitoring Data Collection Standards (Feb 2007) to its current reporting procedures.	Currently in place.
Departmental water monitoring data reporting standards 13(1) Where this plan requires transfer of data or reporting by a resource operations licence holder, the resource operations licence holder must ensure the transfer or reporting is consistent with the Water Monitoring Data Reporting Standards.	Refer ss150-156	Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards (Feb 2007) to its current reporting procedures.	Currently in place.
Operating levels for infrastructure 85(1) The minimum operating levels, nominal operating levels and full supply levels for infrastructure in the Logan River Water Supply Scheme are specified in Attachment 5 Table 6.. 85 (2) The resource operations licence holder must not release or supply water from any infrastructure when the water level in that infrastructure is at or below its minimum operating level. 85(3) The resource operations licence holder must not release water from any infrastructure unless the release is necessary to— (a) meet daily releases mentioned in section 87; (b) supply downstream demand; or (c) maintain the downstream infrastructure at its nominal operating level. 85(4) Despite subsection 3— (a) the resource operations licence holder must not release or supply water from any infrastructure to supply medium priority water allocations when the water level in Maroon Dam is at or below EL 193.23m AHD; (b) if the water level in Maroon Dam is greater than EL 207.14m AHD, releases must be made to return the water level to EL 207.14m AHD.	85(1) Not compliant with ROP. Minimum operating level for the fish lock at Cedar Grove Weir is EL: 19.5m which is above the specified Nominal Operating Level of EL: 17.87m. 85(1) CGW – usually operated at full supply level, due to dynamic operation, generally no static level kept (nominal level in ROP too low for effective operation – will also prevent operation of fish lock). 85(1) Maroon, Bromelton Off-Stream Storage and Bromelton Weir compliant with ROP and IROL. 85(3) Not compliant with ROP. Releases are made for operational purposes. 85(3) Not compliant with ROP. Releases are made for operational purposes to manage environmental quality and flora and fauna. 85(4)(a) Not compliant with ROP (compliant with IROL). 85(4)(b) Compliant with ROP.	Seqwater will continue to make releases from infrastructure for consumption, flood mitigation, operational maintenance and fish recovery/maintenance.	Nil.
Releases from infrastructure 87(1) The resource operations licence holder must make daily releases— (a) from Maroon Dam— (i) equal to the volume of inflow, when inflow to Maroon Dam is less than or equal to 4 ML/day; or (ii) 4ML/day when inflow to Maroon Dam is greater than 4 ML/day. (b) from Bromelton Weir— (i) equal to the volume of inflow, when inflow to Bromelton Weir is less than or equal to 5ML/day; or (ii) 5ML/day when inflow to Bromelton Weir is greater than 5ML/day. (c) from Cedar Grove Weir— (i) equal to the volume of inflow, when inflow to Cedar Grove Weir is less than or equal to 5ML/day; or (ii) 5ML/day when inflow to Cedar Grove Weir is greater than 5ML/day. 87(3) The resource operations licence holder must develop and submit to the chief executive for approval within 40 business days of the commencement of this plan, storage inflow derivation techniques for infrastructure mentioned in subsection 1.	87(1) Compliant with ROP 87(3) Submitted to DERM on 5 February 2010.	87(3) Consistent inflow derivation methodology will be developed by July 2012 for all storages. In the interim, existing methodology inherited from previous asset owners will be used.	July 2012.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Operation of Bromelton Off-stream Storage 88(1) The resource operations licence holder must only divert water from the Logan River to Bromelton Off-stream Storage when the following conditions are satisfied— (a) the water level in Bromelton Off-stream Storage is less than the full supply level; (b) flows past Bromelton Weir, measured at the gauging station located downstream of Bromelton Weir, are greater than 150ML/day; and (c) flows past Cedar Grove Weir are greater than 150ML/day. 88(2) The resource operations licence holder must cease diverting water from the Logan River to Bromelton Off-stream Storage when flows past the pump station on the Logan River are less than 150ML/day. 88(3) The maximum rate at which the resource operations licence holder may divert water using the pump station on the Logan River is 249.8ML/day. 88(4) The maximum rate at which the resource operations licence holder may release water from Bromelton Off-stream Storage into the Logan River is 115ML/day.	Compliant with ROP 88(1) Cedar Grove overflows derived from storage curve, SCADA provides upstream and downstream heights (ELs) with flow meters only on fishway and outlet works. 88(2) Not compliant with ROP. Flow based on Bromelton Weir DS Gauge and Cedar Grove Weir, no gauging capability at the pump station. 88(3) and 88(4) Pumps capacity total at normal operating levels = 250ML/d, capable of pumping approx 353ML/d with higher river flows. Max rate of diversion into BOS – requested previously for max flow rate to be increased to 400ML/d to suit max design flow rate of the pumps. 88(4) Compliant with ROP. ROP description of works, pump sets – incorrect. **Actual:** 4 x submersible pump sets, 2 x 400KW and 2 x 250KW pumps as submitted to DERM by Seqwater on 16 June 2009 and as per IROL.	88(2) Seqwater has a flow measuring device for use at the site. A water level recorder will be used in conjunction with a rating curve to determine flows. This will be able to confirm the cessation trigger at BOS from 2012, once remote access is established.. 88(3) Daily volumes to/from BOS are measured by flow meter installed at Bromelton Off-Stream Pumping Station. A manual gauge and SCADA monitoring of BOS level is available as required for pump station operation, not remotely available. ALERT gauge to be installed late 2010, after which volume will be calculated using levels/storage curve to determine volume change. Inflow from associated catchment can be assumed to be negligible due to small area. Evaporation/rain on storage also assessed to be minor, however, can be added to a volume change calculation if required. ROP description of works, pump sets – incorrect. Actual: 4 x submersible pump sets, 2 x 400KW and 2 x 250KW pumps as submitted to DERM by Seqwater on 16 June 2009 and as per IROL. Attachment 5, Table 3 has incorrect Full Supply Volume for Bromelton Off-Stream Storage. Correct FSV is 8210ML.	88(2) 1 July 2012 88(3) December 2010.
Announced Allocations 90 The resource operations licence holder must— (a) determine an announced allocation for each priority group for use in defining the share of water available to be taken under water allocations in that priority group; (b) use the water sharing rules specified in this part, to calculate announced allocations throughout the water year; (c) calculate and set the announced allocation for each priority group to take effect on the first day of each water year; (d) following the commencement of a water year— (i) recalculate the announced allocation to take effect no later than five business days following the first day of the month; (ii) reset the announced allocation if a recalculation indicates that the recalculated announced allocation would— (A) increase by five or more percentage points; or (B) increase to 100 per cent; and (e) within five business days of setting an announced allocation under subsection 1(c) or the first calendar day of every month when resetting the announced allocation under subsection 1(d), make public details of the announced allocation, including parameters for determining the announced allocation, on the resource operations licence holder's internet site for the Logan Rive r Water Supply Scheme; (f) not reduce the announced allocation during a water year; (g) round the announced allocation to the nearest whole percentage point (h) not set an announced allocation that is less than zero or greater than 100 per cent.	Compliant with ROP	Updated Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Announced Allocations for Medium Priority Water Allocations 91(1) The announced allocation for medium priority water allocations must be calculated using the following formula— AAMP = ((UV+IN-HPA+DIVHP-RE+DIVMP-TOA)/MPA)*100	Compliant with ROP	Updated Medium Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
91(2) The parameters used in the announced allocation formula are detailed in Attachment 5, Tables 7 to 11.			
Announced Allocation for High Priority Water Allocations 92(1) The announced allocation for high priority water allocations must be as follows— (a) 100 per cent where the announced allocation for medium priority group water allocations is greater than zero per cent; (b) when the announced allocation for medium priority water allocations is zero per cent, the announced allocation percentage for high priority water allocations must be calculated using the following formula— AAHP=((UV+DIVHP-TOA)/HPA)*100 92(2) The parameters used in the announced allocation formula are detailed in Attachment 5, Tables 7 to 11.	Compliant with ROP	Updated Medium Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Stream flow period access conditions 94(1) A stream flow period for a zone is a period of time that starts and ends at such time that the resource operations licence holder notifies under subsection 2. 94(2) The resource operations licence holder for the scheme must notify the water allocation holders for the zone of the start and end of a stream flow period. 94(3) The resource operations licence holder may start a stream flow period whenever the following requirements for the zone are being met— (a) the announced allocation for the medium priority group is less than 100 per cent; and (b) the water level in Cedar Grove Weir is equal to or greater than 20.50 m AHD, or will be equal to or greater than EL 20.50m AHD during the stream flow period; and (c) the water level in South Maclean Weir is equal to or greater than EL 10.50m AHD, or will be equal to or greater than EL 10.50m AHD during the stream flow period; and (d) for zone BUCSB— (i) the water level in Bromelton Weir is equal to or greater than EL 40.70m AHD, or will be equal to or greater than EL 40.70m AHD during the stream flow period; and (ii) the flow rate in Burnett Creek downstream of Maroon Dam is greater than any release made in accordance with section 87(1)(a), plus any supplemented water releases from Maroon Dam; (e) for zone LORSA— (i) the water level in Bromelton Weir is equal to or greater than 40.70m AHD, or will be equal to or greater than EL40.70m AHD during the stream flow period; and (ii) the flow rate at Forest Home gauging station (145O038) on Logan River is greater than 10ML per day. (f) for zone LORSB— (i) The water level in Bromelton Weir is equal to or greater than 40.70m AHD, or will be equal to or greater than EL 40.7m AHD during the stream flow period; and (ii) The combined flow rate at both Rathdowney gauging station (145020A) on Logan River and Dieckmans Bridge gauging station (145010A) on Running Creek is greater than 15ML per day;	Compliant with ROP	Sites currently monitoring via SCADA and remote monitoring capability will be implemented as part of infrastructure upgrade program (anticipated for finalisation by December 2014). Please refer to Attachment 5, Table 14 at end of document.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010

Relevant ROP Requirement	Programs Currently in Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
(g) for zones LORSC, LORSD and LORSE— (I) the water level in Bromelton Weir is equal to or greater than 40.70m AHD, or will be equal to or greater than EL40.70m AHD during the stream flow period; and (II) the flow rate at Round Mountain gauging station (145008A) on Logan River is greater than 15ML per day; (h) for zones LORSF and LORSG— (i) the flow rate is greater than 15ML per day at Teviot Brook overflow gauging station (14S012A); or (II) the flow rate is greater than 15ML per day at Bromelton Weir tailwater gauging station (145025A), when the water level in Bromelton Weir is equal to or greater than 40.70m AHD or will be equal to or greater than EL 40.70m AHD during the stream flow period. 94(4) The resource operations licence holder must notify the water allocation holders for a zone of the end of a stream flow period whenever any of the requirements in subsection 3 for the zone are no longer being met.			
Critical Water Sharing Arrangements 95(1) Critical water sharing arrangements are in force when the announced allocation for medium priority group water allocations is zero per cent. 95(2) During times when critical water sharing arrangements are in force, the resource operations licence holder must for the Logan River Water Supply Scheme must calculate the announced allocation for high priority water allocations in accordance with section 92(1)(b) of this plan.	Compliant with ROP	Updated Medium Priority and High Priority Announced Allocation processes and procedures (including adjustments to incorporate Critical Water Sharing Arrangements) will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 1/12/2011 Medium Priority and High Priority Announced Allocation processes and procedures (including adjustments to incorporate Critical Water Sharing Arrangements) have been in place as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Seasonal water assignment rules 103(1) The resource operations licence holder may approve a seasonal assignment of a volume of water provided that the total volume of water use in a water year for each zone does not exceed the maximum allowable water use volume in Attachment 5, Table 13 for each zone. 103(2) The resource operations licence holder is responsible for dealing with applications for seasonal water assignment where the resource operations licence holder distributes to the assignee.	Compliant with ROP	Procedures for monitoring and approving Seasonal Water Assignments across all of the new ROP zones have been developed and will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 1/12/2011 Internal processes to process, approve and record SWA has been in place as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Resource operations licence holder monitoring and reporting 136 The resource operations licence holder must provide any monitoring data required under this chapter to the chief executive upon request and within the time requested.	Compliant with ROP	1/12/2011 ROP reporting requirements will be provided within required timeframes. For requests outside of ROP reporting requirements a standard waiting period of 7-14 days applies. Longer waiting periods may apply depending on the detail of the request.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Monitoring requirements – Streamflow and infrastructure water level data 137 The resource operations licence holder must record infrastructure water level and stream flow data in accordance with Attachment 5 Table 14.	Refer table "Attachment 5, Table 14" at end of document	Please refer to table at end of document ("Attachment 5, Table 14").	Please refer to table at end of document ("Attachment 5, Table 14").
Monitoring requirements – Announced allocations 139 The resource operations licence holder must record details of announced allocation determinations including— (a) the announced allocations for medium and high priority water allocations; (b) the date announced allocations are determined; and (c) the value of each parameter applied for calculating the announced allocation.	Compliant with ROP	Updated Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 25/11/2010 Internal processes to process, approve and record Announced allocations is in place as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Monitoring requirements – Stream flow period 142 The resource operations licence holder must record details of stream flow period announcements including—	Compliant with ROP	New Stream Flow Period data will be implemented and recorded commencing in the 2010/2011 water year. 1/12/2011 Stream Flow period data will be reported at the start and end of any stream flow period including the zone to which the stream flow period applies.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010

Relevant ROP Requirement	Programs Currently in Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
(a) The start and end of any stream flow period; and (b) The zone to which the stream flow period announcement applies.			
Monitoring requirements – Critical water sharing arrangements 144 The resource operations licence holder must record details of critical water sharing arrangements including— (a) the commencement date(s) and effective period of critical water sharing arrangements; and (b) the effectiveness of the critical water sharing arrangements.	Not compliant with ROP (compliant with IROL)	New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 1/12/2011 Medium Priority and High Priority Announced Allocation processes and procedures (including adjustments to incorporate Critical Water Sharing Arrangements) have been in place as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Impact of infrastructure operation on natural ecosystems – Water Quality 145 The resource operations licence holder must monitor and record water quality in relation to relevant infrastructure listed in Attachment S.	Data transfers submitted in Quarterly Reporting. Below conducted at all relevant infrastructure. <u>Head water:</u> SDL: Every 3 months Date – Time – Depth – Electrical Conductivity – Dissolved Oxygen – pH – Temperature Ecowise/ALS Lab Analysis: Every 3 Months Total Nitrogen – Total Phosphorus BGA: Queensland Health (frequency of analysis is dependent on analysis results). Blue-green algae (to be monitored in accordance with the Department of Natural Resources and Water's Blue-Green Algae Monitoring Standard) <u>Tailwater:</u> SDL: Every 3 months Date – Time – Depth – Electrical Conductivity – Dissolved Oxygen – pH – Temperature Ecowise/ALS Lab Analysis: Every 3 months Total Nitrogen – Total Phosphorus – Total Sulphides	Monitoring and recording of water quality in relation to relevant infrastructure listed in Attachment S will be in place by 1 July 2010. Relevant inflow sites will be added to water quality monitoring and will be recorded, commencing the 2010/2011 water year.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010.
Impact of infrastructure operation on natural ecosystems – Bank condition 146(1) The resource operations licence holder must inspect banks for evidence of collapse or erosion within the ponded areas associated with infrastructure listed in Attachment S and downstream of the relevant infrastructure following instances of— (a) rapid water level changes; (b) large flows through infrastructure; or (c) other occasions when collapse or erosion of banks may be likely. 146(2) For subsection 1, downstream of the relevant infrastructure means the distance of influence of infrastructure operations.	Compliant with ROP (compliant with IROL)	Ponded area bank inspections for erosion are currently being undertaken on a weekly basis. Seqwater will add interim downstream visual bank inspections to weekly surveillance inspections with results collated quarterly and reported (commencing July 2010 and fully implemented by September 2010). These interim downstream visual inspections will allow the distance of influence of infrastructure for each storage to be determined and an appropriate monitoring and inspection program to be implemented (commencing December 2010 and fully implemented by December 2011).	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010.
Data transfer – Monitoring data must be made available 148 The resource operations licence holder must transfer any monitoring data required under this part to the chief executive, in an electronic format as specified by the chief executive, within the time requested.	Not compliant with ROP (compliant with IROL)	Requests for data outside of ROP reporting requirements will be provided within required timeframes. Place note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	

Relevant ROP Requirement	Programs Currently in Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Data transfer – Daily data transfer 149 For infrastructure mentioned in section 138(1) the resource operations licence holder must transfer the following data to the chief executive as soon as possible at the commencement of each day— (a) stream flow and infrastructure water levels; (b) the daily volume released and component volumes for each release; (c) the release rate; and (d) the device used for release.	Not compliant with ROP (compliant with IROL)	In 2010-2011, Seqwater are implementing a program to improve and upgrade hydrometric information management within the organisation. This will enable it to better meet daily, quarterly and annual reporting requirements. In addition, some infrastructure upgrades/installations will be undertaken to meet various monitoring requirements under this ROP (please refer to Attachment S, Table 14 at end of document). Furthermore, water level and flow information is intended to be made readily available to DERM through data sharing agreements that are currently under development. Electronic systems for capture, storing, and transfer of data are being upgraded by Seqwater with the intention of having these completed by 2013.	30 June 2011 – December 2013.
Reporting Requirements 150 The resource operations licence holder must provide— (a) quarterly reports; (b) annual reports for the previous water year; (c) operational reports; and (d) emergency reports.	Compliant with ROP	Refer ss151-156	Refer ss151-156.
Quarterly Reporting 151(1) The resource operations licence holder must submit a quarterly report to the chief executive within 3 months after the end of each quarter, of every water year. 151(2) The report must contain the following data— (a) stream flow and infrastructure water levels—all records referred to in section 137 of this plan; (b) water diverted – records referred to in section 141 of this plan; (c) the total volume of water for each quarter— (i) taken for each zone; (ii) entitled to be taken from each zone; (d) water quality—all records referred to in section 145 of this plan; (e) a summary of bank condition monitoring and incidences of slumping carried out in accordance with section 146 of this plan; and (f) the details and status of any programs implemented under section 14 of this plan.	Not compliant with ROP (compliant with IROL)	Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards (Feb 2007) to its current reporting procedures. Commencing 1 July 2010 the following will be implemented: • ROP datasets will be supplied quarterly, as required under the ROP. • ROP Compliance Report will be submitted with the quarterly reporting process, including exceptions to ROP requirements and an update on the Statement of Current Programs, as required under the ROP. s151(2)(a): In 2010-2011, Seqwater are implementing a program to improve and upgrade hydrometric information management within the organisation. This will enable it to better meet daily, quarterly and annual reporting requirements. In addition, some infrastructure upgrades/installations will be undertaken (to be finalised by December 2014) to meet various monitoring requirements under this ROP (please refer to Attachment S, Table 14 at end of document). The requirements set out in this particular section will be incorporated as part of both those programs, with an anticipated finalisation date of December 2014. Results of weekly bank condition monitoring will be collated quarterly and reported, with progressive implementation commencing 1 July 2010 and fully implemented by December 2011. Refer ss137, 145 and 146	30 June 2011 – December 2014.
Annual Reporting 152(1) The resource operations licence holder must submit an annual report to the chief executive after the end of each water year. 152(2) The annual report must include— (a) water quantity monitoring results required under section 153 of this plan; (b) details of the impact of infrastructure operation on water quality as required under section 154 of this plan; (c) a discussion about any issues that arose as a result of the implementation and application of the rules and requirements of this plan.	Compliant with ROP	s152(1) and s152(2)(c): Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. s152(a): In 2010-2011, Seqwater are implementing a program to improve and upgrade hydrometric information management within the organisation. This will enable it to better meet daily, quarterly and annual reporting requirements. In addition, some infrastructure upgrades/installations will be undertaken (to be finalised by December 2014) to meet various monitoring requirements under this ROP (please refer to Attachment S, Table 14 at end of document). The requirements set out in this particular section will be incorporated as part of both those programs, with an anticipated finalisation date of December 2014. s152(b): Seqwater will report in accordance with this requirement for relevant infrastructure listed in Attachment S from 1 July 2010. Refer ss153 and 154 for further detail.	30 June 2011 – December 2014.
Water quantity monitoring – Annual Report 153 The resource operations licence holder must include in the annual report under section 152— (a) a summary of announced allocation determinations, including— (i) an evaluation of the announced allocation procedures and outcomes; and (ii) the date and value for the initial announced allocation and for each change made to an announced allocation; (b) instances where critical water sharing arrangements have been implemented— (i) an evaluation of the effectiveness of the	Compliant with ROP	Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. Updated Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). In 2010-2011, Seqwater are implementing a program to improve and upgrade hydrometric information management within the organisation. This will enable it to better meet daily, quarterly and annual reporting requirements. In addition, some infrastructure upgrades/installations will be undertaken (to be finalised by December 2014) to meet various monitoring requirements under this ROP (please refer to Attachment S, Table 14 at end of document). The requirements set out in this particular section will be incorporated as part of both those programs, with an anticipated finalisation date of December 2014.	30 June 2011 – December 2014.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
arrangements and outcomes; and (II) the commencement date(s) and effective period of the arrangements; (c) releases from infrastructure—records referred to in section 138; (d) for the water year, the total annual volume of water taken by each water user, specified by zone, namely— (I) the total volume of water taken; (II) the total volume of water entitled to be taken; and (III) the basis for determining the volume entitled to be taken; (e) details of seasonal water assignments, namely— (i) the total number of seasonal water assignment arrangements; and (ii) the total volume of water seasonally assigned; (f) all details of changes to infrastructure or the operation of the infrastructure that may impact on compliance with rules in this plan; and (g) details of any new monitoring devices used such as equipment to measure stream flow.			
Impact of infrastructure operation on natural ecosystems – Annual report 154 The resource operations licence holder must include in the annual report under section 152— (a) a summary of environmental considerations made by the resource operations licence holder in making operational and release decisions; (b) a summary of the environmental outcomes of the decision including any adverse environmental impacts; (c) a summary of bank condition and fish stranding monitoring and assessment, including— (i) results of investigations of bank slumping or erosion identified in ponded areas or downstream of infrastructure; (ii) results of investigations of fish stranding downstream of infrastructure; and (iii) changes to the operation of infrastructure to reduce instances of bank slumping, erosion or fish stranding; (d) a discussion and assessment of the following water quality issues— (I) thermal and chemical stratification in each water storage associated with infrastructure; (II) contribution of the water storage and its management to the quality of water released; (III) cumulative effect of successive water storages associated with infrastructure on water quality; (IV) cyanobacteria population changes in response to stratification in each water storage; and (V) any changes to the monitoring program as a result of evaluation of the data.	154(a) Compliant with ROP (compliant with IROL and Reporting Standards) 154(b) Not compliant with ROP. Not currently reported 154(c) Not compliant with ROP. Not currently reported, dam safety site inspections carried out in dam wall and embankment 154(d)(i) Not compliant with ROP. Not currently reported. 154(d)(ii) Not compliant with ROP. Not currently reported. 154(d)(III) Not compliant with ROP. Not currently reported. 154(d)(IV) Not compliant with ROP. Not currently reported. 154(d)(V) Not compliant with ROP. Not currently reported.	s154(a-c): Process for reporting instances of fish standing and bank slumping will be progressively implemented beginning 1 July 2010 with finalisation by December 2011. Ponded area bank inspections for erosion are currently being undertaken on a weekly basis. Seqwater will add interim downstream visual bank inspections to weekly surveillance inspections with results collated quarterly and reported (commencing 1 July 2010 and implemented by September 2010). These interim downstream visual inspections will allow to the distance of influence of infrastructure for each storage to be determined and an appropriate monitoring and inspection program to be implemented (commencing December 2010 and fully implemented by December 2011). s154(d): Seqwater will report in accordance with this requirement for relevant infrastructure listed in Attachment 5 from 1 July 2010. Refer s152 for further detail.	1 July 2010 – December 2011.
Operational Report 155 The resource operations licence holder must— (a) notify the chief executive within one business day of becoming aware of any of the following operational incidents— (I) a non-compliance by the resource operations holder with the rules in this plan; and (II) instances of fish stranding or bank slumping within the ponded areas or downstream of	Compliant with ROP	Seqwater will submit operational reports as required, commencing for the 2010/2011 water year. s155(a)(ii): Process for reporting instances of fish standing and bank slumping will be progressively implemented beginning 1 July 2010 with finalisation by December 2011. Ponded area bank inspections for erosion are currently being undertaken on a weekly basis. Seqwater will add interim downstream visual bank inspections to weekly surveillance inspections with results collated quarterly and reported (commencing 1 July 2010 and implemented by September 2010). These interim downstream visual inspections will allow to the distance of influence of infrastructure for each storage to be determined and an appropriate monitoring and inspection program to be implemented (commencing December 2010 and fully implemented by December 2011). Updated Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the	1 July 2010 – December 2011.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
infrastructure listed in Attachment 5 or watercourses associated with the operation of the Logan River Water Supply Scheme; (b) provide to the chief executive a report which includes details of— (i) the incident; (ii) conditions under which the incident occurred; and (iii) any responses or activities carried out as a result of the incident; (c) notify the chief executive upon commencement and cessation of (i) critical water sharing arrangements; and (ii) any stream flow period; (d) notify the chief executive on approval of any seasonal water assignment and transfer information including— (i) the name and location of the assignees and assignors; and (ii) the zone or zones where water is being seasonally assigned to and from. (e) notify the chief executive upon making a decision relating to an initial announced allocation and/or its recalculation; (f) transfer to the chief executive— (i) details of any arrangements for addressing circumstances where the resource operations licence holder is unable to supply water allocations under subsection (e); and (ii) relevant supporting information used in making a decision under subsection (e).		commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	
Emergency report 156 In an emergency where the resource operations licence holder cannot comply with a rule in this plan as a result of the emergency, the resource operations licence holder must— (a) notify the chief executive upon discovery of the emergency; and (b) provide to the chief executive a report that includes— (i) details of the emergency; (ii) conditions under which the emergency occurred; (iii) any responses or activities carried out as a result of the emergency; and (iv) any rules specified in this plan that the resource operations licence holder is either permanently or temporarily unable to comply with due to the emergency.	Compliant with ROP	Seqwater will submit emergency reports as required, commencing for the 2010/2011 water year.	1 July 2010.

Attachment 5, Table 14 –Locations where continuous time series infrastructure water level and stream flow data are required.

Location	Continuous time series infrastructure water level data	Continuous time series flow data	Programs Currently in Existence	Interim Program, including Methodology	Timetable
Maroon Dam inflow		Y	Not continuous and no reporting.	An inflow model is being developed and will be available by 1 July 2010.	1 July 2010.
Maroon Dam headwater	Y		Continuous Data supplied by SunWater.	Headwater levels currently continuously monitored by Seqwater via telephone and radio telemetry.	1 July 2010.
Maroon Dam tailwater		Y	Not compliant with ROP. Daily stream flow data provided by SunWater with average daily flow and river heights.	Tailwater levels currently continuously monitored by Seqwater via telephone.	30 December 2010.
Bromelton Weir headwater	Y		Continuous data provided by SunWater.	Headwater levels are continuously monitored by Seqwater via telephone and radio telemetry.	1 July 2010.
Bromelton Weir tailwater		Y	Continuous data provided by SunWater	Tailwater levels are continuously monitored by Seqwater via telephone.	1 July 2010.
Bromelton Off-stream Storage	Y		Not continuous	Headwater levels are monitored onsite via SCADA. Seqwater are in the process of installing an ALERT gauge at the site for continuous monitoring. Regular gauge board readings are made for verification.	1 July 2010.
Cedar Grove Weir headwater	Y		Not continuous	A flow meter monitors the flow through the fishway and through the outlet valve via the onsite SCADA. Flows over the spillway crest will be estimated from a rough rating. A staff gauge will be installed to enable verification observations by December 2010 and a continuous gauge by July 2012.	July 2012.
Cedar Grove Weir tailwater		Y	Not continuous. Cedar Grove Weir, SCADA provides daily totals of release via fishway and outlet, stream ELs only as viewed when on site or trendable.	Tailwater gauge to be installed at the site by July 2012.	July 2012.
South Maclean Weir headwater	Y		Continuous data (at pumpstation) provided by SunWater. South Maclean Weir, Headwater gauge not tied to Weir level only height at upstream pump intakes for South Maclean WTP.	Outlet may occur via fishway, outlet valve (not normally used) and over the spillway crest. There is a gauge board but it and the telephone telemeter need to be adjusted to be consistent with the crest spillway level (to be finalised by December 2014).	December 2014.
South Maclean Weir tailwater		Y	Continuous data (at pumpstation) provided by SunWater. No tailwater gauging or flow meter at present.	No tailwater gauge installed and no intention for installation. Flow from the weir will be estimated via headwater level and weir rating which would need to be developed.	December 2014.

Appendix B

Seqwater Interim Program Report Moreton Resource Operations Plan

The Moreton Resource Operations Plan (the ROP) commenced on 7 December 2009. The Queensland Bulk Water Supply Authority (trading as Seqwater) is the Resource Operations Licence Holder under the ROP for the following Water Supply Schemes:

- Central Brisbane River Water Supply Scheme;
- Pine Valleys Water Supply Scheme; and
- Stanley River Water Supply Scheme.

Where Seqwater, as the ROL holder, is unable to meet requirements of the ROP, a structured process is available whereby a statement of programs currently in existence can be prepared and submitted to the Department of Environment and Resource Management, to be followed by an Interim Program. The box below sets out the relevant provisions under the ROP.

Relevant ROP Requirement

Interim Program

s13(1) The chief executive and the resource operations licence holder must implement requirements of this plan as soon as is practical within the timeframes stated below.
s13(2) Subsections 3 to 11 apply where a resource operations licence holder is unable to meet the requirements of this plan on the day this plan commences.
s13(3) The resource ooperations licence holder must –

(c) within 2 months of commencement of this plan, submit a statement of programs currently in existence, to the chief executive for approval; and
(d) **within 6 months of commencement of this plan, submit a program for meeting the requirements of this plan to the chief executive for approval, including a timetable and interim methods to be used.**

s13(4) The resource operations licence holder may, where an emergency or operational incident results in an inability to comply with any rules or requirements of this plan, submit an interim program for meeting the requirements of this plan to the chief executive for approval, **including timetable and interim methods to be used.**
s13(5) Where the submitted program relates to the Water Monitoring Data Collection Standards, the program must include the accuracy of methods currently used.
s13(6) The chief executive, in considering any submitted program, may request additional information.
s13(7) The chief executive, in considering any submitted program, may either–

(d) approve the program with or without conditions;
(e) amend and approved the amended program; or
(f) require the resource operations licence holder to submit a revised program.

s13(8) Within 10 business days of making a decision on a program submitted under this section the chief executive must notify the resource operations licence holder of the decision.
s13(9) Following approval of the program by the chief executive, the resource operations licence holder must–

(c) implement and operate in accordance with the approved program; and
(d) make public details of the approved program on their internet site.

s13(10) Where there is conflict between the provisions of this plan and the provisions of an approved program, the approved program prevails for the time that the approved program is in place.
S13(11) Where this section applies, the resource operations licence holder may continue to operate under the existing program until the program submitted under this section is approved.

Seqwater submitted a Statement of Current Programs to DERM on 5 February 2010, in accordance with Section 13 of the ROP.

The following document sets out Seqwater's Interim Program for the Moreton ROP, as provided for under s13 of the ROP. It is submitted to the Department of Environment and Resource Management for approval.

Seqwater Interim Program – Moreton Resource Operations Plan

Current as at Current as at December 2010

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Departmental water monitoring data collection standards 11(1) Where this plan required monitoring by a resource operations licence holder, including measurement, collection, analysis and storage of data, the resource operations licence holder must ensure the monitoring is consistent with the Water Monitoring Data Collection Standards.	Refer ss151-160.	There is currently limited monitoring of listed infrastructure under the ROP, however, a review will be undertaken (due for a staged completion, with final stage completed by 1 March 2012) to ensure monitoring is consistent with the Queensland Government Water Monitoring Data Collection Standards. The following sets out the timeline for the review: North Pine Dam: Review 1 July 2010; Implementation 1 September 2010 Sideling Creek Dam: Review 1 July 2010; Implementation 1 September 2010 Wivenhoe Dam: Review 1 October 2010; Implementation 1 January 2011 Somerset Dam: Review 1 October 2010; Implementation 1 January 2011 Enoggera Dam: Review 1 October 2011; Implementation 1 January 2012 Gold Creek Dam: Review 1 October 2011; Implementation 1 January 2012 Caboolture River: Review 1 January 2012; Implementation 1 March 2012	**Actual date:** 1 Sep 2010 **Actual date:** 1 Sep 2010 **Actual date:** 1 Sep 2010 **Actual date:** 1 July 2010 1 September 2010 - 1 March 2012.
Departmental water monitoring data reporting standards 12(1) Where this plan requires transfer of data or reporting by a resource operations licence holder the resource operational licence holder must ensure the transfer or reporting is consistent with the Water Monitoring Data Collection Standards.	Refer ss161-167.	Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards (Feb 2007) to its current reporting procedures.	Refer ss151-167.
Central Brisbane River and Stanley River Water Supply Schemes – Operating levels for infrastructure 72(3) The resource operations licence holder must not release water from any infrastructure unless the release is necessary to— (d) meet minimum flow rates in section 75; or (e) supply downstream demand.	Releases made for operational purposes and water quality and ecosystem health including fish management	Seqwater will continue to make releases from infrastructure for consumption, flood mitigation, operational maintenance and fish recovery/maintenance.	Nil.
Central Brisbane River and Stanley River Water Supply Schemes – Streamflow Requirement 75 When critical water sharing arrangements are not in force, the resource operations licence holder must release a minimum flow of 8.64ML/day from Mount Crosby Weir.	No operational outlet works at Mt Crosby Weir, therefore no managed releases made.	As there are no operable outlet works at Mt Crosby Weir (and cannot be implemented without significant investment, including possible reconstruction of the weir), overflows are dependent upon releases from Wivenhoe and projected water supply demands and local inflows, the latter two components being outside Seqwater control. As a result, Seqwater has very limited control over releases from Mt Crosby Weir on a daily basis. As such, it is proposed that this requirement be deemed as satisfied if a minimum average flow of 8.64ML/day (for any given month) flows over Mt Crosby Weir, rather than a minimum flow of 8.64ML/day (for any given day).	Seqwater would be compliant with a requirement for a minimum average flow of 8.64ML/day for any given month from 1 July 2010. Compliance is not able to be achieved for a minimum flow of 8.64Ml/day for any given day.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Central Brisbane River and Stanley River Water Supply Schemes – Announced Allocations 76 The resource operations licence holder must— (b) calculate an announced allocation for each priority group for use in defining the share of water available to be taken under water allocations in that priority group; (c) use the water sharing rules specified in this part to calculate announced allocations throughout the water year; (d) calculate and set the announced allocation for each priority group to take effect on the first day of each water year; (e) following the commencement of a water year— (i) recalculate the announced allocation to take effect no later than 5 business days following the first day of the month; (ii) reset the announced allocation if a recalculation indicates that the recalculated announced allocation would— (A) for medium priority water allocations increase by 10 or more percentage points; (B) for high priority water allocations increase by 5 or more percentage points; or (C) increase to 100 per cent. (f) within 5 business days of setting an announced allocation under subsection 1(c) or the first calendar day of every month when resetting the announced allocation under subsection 1(d)— (i) publish details of the announced allocation; and (ii) make public details of the announced allocation, including parameters for determining the announced allocation, on the resource operations licence holder's internet site; (g) not reduce the announced allocation during a water year; (h) round the announced allocation to the nearest whole percentage point (i) not set an announced allocation that is greater than 100 per cent.	Not compliant with ROP (no programs currently in existence – MP customers transferred to Seqwater on ROP gazettal)	New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 1/12/2011 – Announced Allocation processes and procedures were implemented as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Central Brisbane River and Stanley River Water Supply Schemes – Announced Allocations for Medium Priority Water Allocations 77(1) The announced allocation for medium priority water allocations in the Central Brisbane River Water Supply Scheme is the announced allocation percentage stated in Attachment 5, Table 5, column 2 corresponding to the combined percentage of useable volume in storage of Wivenhoe and Somerset dams stated in Attachment 5, Table 5, column 1. 77(2) the combined percentage of useable volume in storage of Wivenhoe and Somerset dams must be calculated using the following formula— SPUVS = ((UVWivenhoe+UVSomerset)/CUFSV)*100 77(3) The parameters used in the formula for combined percentage of volume in storage are defined in Attachment 5, Table 6.	Not compliant with ROP (no programs currently in existence – MP customers transferred to Seqwater on ROP gazettal) Please note: the volume stored in Split Yard Creek Dam may influence the Announced Allocation.	New Medium Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 1/12/2011 – Announced Allocation processes and procedures were implemented as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Central Brisbane River and Stanley River Water Supply Schemes – Announced Allocation for 'High Priority A' Water Allocations 78 (1) The announced allocation for 'High Priority A' water allocations within the Central Brisbane River Water Supply Scheme must be as follows— (c) 100 per cent when the combined percentage of useable volume in storage of Wivenhoe and Somerset dams is greater than or equal to 25 per cent or (d) when the combined percentage of useable volume in storage of Wivenhoe and Somerset dams is less than 25 per cent, the announced allocation percentage for 'High Priority A' water allocations must be calculated using the following formula— AAHPA=((UV-(AAMP*MPA)+DIVHPA+DIVMP)/HPAA)*100 78(2) The parameters used in the formula for announced allocation are defined in Attachment 5, Table 4. 78(3) For subsection 1 the combined percentage of useable volume in storage of Wivenhoe and Somerset dams must be calculated using the formula in	Not compliant with ROP (no programs currently in existence)	New High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 1/12/2011 – Announced Allocation processes and procedures were implemented as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
section 77(2) of this plan.			
Central Brisbane River and Stanley River Water Supply Schemes – Critical Water Sharing Arrangements 80(1) Critical water sharing arrangements are in force when the combined percentage of the volume of water in storage in Wivenhoe and Somerset Dams is less than 15 percent. 80(2) During times when critical water sharing arrangements are in force the resource operations licence holder must— (a) cease making releases from Mount Crosby Weir under section 75 of this plan; (b) when at the start of the water year the combined percentage of useable volume in storage of Wivenhoe and Somerset dams is less than 15 per cent, set the announced allocation for medium priority water allocations in the Central Brisbane River Water Supply Scheme to zero per cent; and 80(3) For subsection 1 the combined percentage of volume of water in storage for Wivenhoe and Somerset Dams must be calculated using the formula in section 77(2) of this plan.	Compliant with ROP	New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). Announced Allocation processes and procedures (including adjustments to incorporate Critical Water Sharing Arrangements) have been in place as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Central Brisbane River and Stanley River Water Supply Schemes – Seasonal water assignment rules 88(1) The resource operations licence holder may approve a seasonal assignment of a volume of water provided that the total volume of water use in a water year for each zone will not exceed the maximum allowable water use volume in Attachment 5, Table 9 for each zone. 88(2) The resource operations licence holder is responsible for dealing with applications for seasonal water assignment where the resource operations licence holder distributes water to the assignee.	Compliant with ROP	Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place for all schemes from 1 July 2010, however, it should be noted that Seasonal Water Assignments in the Central Brisbane River Water Supply Scheme are connected to implementation of a metering program (anticipated to take until December 2012). Advice will be provided to customers that where two parties wish to enter into a seasonal assignment transaction, that both parties will require a water meter, unless the selling party can demonstrate that they have no active water extraction or usage.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010 Please note: Metering program to be undertaken in close consultation with Mid-Brisbane Irrigators (likely to take until December 2012).
Pine Valleys Water Supply Schemes – Operating Levels for Infrastructure 97(1) The operating levels for the infrastructure in the Pine Valleys Water Supply Scheme are specified in Attachment 6, Table 1. 97(2) The resource operations licence holder must not release or supply water from any infrastructure when the water level in that infrastructure is at or below its minimum operating level. 97(3) The resource operations licence holder must not release water from any infrastructure unless the release is necessary to supply downstream demand and is made in accordance with this plan.	Not compliant with ROP (releases made for operational purposes and for water quality and ecosystem health including fish management)	s97(1): Attachment 6, Table 1 incorrectly specifies the Minimum Operating Level for North Pine Dam as EL 14.2m AHD and Minimum Operating Volume as 2100ML. The correct Minimum Operating Level is EL 12.8m AHD and the correct Minimum Operating Volume is 1310ML. 1/12/2010 – Confirmation required s97(2): Seqwater will continue to release or supply water from North Pine Dam in accordance with the correct Minimum Operating Level of EL 12.8m AHD rather than the incorrect Minimum Operating Level of EL 14.2m AHD as specified in Attachment 6, Table 1. Seqwater requests DERM correct this error in the ROP. s97(3): Seqwater will continue to make releases from infrastructure for consumption, flood mitigation, operational maintenance and fish recovery/maintenance.	Nil.
Pine Valleys Water Supply Schemes – Announced Allocations 100 The resource operations licence holder must— (a) calculate an announced allocation for each priority group for use in defining the share of water available to be taken under water allocations in that priority group; (b) use the water sharing rules specified in this part to calculate announced allocations throughout the water year; (c) calculate and set the announced allocation for each priority group to take effect on the first day of each water year; (d) following the commencement of a water year— (i) recalculate the announced allocation to take effect no later than 5 business days following the first day of the month; (ii) reset the announced allocation if a recalculation indicates that the recalculated announced allocation would— (A) for high priority water allocations increase by 5 or more percentage points; or (B) increase to 100 per cent (e) within 5 business days of setting an announced allocation under subsection 1(c) or the first calendar day of every month when resetting the announced allocation under subsection 1(d) make public details of the announced allocation, including parameters for determining the announced allocation, on the resource operations	Compliant with ROP	New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). 1/12/2011 – Announced Allocation processes and procedures were implemented as at 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010 **Status:** Complete

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
licence holder's internet site for the Pine Valleys Water Supply Scheme; (f) not reduce the announced allocation during a water year; (g) round the announced allocation to the nearest whole percentage point; and (h) not set an announced allocation that is greater than 100 per cent. 101(1) The announced allocation for 'High Priority A' water allocations in the Pine Valleys Water Supply Scheme must be as follows— (a) 100 per cent when the level of water in storage in North Pine Dam is greater than E.L. 29.3m AHD; and (b) When the water level of water in storage in North Pine Dam is equal to or less than E.L. 29.3m AHD the announced allocation percentage for high priority water allocations must be calculated using the following formula— AAHPA=[(UV+DIVHPA)/HPAA)*100 101(2) The parameters used in the formula for announced allocations are defined in Attachment 6, Table 2. 102 The total volume of water taken under a water allocation in a water year must not exceed the nominal volume of the water allocation multiplied by the announced allocation and divided by 100.			
Pine Valleys Water Supply Schemes – Critical Water Sharing Arrangements 103(1) Critical water sharing arrangements are in force when the water level in North Pine Dam is equal to or less than E.L. 29.3m AHD. 103(2) During times when critical water sharing arrangements are in force the resource operations licence holder must calculate the announced allocation for high priority water allocations in accordance with section 101(1)(b) of this plan.	Compliant with RP	New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). New High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Pine Valleys Water Supply Schemes – Seasonal Water Assignment Rules 110(1) The resource operations licence holder may approve a seasonal assignment of a volume of water provided that the total volume of water use in a water year for each zone will not exceed the maximum allowable water use volume in Attachment 6, Table 3 for each zone. 110(2) The resource operations licence holder is responsible for dealing with applications for seasonal water assignment where the resource operations licence holder distributes water to the assignee.	Compliant with ROP	Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place by 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Resource operations licence holder monitoring and reporting – Monitoring data must be made available 151 The resource operations licence holder must provide any monitoring data required under this chapter to the chief executive upon request and within the time requested.	Compliant with ROP	1/12/2011 ROP reporting requirements will be provided within required timeframes. For requests outside of ROP reporting waiting period of 7-14 days applies. Longer waiting periods may apply depending on the detail of the request.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010 (please note waiting periods).
Monitoring requirements – Streamflow and infrastructure water level 152(1) The resource operations licence holder must record water level and volume and stream flow data in accordance with Attachment 9, Table 1. 152(2) Infrastructure inflows may be determined based upon an infrastructure inflow derivation technique supplied by the resource operations licence holder and approved by the chief executive.	Not compliant with ROP (ALERT data available for Baxters Ck and Dayboro WWTP)	152(2) Consistent inflow derivation methodology will be developed by July 2011 for all storages. In the interim, existing methodology inherited from previous asset owners will be used where in existence. Please refer to Attachment 9, Table 1 at end of document.	1 July 2010 – July 2011.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Monitoring requirements – Releases from infrastructure 153(1) This section applies to the following infrastructure— (a) Cressbrook Dam; (b) Mount Crosby Weir; (c) North Pine Dam; (d) Perseverance Dam; (e) Somerset Dam; and (f) Wivenhoe Dam. 153(2) The resource operations licence holder must measure and record for each release of water from infrastructure listed in subsection 1— (a) the daily volume released; (b) the release rate and for each change in release rate— (I) the date and time of the change; and (II) the new release rate; (c) the reason for each release; and (d) the device used for each release. 153(3) The resource operations licence holder for infrastructure mentioned in subsection 1(c) and 1(f) must record— (a) the inlet level used for each release of water; and (b) the reason for taking water via a particular inlet level.	153(1)(b) No measured releases made 153(1)(c) Operational Log ex SunWater system 153(1)(e) Operational Log ex SunWater system 153(1)(f) Operational Log ex SunWater system 153(2) Data is recorded in Operational Log 153(3) Data is recorded in Operational Log	153(1)(b): No operable outlet works exist at Mount Crosby Weir and cannot be implemented without significant investment. Releases are not made – only overflows, which are monitored and recorded. As such, it is proposed Seqwater report the overflows in compliance with ss153(2) and 153(3) instead of releases since none are made.	1 July 2010 (note: overflows and not releases will be reported for Mt Crosby Weir).
Monitoring requirements – Announced allocations 154 The resource operations licence holder must record details of announced allocation determinations including— (d) the announced allocations for medium and high priority water allocations; (e) the date announced allocations are determined; and (f) the value of each parameter applied for calculating the announced allocation.	Compliant with ROP	New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Monitoring requirements – Water taken by water users 155 The resource operations licence holder must record the total volume of water taken, by each water user for each zone as follows— (a) the total volume of water taken in each quarter; (b) the total volume of water entitled to be taken at any time; and (c) the basis for determining the total volume of water entitlement to be taken at any time.	Only HP water take measured – no meters for measuring MP water take	Full compliance with these requirements for the Central Brisbane River Water Supply Scheme is dependent on the development and implementation of a metering program within the Scheme (anticipated to be an ongoing program which will need to be implemented in close consultation with the Mid-Brisbane irrigators, and will likely take until December 2012). All other schemes will be compliant from 1 July 2010. In the interim water estimations will consist of a quarterly mailout of recording sheets, specifying the requirement for recording volumes of water taken, plus supporting information, with submission of the recording sheets on a quarterly basis. The quarterly mailout will be a prompt for customers to submit their records. Advice will also be given of the Seqwater position that where records are not received that it will be assumed that 25% of the customer's water entitlement has been used for that quarter, and that this will be recorded as such.	1 July 2010 for all schemes except Central Brisbane River Water Supply Scheme (anticipated to take until December 2012, with log sheets to be distributed in the first quarter after approval of the interim program).
Monitoring requirements – Seasonal water assignment of water allocations 156 The resource operations licence holder that approves a seasonal water assignment must record details of seasonal water assignment arrangements including— (a) the name of the assignee, volume and location of water that has been seasonally assigned by an assignor; (b) the name of the assignor, volume and location of the water that has been seasonally assigned to an assignee; and (c) the effective date of seasonal water assignments.	Compliant with ROP	Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place for all schemes from 1 July 2010, however, it should be noted that Seasonal Water Assignments in the Central Brisbane River Water Supply Scheme are connected to implementation of a metering program (anticipated to take until December 2012 – please refer to ss88 and 164 for further detail).	1 July 2010 for all schemes except Central Brisbane River Water Supply Scheme (anticipated to take until December 2012).
Monitoring requirements – Critical water sharing arrangements 157 The resource operations licence holder must record details of critical water sharing arrangements including the following— (c) the commencement date(s) and effective period of critical water sharing arrangements; and (d) the effectiveness of the critical water sharing arrangements.	Compliant with ROP	New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Monitoring requirements – Water Quality 158 the resource operations licence holder must monitor and record water quality data in relation to relevant infrastructure listed in Attachments 5, 6 and 7.	Somerset Dam **Inflow:** None. Quality monitoring and recording is event-related only. Water quality meters are DERM infrastructure.	Seqwater is currently compliant with the monitoring requirements for Wivenhoe Dam and Mt Crosby Weir (with the exception of tailwater monitoring since the downstream area is estuarine) and will be reported from 1 July 2010. North Pine Dam requires some parameter additions to the inflow site on the North Pine River and the addition of a	1 January 2011.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
	Headwater: Real-time telemetered VPS pH, Cond., Turb., Chl, BGA, DO; Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO; Monthly (SB) – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, H2S, DOC, TOC, NH4, NOX, FRP, TN, TP, silica, Chl a, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** Fortnightly – Total Cyano, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, DOC, TOC, NH4, NOX, FRP, TN, TP, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. <u>Wivenhoe Dam</u> **Inflow** – (Caboonbah): Fortnightly – Total Cyanobacteria, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. Monthly (SB) – Total Cyanobacteria, EC, TC, Chl a, Fe, Mn, true colour, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Headwater:** Real-time telemetered VPS pH, Cond., Turb., Temp., Chl, BGA, DO Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly (SB) – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, H2S, DOC, TOC, NH4, NOX, FRP, TN, TP, silica, Chl a, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour,TSS, DOC, TOC, NH4, NOX, FRP, TN, TP, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. <u>North Pine Dam</u> **Inflow:** None. Quality monitoring and recording is event-related only. **Headwater:** Real-time telemetered VPS pH, Cond., Turb., Temp., Chl, BGA, DO Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly (SB) – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, H2S, DOC, TOC, NH4, NOX, FRP, TN, TP, silica, Chl a, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** None. <u>Mt Crosby Weir (also TS sampling)</u> **Inflow:** Kholo: Fortnightly – total phytoplankton, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO.	tailwater site to be compliant with the ROP requirements. Seqwater is currently reviewing the North Pine Monitoring Program which will include the requirements under the ROP (scheduled for completion by 1 July 2010) and will be implemented by 1 September 2010 (including training, reporting and scheduling). In the interim, additional parameters will be added to the existing gauging and water quality site on the North Pine River to be sampled on a monthly basis as follows: • Inflow: electrical conductivity, temperature, dissolved oxygen, pH, turbidity, total nutrients, dissolved nutrients • Tailwater: electrical conductivity, temperature, dissolved oxygen, pH, turbidity, total nutrients, dissolved nutrients, total sulphides Somerset Dam requires the addition of an inflow site on the Stanley River. The Somerset Dam Monitoring Program Review is scheduled for completion on 1 October 2010, with implementation (including training, reporting and scheduling) by 1 January 2011. Mt Crosby Weir requires the addition of an tailwater site on the Brisbane River. The Wivenhoe Dam Monitoring Program Review is scheduled for completion on 1 October 2010, with implementation (including training, reporting and scheduling) by 1 January 2011.	

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
	Headwater: Fortnightly – Total Cyano, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly – Total Cyano, EC, TC, Chl a, Fe, Mn, true colour, TSS, DOC, TOC, NH4, NOX, FRP, TN, TP, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** None, estuarine		
Monitoring requirements – Bank condition 159(1) The resource operations licence holder must inspect banks for evidence of collapse or erosion within the ponded areas and downstream of the relevant infrastructure listed in Attachments 5, 6 and 7 following instances of— (d) rapid water level changes; (e) large flows through infrastructure; or (f) other occasions when collapse or erosion of banks may be likely. 159(2) For subsection 1, downstream of the relevant infrastructure means the distance of influence of infrastructure operations.	Compliant with ROP	Ponded area bank inspections for erosion are currently being undertaken on a weekly basis. Seqwater will add interim downstream visual bank inspections to weekly surveillance inspections with results collated quarterly and reported (commencing 1 July 2010 and implemented by September 2010). These interim downstream visual inspections will allow the distance of influence of infrastructure for each storage to be determined and an appropriate monitoring and inspection program to be implemented (commencing December 2010 and fully implemented by December 2011).	1 July 2010 – December 2011.
Reporting requirements 161 The resource operations licence holder must provide— (a) quarterly reports; (b) annual reports for the previous water year; (c) operational reports; and (d) emergency reports.	Compliant with ROP	Refer ss162-167	Refer ss162-167.
Reporting requirements – Quarterly Report 162(1) The resource operations licence holder must submit a quarterly report to the chief executive after the end of each quarter, of every water year. 162(2) The report must contain the following data— (g) stream flow and infrastructure water levels—all records referred to in section 152 of this plan; (h) the total volume of water for each quarter— (iii) taken for each zone; (iv) entitled to be taken from each zone; (i) water quality—all records referred to in section 158 of this plan; (j) a summary of bank condition monitoring and incidences of slumping, undertaken in accordance with section 159 of this plan; and (k) the details and status of any programs implemented under section 13 of this plan.	Compliant with ROP	Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards (Feb 2007) to its current reporting procedures. Commencing 1 July 2010 the following will be implemented: • ROP datasets will be supplied quarterly, as required under the ROP. • ROP Compliance Report will be submitted with the quarterly reporting process, including exceptions to ROP requirements and an update on the Interim Program, as required under the ROP. Results of weekly bank condition monitoring will be collated quarterly and reported, with progressive implementation commencing 1 July 2010 and fully implemented by December 2011. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to ss152, 158 and 159 for further details.	1 July 2010 – December 2011.
Reporting requirements – Annual Report 163(1) The resource operations licence holder must submit an annual report to the chief executive after the end of the water year. 163(2) The annual report must include— (d) water quantity monitoring results required under section 164 of this plan; (e) details of the impact of infrastructure operation on water quality as required under section 164 of this plan; (f) a discussion about any issues that arose as a result of the implementation and application of the rules and requirements of this plan.	Compliant with ROP	Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to s164 for further details.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Reporting requirements – Water quantity monitoring – Annual Report 164 The resource operations licence holder must include in the annual report under section 163— (h) A summary of announced allocation determinations, including— (iii) an evaluation of the announced allocation procedures and outcomes; and (iv) the date and value for the initial announced allocation and for each change made to an announced allocation; (i) instances where critical water sharing arrangements have been implemented— (iii) an evaluation of the announced allocation procedures and outcomes; and (iv) the commencement date(s) and effective period(s) for each stage of the arrangements and outcomes; (j) records from infrastructure—records referred to in section 153; (k) the total annual volume of water taken by each water user, specified by zone, namely— (iv) the total annual volume of supplemented water taken; (v) the total annual volume of supplemented water entitled to be taken; and (vi) the basis for determining the volume entitled to be taken; (l) details of seasonal water assignments, namely— (iii) the total number of seasonal water assignments arrangements; and (iv) the total volume of water seasonally assigned; (m) all details of changes to infrastructure or the operation of the infrastructure that may impact on compliance with rules in this plan; and (n) details of any new monitoring devices used such as equipment to measure stream flow.	Compliant with ROP	Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to ss76, 77, 78, 80, 88, 100, 101, 103, 110, 153, 155, 156 and 157 for further detail. s164(a): New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). s164(b): New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). s164(c): No operable outlet works exist at Mount Crosby Weir and cannot be implemented without significant investment. Releases are not made – only overflows, which are monitored and recorded. As such, it is proposed Seqwater report the overflows in compliance with ss153(2) and 153(3) instead of releases since none are made. Please refer to s153 for further details. ss164(d-e): Compliance with these requirements for the Central Brisbane River Water Supply Scheme is dependent on the development and implementation of a metering program within the Scheme (anticipated to be an ongoing program and will need to be implemented in close consultation with the Mid-Brisbane irrigators, timeframe likely to take until December 2012). All other schemes will be compliant from 1 July 2010. ss164(f-g): Seqwater will be compliant with these requirements from 1 July 2010.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010 ss164(a-b, f-g): 1 July 2010. s164(c): 1 July 2010 (note: overflows rather than releases will be reported for Mt Crosby Weir). Please refer to s153 for further details. s164(d-e): 1 July 2010 – December 2012. Please refer to ss88, 155 and 156 for further details.
Reporting requirements – Impact of infrastructure operation on natural ecosystems – Annual report 165 The resource operations licence holder must include in the annual report under section 163— (e) a summary of environmental considerations made by the resource operations licence holder in making operational and release decisions; (f) a summary of the environmental outcomes of the decision including any adverse environmental impacts; (g) a summary of bank condition and fish stranding monitoring and assessment, including— (iv) results of investigations of bank slumping or erosion identified in ponded areas or downstream of infrastructure; (v) results of investigations of fish stranding downstream of infrastructure; and (vi) changes to to the operation of infrastructure to reduce instances of bank slumping, erosion or fish stranding; (h) a discussion and assessment of the following water quality issues— (vi) thermal and chemical stratification in each water storage associated with infrastructure; (vii) contribution of the water storage and its management to the quality of water released; (viii) cumulative effect of successive water storages associated with infrastructure on water quality; (ix) cyanobacteria population changes in response to stratification in each water storage; and (x) any changes to the monitoring program as a result of evaluation of the data.	Compliant with ROP	Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to ss 158 and 159 for further details.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010
Reporting requirements – Operational Report	Compliant with ROP	ss166(a)(i), (b): Seqwater will submit operational reports as required, commencing for the 2010/2011 water year.	**Projected date:** 1 July 2010.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
166 The resource operations licence holder must— (g) notify the chief executive within one business day of becoming aware of any of the following operational incidents— (iii) a non-compliance by the resource operations holder with the rules in this plan; and (iv) instances of fish stranding or bank slumping within the impounded areas or downstream of infrastructure listed in Attachment 9, Table 1 or watercourses associated with the operation of the Central Brisbane River, Cressbrook Creek, Pine Valleys and Stanley River water supply schemes; (h) provide to the chief executive a report which includes details of— (iv) the incident; (v) conditions under which the incident occurred; and (vi) any response or activities carried out as a result of the incident; (i) notify the chief executive upon commencement and cessation of critical water sharing arrangements; and (j) notify the chief executive on approval of any seasonal water assignment, including— (iii) the name and location of the assignees and assignors; and (iv) the zone or zones where water is being seasonally assigned to and from; (k) notify the chief executive upon making a decision relating to an initial announced allocation and/or its recalculation; (l) transfer to the chief executive— (iii) details of any arrangements of addressing circumstances where the resource operations licence holder is unable to supply water allocations under subsection (c); and (iv) relevant supporting information used in making a decision under subsection (e).		s166(a)(ii): Process for reporting instances of fish standing and bank slumping will be progressively implemented beginning 1 July 2010 with finalisation by December 2011. Ponded area bank inspections for erosion are currently being undertaken on a weekly basis. Seqwater will add interim downstream visual bank inspections to weekly surveillance inspections with results collated quarterly and reported (commencing 1 July 2010 and implemented by September 2010). These interim downstream visual inspections will allow to the distance of influence of infrastructure for each storage to be determined and an appropriate monitoring and inspection program to be implemented (commencing December 2010 and fully implemented by December 2011). s166(c): New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). s166(d): Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place for all schemes from 1 July 2010, however, it should be noted that Seasonal Water Assignments in the Central Brisbane River Water Supply Scheme are connected to implementation of a metering program (anticipated to take until December 2012 – please refer to ss88 and 164 for further detail). s166(e-f): New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	**Actual date:** 1 July 2010
Reporting requirements – Emergency report 167 In an emergency where the resource operations licence holder cannot comply with a rule in this plan as a result of an emergency, the resource operations licence holder must— (c) notify the chief executive upon discovery of the emergency; and (d) provide to the chief executive a report that includes— (v) details of the emergency; (vi) conditions under which the emergency occurred; (vii) any responses or activities carried out as a result of the emergency; and (viii) any rules specified in this plan that the resource operations licence holder is either permanently or temporarily unable to comply with due to the emergency.	Compliant with ROP	Seqwater will submit emergency reports as required, commencing for the 2010/2011 water year.	**Projected date:** 1 July 2010. **Actual date:** 1 July 2010

Attachment 8, Table 1 – Water Allocation Schedule

Relevant ROP Requirement	Programs Currently In Existence	Interim Program, including Methodology	Timetable
Water Allocation Number 137: Brisbane Zone, Any Purpose, 25ML, High Class A Priority, "This authorisation was authorised to continue under section 360ZDP of the *Water Act 2000*.	The map in Attachment 2(b) of the ROP does not include Somerset Dam, where part of this water allocation has always been taken. Due to the boundaries of the Brisbane Zone, this allocation is currently being taken outside of the specified zone in the ROP.	The zone where this entitlement has been issued does not include Somerset Dam, where part of this water allocation has always been taken. Due to the boundaries of the Brisbane Zone, this allocation is currently being taken outside of the specified zone in the ROP.	
Water Allocation Number 139: Mid-Brisbane Zone, Any Purpose, 150ML, Medium Priority, "This authorisation was authorised to continue under section 360ZDP of the *Water Act 2000*.	In accordance with current take of water from the Mid-Brisbane zone.		

Attachment 9 – Resource operations licence holder monitoring: Locations where continuous time series height and flow data and storage water level data are required.

Location	Continuous time series storage water level data	Continuous time series flow data	Programs Currently in Existence	Interim Program, including Methodology	Timetable
Mount Crosby Weir inflow		Y	Not continuous	A daily inflow derivation model is being developed which will incorporate outflow from Wivenhoe Dam, flow from Lockyer Creek and local area, change in Mt Crosby water levels and local irrigation and water supply demands.	1 July 2011
Mount Crosby Weir headwater level	Y		Continuous	Water level is monitored via ALERT to a 20mm resolution.	1 July 2010.
Mount Crosby Weir tailwater		Y	Not continuous	Downstream of Mt Crosby Weir is tidal and, as such, a downstream gauging station will not provide estimates of river flow. Releases are not made from Mt Crosby Weir and any flow through the fish way and over the weir crest will provide an estimate of the flow from the weir.	Estimate of flow from the weir in place by 30 December 2010.
North Pine Dam inflow		Y	Not continuous	A new daily inflow model is being developed and will be available by 1 July 2011	1 July 2011
North Pine Dam headwater level	Y		Continuous	Compliant.	1 July 2010.
North Pine Dam tailwater		Y	Not continuous	Water level is monitored continuously at the Dayboro Rd WPS Weir about 1km downstream of North Pine Dam. At present, this is only available via SCADA and is not rated. Until the rating is developed and equipment installed at the site to enable remote monitoring, flow downstream of North Pine Dam can be estimated from the gate and valve openings at the Dam (anticipated for July 2011). A rating can be developed for the Dayboro Rd Weir based on recorded flows and heights.	July 2011.
Somerset Dam inflow		Y	Not continuous	A new daily inflow model is being developed and will be in place by 1 July 2011	1 July 2011
Somerset Dam headwater level	Y		Continuous	Compliant.	1 July 2010.
Somerset Dam tailwater		Y	Not continuous	Somerset Dam tailwater is affected by levels in Wivenhoe Dam. When full, the water in Wivenhoe back up to the toe of Somerset Dam. As such, a tailwater gauge is considered inappropriate. Outflows from Somerset can be estimated from the recorded openings of the gates, sluices and valves at the dam.	Nil
Wivenhoe Dam inflow		Y	Not continuous	A new daily inflow model is being developed and will be available by 1 July 2011	1 July 2011
Wivenhoe Dam headwater level	Y		Continuous	Compliant.	1 July 2010.
Wivenhoe Dam tailwater		Y	Not continuous	Please note: Water level is continuously monitored and recorded via ALERT and on-site logger with a resolution of 20mm which is owned by DERM not Seqwater (143035A). The site is rated but can be affected by backwater from Lockyer Creek. Discharge from the dam can also be estimated via the rated gates and valves. Since the gauge is owned by DERM, Seqwater will not undertake monitoring for tailwater at this site.	Seqwater will not undertake monitoring for tailwater at this site since the gauge is owned by DERM (143035A).

Scheme	Zone	Date	Location	Description	Comment
BRISBANE	BNSMB	2/10/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	9/10/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	16/10/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	23/10/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	30/10/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	6/11/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	13/11/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	20/11/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	18/12/2010	Wivenhoe Dam	Routine visual inpection	
BRISBANE	BNSMB	25/12/2010	Wivenhoe Dam	Routine visual inpection	
LRWSS	LRS_E	1/10/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	LRS_E	1/10/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	2/10/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	9/10/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	9/10/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	16/10/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	16/10/2010	Maroon Dam	Routine visual inpection	
LRWSS	BUCSA	17/10/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	23/10/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	LRS_E	30/10/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	30/10/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	6/11/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	LRS_E	13/11/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	13/11/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	20/11/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	20/11/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	27/11/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	27/11/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	4/12/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	4/12/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	11/12/2010	Bromelton Off Stream Storage	Routine visual inpection	
LRWSS	BUCSA	11/12/2010	Maroon Dam	Routine visual inpection	
LRWSS	BUCSA	17/12/2010	Maroon Dam	Routine visual inpection	
LRWSS	BUCSA	18/12/2010	Maroon Dam	Routine visual inpection	
LRWSS	LRS_E	25/12/2010	Bromelton Off Stream Storage	Routine visual inpection	Flood Debris removed
LRWSS	BUCSA	25/12/2010	Maroon Dam	Routine visual inpection	
NEWSS	NESNE	9/10/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	16/10/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	16/10/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	23/10/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	23/10/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	30/10/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	6/11/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	13/11/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	20/11/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	27/11/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	4/12/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	11/12/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	18/12/2010	Little Nerang Dam	Routine visual inpection	
NEWSS	NESNE	25/12/2010	Little Nerang Dam	Routine visual inpection	

PINE	PISNP	2/10/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	9/10/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	16/10/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	23/10/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	5/11/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	6/11/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	13/11/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	20/11/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	27/11/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	4/12/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	18/12/2010	North Pine Dam	Routine visual inpection
PINE	PISNP	25/12/2010	North Pine Dam	Routine visual inpection
STANLEY	STANS	2/10/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	6/10/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	16/10/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	23/10/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	30/10/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	19/11/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	20/11/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	27/11/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	3/12/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	11/12/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	18/12/2010	Somerset Dam	Routine visual inpection
STANLEY	STANS	25/12/2010	Somerset Dam	Routine visuel inpection

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

SEQWATER INCIDENT REFERENCE	INIR- 1515 (4)

Notification Report Submitted By:
Queensland Bulk Water Supply Authority (QBWSA) Trading as Seqwater Karalee Regional Office PO Box 2437 North Ipswich Q 4305

Contact:	
Karen Burgh ROP ROL Coordinator	
Telephone:	[redacted]
Facsimile:	
Email:	

Date of Submission	31 May 2011

As per the Resource Operations Licences (ROL) and/or Interim Resource Operations Licences (IROL), Seqwater wishes to report the following updated information to DERM. All due care and diligence has been applied to ensure the accuracy of the information provided.

Seqwater is not aware of any non-compliance by it with the rules in the Resource Operations Plan with regard to water releases for flood mitigation purposes from Wivenhoe Dam. Such releases are authorised by Seqwater's Interim Program, approved under section 13 of the Moreton ROP on 3 December 2010.

Incident Information	
This report is the fourth update to the incident report submitted for the January 2011 floods on Thursday, 25 March detailing instances for the January 2011 Floods.	
Area:	South East Queensland Region
Type of Incident:	Various
Location of Incident:	Various
Classification: (Minor/Moderate/Major)	Various

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Incident Reference Information	
Dam Operations Coordinator:	Murray Dunstan – North Region Jayam Tennakoon – Central Region Craig Duncan – South Region
Details of alert notification previously sent to DERM	**From:** Karen Burgh **Sent:** Friday, 21 January 2011 11:06 AM **To:** [redacted] **Subject:** Alert Notification/ Operational & Incident Reports January 2011 Floods_Brisbane River, Bremer River, Warrill Creek and Lockyer Creek **Importance:** High
Details of Incident Report submissions to DERM	▪ **Initial Report / Ref: INIR-1515** **From:** Karen Burgh **Sent:** Thursday, 3 February 2011 5:46 PM **To:** 'Vanderheijde Karin'; Latham Will; Cock Don; Bass Bruce; Miller George; Hundy Fred **Subject:** Incident Report_January 2011 Floods_030211 ▪ **Update 1 / Ref: INIR-1515 (2)** **From:** Karen Burgh **Sent:** Friday, 25 March 2011 2:50 PM **To:** 'Vanderheijde Karin'; 'Latham Will'; 'Cock Don'; 'Miller George' **Subject:** Incident Report Update_January 2011 Floods_250311 ▪ **Update 2 / Ref: INIR-1515 (3)** **From:** Karen Burgh **Sent:** Friday, 29 April 2011 4:41 PM **To:** 'Vanderheijde Karin'; 'Latham Will'; 'Cock Don'; 'Miller George' **Subject:** Incident Report_January 2011 Floods_Updated 290411

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Detail of Incident	
Date of Incident:	4/01/2011 to 20/01/2011
Time of Incident:	Not applicable
Raised By:	Karen Burgh
Details of incident:	Details where the collection of data may not be consistent with Queensland Government Water Monitoring Data Reporting Standards or the monitoring responsibilities of the ROP/IROL are in attachment one (1) to eight (8). Operational procedures in accordance with Seqwater's 'Flood Mitigation Manual for Wivenhoe and Somerset Dams', prepared and approved under chapter 4, part 2 of the Water Supply (Safety and Reliability) Act 2008, were undertaken from 4/1/2011 to 20/01/2011. Operational procedures under the FLOOD MITIGATION MANUAL and in accordance with the approved INTERIM PROGRAM under the Moreton ROP led to instances of fish stranding and bank slumping within relevant areas.
Short Term Actions	
Immediate actions taken to manage the incident	Various issues are being investigated and reported as information becomes available. Monitoring devices used to record or measure water quantity and quality data have been reviewed. Preliminary surveys and assessments are being carried out to review and assess remedial works at each site. Procedures from Seqwater Fish Recovery Manuals were adhered during the January events.
Further Investigations	
Findings	For an update on issues raised, current investigations and findings, refer to attachment 1 to 8. A summary of minor fish recovery events are detailed in Appendix A.
Current Status:	**In progress**
Next Report Update:	**30 June 2011**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 1

Release from Storages							
ROP/ IROL	Catchment	CODE	SCHEME NAME	RELEASED FROM	RELEASED TO	Actions	Findings
ROP	Moreton Basin	165	Central Brisbane	Mt Crosby Weir	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status:** **Closed 27/04/2011**
ROP	Moreton Basin	377	Central Brisbane	Wivenhoe Dam	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status:** **Closed 27/04/2011**
ROP	Moreton Basin	334	Pine River	North Pine Dam	North Pine River	Flood operations applied to North Pine Dam intermittently from 9/10/2010 to approximately 20/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status:** **Closed 27/04/2011**
ROP	Moreton Basin	354	Stanley River	Somerset Dam	Wivenhoe Dam	Flood operations applied to Somerset Dam between 7/1/2011 to approximately 18/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status:** **Closed 27/04/2011**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 2

Storage Heights								
ROP/ ROL	**Catchment**	**Scheme Name**	**Site ID**	**Site Location**	**G/S**	**Alert**	**Actions**	**Findings**
ROP	Logan Basin	Logan River	116	Logan R. at Bromelton Weir H/W	145025A		Remedial works completed.	Site Operational **Status: Closed 3/3/2011**
ROP	Logan Basin	Logan River	555	South Maclean Weir HW	145023A		Remedial works completed.	Site Operational **Status: Closed 26/5/2011**
ROP	Moreton Basin	Central Brisbane	568	Mt Crosby Weir HW	143003A	540199	Remedial works completed.	Site operational **Status: Closed 30/05/2011**
IROL	Moreton Basin	Central Lockyer	111	Laidley Ck at Showground Weir H/W	143225A		Remedial works completed.	Site operational **Status: Closed 3/3/2011**
IROL	Moreton Basin	Warrill Valley	106	Warrill Ck at Junction Weir H/W	143117A		Remedial works completed.	Site operational **Status: Closed 30/05/2011**
IROL	Moreton Basin	Warrill Valley	103	Warrill Ck at Churchbank Weir H/W	143105A		Remedial works completed.	Site operational **Status: Closed 30/05/2011**

Attachment 3

Stream Height							
ROP/ROL	**CATCHMENT**	**Scheme Name**	**Site ID**	**Description**	**G/S**	**Actions**	**Findings**
ROP	Logan Basin	Logan River	117	Logan R. at Bromelton Weir T/W	145024A	Remedial works completed.	Site Operational **Status:** **Closed 03/03/2011**
IROL	Mary River Basin	Upper Mary	102	Yabba Ck at Borumba Dam T/W	138119A	Scoping for remedial works in progress	Damaged Sensor. **Status:** In progress
IROL	Moreton Basin	Warrill Valley	105	Reynolds Ck at Moogerah T/W	143103B	Remedial works completed.	Site Operational **Status:** **Closed 3/03/2011**
IROL	Moreton Basin	Warrill Valley	107	Warrill Ck at Junction Weir T/W	143118A	Remedial works completed.	Site Operational **Status:** **Closed 3/05/2011**
ROP	Moreton	Brisbane	564	Brisbane River and Wivenhoe Dam TW	143035A	Remedial works in progress	Major damage to capillary. Scoping for remedial works in progress **Status:** In progress

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 4

Stream Flows [1]						
ROP/IROL	**Catchment**	**Scheme**	**Site ID**	**Description**	**Actions**	**Findings**
ROP	Logan Basin	Logan River	117	Logan R. at Bromelton Weir T/W	Remedial works completed.	Site Operational **Status: Closed 03/03/2011**
IROL	Mary River Basin	Upper Mary	102	Yabba Ck at Borumba Dam T/W	Scoping for remedial works in progress	Damaged Sensor. **Status:** In progress
IROL	Moreton Basin	Warrill Valley	105	Reynolds Ck at Moogerah T/W	Remedial works completed.	Site Operational **Status: Closed 3/03/2011**
IROL	Moreton Basin	Warrill Valley	107	Warrill Ck at Junction Weir T/W	Remedial works completed.	Site Operational **Status: Closed 27/05/2011**
ROP	Moreton	Brisbane	564	Brisbane River and Wivenhoe Dam TW	Remedial works in progress	Major damage to capillary. **Status:** In progress

[1] Rating reviews may be required

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 5

Stream Bank Monitoring						
IROL ROP	Catchment	Storage Code	Scheme Name	Storage Site	Actions	Findings
ROP	Logan	2195	Logan River	Bromelton Weir	No risk to infrastructure at present, despite erosion below rock protection mattress and d/s repairs awaiting remediation	Progress will be monitored and reported via annual reporting. **Status: Closed 28/04/2010**
ROP	Logan	2268	Logan River	Cedar Grove Weir	Erosion d/s is being monitored tri-weekly. No further changes or erosion has occurred.	Progress will be monitored and reported via annual reporting. **Status: Closed 28/04/2010**
ROP	Moreton	334	Pine River	North Pine Dam	Remedial works have been scheduled and will progress after wet season for erosion at the toe of the flip bucket and fish passage d/s.	Progress will be reported via annual reporting. **Status: Closed 28/04/2010**
ROP	Moreton	377	Central Brisbane	Wivenhoe DAM	Discussions and investigations to rehabilitate eroded riverbeds (up to viewing platform) are in planning. Preliminary surveys and assessments have been scheduled.	Progress will be reported via annual reporting. **Status:** Closed 28/04/2010
ROP	Moreton	165	Central Brisbane	MT Crosby Weir	Technical surveys have been scheduled to assess the safe removal of debris before repair can take place.	Progress will be monitored and reported via annual reporting. **Status: Closed 28/04/2010**
IROL	Mary River	214	Baroon Pocket	Baroon Pocket Dam	Ongoing monitoring of the potential unstable areas, identified around the reservoir rim will continue	Progress will be monitored and reported via annual reporting. **Status: Closed 28/04/2010**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Stream Bank Monitoring						
IROL ROP	Catchment	Code	Scheme Name	Storage Site	Actions	Findings
IROL	Moreton	165	Lower Lockyer	Atkinson Dam	Preliminary surveys and assessments are in progress	Erosion throughout the water supply scheme including: Wilson's weir, Brightview Channel, Glenore Grove Weir, Jordans Weir, O'reily's weir **Status:** In progress
IROL	Mary River	173	Upper Mary	Borumba Dam	Awaiting preliminary report to recommend options for stabilising eroded areas.	Some significant damage to downstream toe of dam and downstream access roads. Some considerable landslips on the left hand side of spillway. No risk to infrastructure at present. **Status:** In progress
IROL	Mary River	239	Upper Mary	Cedar Pocket Dam	Site has been assessed for remedial works. Erosion noted on the LHS bank d/s of the spillway.	On going monitoring in place. There will be no repairs undertaken at Cedar Pocket dam due to limited damage. **Status:** **Closed 27/03/2011**
IROL	Mary River		Upper Mary	Imbil Weir	Site has been assessed for remedial works.	No Damage. No repairs required **Status:** **Closed 07/03/2011**
IROL	Moreton	-	Warrill valley	Warrill Diversion Weir	Site was assessed for remedial works. Bank erosion up to approx 20mtres downstream of the weir on both sides of the embankment.	Embankment repairs complete. On going monitoring in place. **Status:** **Closed 27/03/2011**

Attachment 6

Water Quality							
ROP /IROL	Catchment	Code	Scheme	Site Location	Freq	Action	Findings
ROP	Moreton Basin	573	Pine River	North Pine Dam TW	M	Sampling resumed in February as required	**Status: Closed 10/03/2011**
ROP	Moreton Basin	565	Central Brisbane	Wivenhoe Dam HW	M	Sampling resumed in February as required	**Status: Closed 10/03/2011**
ROP	Moreton Basin	564	Central Brisbane	Wivenhoe Dam TW	M	Sampling resumed February as required.	**Status: Closed 10/03/2011**
ROP	Moreton Basin	568	Central Brisbane	Mt Crosby Weir HW	M	Sampling resumed February as required	**Status: Closed 10/03/2011**
ROP	Moreton Basin	567	Central Brisbane	Mt Crosby Weir TW	M	Sampling resumed February as required	**Status: Closed 10/03/2011**

Attachment 7

Water Diversions							
IROL /ROP	Scheme	Code	Water course	Zone from	Zone to	Actions	Findings
IROL	CENTRAL LOCKYER	CLIP	Redbank Creek Pump Station to Lake Clarendon	CL02	CL02	Site under investigation for remedial works.	Damage to Pumps. Limited to approximately 30% capacity to divert **Status:** In progress

Attachment 8

Water Taken Requirements					
Scheme	**Zone**	**Zone Description**	**Usage Description**	**ML Allowed**	**Actions/Findings**
BRISBANE	BNSMB	Mid Brisbane Zone	QBWSA _ High	25	As part of the Moreton ROP implementation plan for Seqwater, a metering program is being developed to ensure allocation holders in the Mid Brisbane Zone are metered. For standardisation, all existing meters will be assessed for replacement. The Seqwater's Moreton ROP Interim Program was updated and submitted to DERM on the 27/08/2010. **Status:** **Closed 28/04/2011**
BRISBANE	BNSMB	Mid Brisbane Zone	QBWSA_Medium	150	
BRISBANE	BNSMB	Mid Brisbane Zone	SEQWGM_High_TWS	278725	
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_ High	250	
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_ Medium	80	
BRISBANE	BNSMB	Mid Brisbane Zone	Irrigation usage	6811	
LLIP	LL01	Lockyer Ck AMTD 36.4-43.5Km Brightview Weir Storage	Irrigation and other usage	1770	Site Operational **Status:** **Closed 27/05/2011**
LLIP	LL02	Lockyer Ck AMTD 15-36.4Km D/S Brightview Weir to Buaraba Ck Jn	Irrigation and other usage	3348	Site Operational **Status:** **Closed 27/05/2011**
LLIP	LL03	Lockyer Ck AMTD 1.4-15Km Buaraba Ck Jn to O'Reilys Weir	Irrigation and other usage	3010	Site Operational **Status:** **Closed 27/05/2011**
LLIP	LL04	O/S storage Atkinson Dam pounded, B/view Ch, Buaraba Supply Ch	Irrigation and other usage	2502	Site Operational **Status:** **Closed 27/05/2011**
LLIP	LL06	Woolshed Ck Woolshed Creek	Irrigation and other usage	284	Site Operational **Status:** **Closed 27/05/2011**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Water Taken Requirements					
Scheme	**Zone**	**Zone Description**	**Usage Description**	**ML Allowed**	**Actions/Findings**
LLIP	LL07	Blind Gully Blind Gully	Irrigation and other usage	316	Site Operational **Status:** **Closed 30/05/2011**
UPRMRY	MRY02	Mary River - from Yabba Creek junction with the Mary River to Bell's Bridge AMTD 226.7 - 161km)	Irrigation and other usage	8111	Pie Creek pump station cleared. There is some damage to a small number of customer meters. Customer meters have been scheduled for replacement. **Status:** **Closed 28/04/2011**

Appendix A

Table 1 – Total numbers of fish kills and recoveries for Wivenhoe and North Pine Dams

Fish Recoveries/Kill			For the Period of: 04/01/2011 to 10/03/2011				
Code	**Scheme**	**Storage**	**Dates**	**Findings**	**Total Recovery**	**Total kills**	**Comments**
377	Brisbane River	WIVENHOE DAM	19/01/2011	Flood releases.	220	41	High volume flow
377	Brisbane River	WIVENHOE DAM	20/01/2011	Flood releases.	274	34	High volume flow
377	Brisbane River	WIVENHOE DAM	02/03/2011	Flood releases.	100	60	Ceased flow
377	Brisbane River	WIVENHOE DAM	29/01/2011 to 30/01/2011	Flood releases.	36	3	Decreased flow
Sub Total for Wivenhoe Dam					**630**	**138**	
334	Pine River	NORTH PINE DAM	14/01/2011	Flood releases	269	159	High volume flow
334	Pine River	NORTH PINE DAM	18/01/2011	Flood releases	219	40	High volume flow
334	Pine River	NORTH PINE DAM	20/01/2011	Flood releases	148	116	High volume flow
334	Pine River	NORTH PINE DAM	21/02/2011	Flood releases	88	131	Increased movement of rocks
Sub Total for North Pine Dam					**724**	**446**	
323	Reynolds Creek	MOOGERAH DAM	3/02/2011	Flood event	Nil	350	High volume flow
Sub Total for Moogerah Dam					**0**	**350**	
Total numbers					**1350**	**934**	

Table 2 – Fish (species) count for **North Pine Dam** from 04/01/2011 to 10/03/2011

North Pine Dam

Fish Species	Number	
	Alive	Dead
Bass	27	7
Bony Bream	5	137
Eel Tailed Catfish	377	23
Lungfish	**50**	**0**
Mullet	14	3
Spangled Perch	129	58
Tilapia	0	204
Yellow Belly	122	14
Total	**724**	**446**

Table 3 – Fish (species) count for **Wivenhoe Dam** from 04/01/2011 to 10/03/2011

Wivenhoe Dam

Fish Species	Number	
	Alive	Dead
Bass	0	0
Bony Bream	70	0
Eel	200	0
Eel Tailed Catfish	5	0
Lungfish	**20**	**0**
Spangled Perch	85	15
Tilapia	155	8
Yellow Belly	45	0
Gar	0	115
Goldfish	50	0
Total	**630**	**138**

Table 4 – Fish (species) count for **Moogerah Dam** from 04/01/2011 to 10/03/2011

Moogerah Dam

Fish Species	Number	
	Alive	Dead
Bony Bream	Nil	340
Total	0	340

CTS No. 01652/11

TWW-5

Department of Environment and Resource Management
JOINT MINISTERIAL BRIEFING NOTE

TO: Minister for Environment and Resource Management

SUBJECT: Inspection of Environmental Impacts of Flooding in South East Queensland

REQUESTED BY

- Tim Watts of the Minister's Office requested this brief by 7 February 2011.

TIMEFRAME

- Approval/Noting of this brief is required by 7 February 2011..

RECOMMENDATION

It is recommended that the Ministers:

- **Note** the impact of flooding on land degradation, particularly streambank erosion and landslips in the Lockyer, upper Brisbane and Bremer catchments of Southeast Queensland.
- **Note** that an aerial inspection of both the Lockyer and Upper Brisbane catchments provides the most effective means of viewing these impacts prior to meeting with local stakeholders and industries.
- Are accompanied on the flight by DERM's Assistant Director-General for Science and Professor Jon Olley from Griffith University separate to a meeting with community and volunteer groups.

BACKGROUND

- On 2nd February 2011, Minister Robertson requested an itinerary to be prepared for both Ministers Robertson and Jones to view the environmental impact of the floods on riparian vegetation, stream banks, soil erosion in the Upper Brisbane River above Wivenhoe and in other relevant areas. The itinerary is expected to be 3-4 hours.
- The Minister also requested to be briefed on options for engaging the community and volunteers in environmental repair works to minimise damage from future high-flow events and restore the ecological and amenity values of watercourses.
- Three reconnaissance flights were conducted across the catchments in SEQ between 2nd to 4th February 2011. The aerial surveys were undertaken by scientific staff within Division of Environment and Resource Science within DERM, Griffith University and SEQ Catchments.

CURRENT ISSUES

- The aerial surveys reveal the extent and severity of land degradation caused by the flooding in Upper Brisbane, Lockyer and Bremer River systems.
- Erosion of stream banks and scouring along the creeks and river channels and landslips appear to be the primary forms of land degradation. Soil erosion by overland surface runoff in these catchments seems to be less extensive.
- Channel erosion, bank slumping and land slips appears to be more severe in the Lockyer catchment compared to the Upper Brisbane and Bremer catchments.
- Photographs from the survey of the Upper Brisbane catchment are provided in Attachment 1. Photographs from the Lockyer catchment are shown in Attachment 2.

Author	Cleared by	Cleared by
Name: Dr Paul Lawrence Position: Director Tel No: [redacted] Date: 7 January 2011	Name: Dr Christine Williams Position: Assistant Director-General ERS Tel No [redacted]	Name: Terry Wall Position: Associate Director-General Tel No: [redacted]
	Name: Position: Tel No:	Name: Position: Tel No:

File Ref:

- Given the nature of the degradation and distances involved, an aerial inspection rather than by driving or boating provides first hand details of the extent and impact of the affected catchments. It is recommended that the Ministers receive this overview of the processes and evidence of management practices prior to engaging with representatives from NRM Bodies and local community groups.
- A proposed itinerary for a flight across the Upper Brisbane catchment is provided in Attachment 3. The estimated round trip flying time is 1 ½ hours.
- A second itinerary which includes the Upper Brisbane and Lockyer catchments is provided in Attachment 4. The estimated flying time is 2 hours.
- It is desirable for the flight to leave from Archerfield airport and use a 4-passenger seat plane equipped with air conditioning.
- Dr Christine Williams, Assistant Director-General ERS DERM and Prof. Jon Olley, Griffith University Deputy Director Australian Rivers Institute are available to accompany the Ministers on the flight and provide details of the land degradation assessment project and expert advice on soil erosion processes and management options.
- The importance of the issue of landscape recovery is recognised in the Environment Road Map to Recovery, with several activities within 3.05 Landscapes relating to the identification of key areas of the landscape affected and the assessment of impact. ERS scientists will be providing the technical advice to NRM groups and other relevant stakeholders, including landholders, as to the key areas of focus for, and best approach to, remediation of these areas. This will involve not only on-ground assistance but technical support in using remote sensing imagery as part of the development of their recovery plans.

RESOURCE/IMPLEMENTATION IMPLICATIONS

- Cost to hire a commercial 4-seater plane is approximately $500-600 per hour, with an additional charge of approximately $500 to depart from Archerfield.
- DERM staff time will be allocated to the activities identified in the Road Map to Recovery, with resources required identified in the relevant activity project plans.

PROPOSED ACTION

- It is recommended that the aerial inspection of the Lockyer and Upper Brisbane catchments be undertaken and accompanied by Dr Christine Williams and Prof. Jon Olley.
- This inspection is designed to inform the Ministers of the flood impacts to stream banks, landslips and surface erosion, as well as on landholders and rural infrastructure.
- DERM staff have already met with Simon Warner of SEQ Catchments to discuss collaborations in field assessments and technical support in flood affected catchments of SEQ. The process of broader engagement with NRM groups will be discussed at the meeting with Geoff Penton, Queensland Murray Darling Committee on Thursday (10th February). DERM staff assistance may be best provided through training of key NRM staff on specific areas likely to be encountered in the regions, eg rehabilitation methods, gully and channel stabilisation and soil compaction.
- A whole of government approach requires the involvement of DEEDI, particularly for advice on agricultural extension issues and in regard to optimal design of agricultural operations, as requested by stakeholders at the Environment Recovery Sub-Group meeting on February 8th. DEEDI has not identified any available resources to undertake this work. The involvement of peak industry groups, such as QFF and AgForce, is also best coordinated through DEEDI, although DERM are happy to engage with them on landscape and water issues relating to the floods. Senior DERM staff will discuss this issue with senior staff in DEEDI.

Author	Cleared by	Cleared by
Name: Dr Paul Lawrence Position: Director Tel No: [redacted] Date: 7 January 2011	Name: Dr Christine Williams Position: Assistant Director-General ERS Tel No: [redacted] Name: Position: Tel No:	Name: Terry Wall Position: Associate Director-General Tel No: [redacted] Name: Position: Tel No:

File Ref:

OTHER INFORMATION

- As the proposed aerial inspection of the affected catchments is designed to inform the Ministers, it is recommended that the media not be involved.

ATTACHMENTS

1. Photos of Land Degradation within the Upper Brisbane catchment
2. Photos of Land Degradation within the Lockyer Creek catchment
3. Proposed flight itinerary for inspecting the Upper Brisbane catchment
4. Proposed flight itinerary to inspect the Upper Brisbane and Lockyer Creek catchments

[redacted] 9/2/11

Director-General

Approved Not approved Noted

Comments:

..... / /

Minister for Natural Resources, Mines and Energy and Minister for Trade

..... / /

Principal Advisor

Approved Not approved Noted

Comments:

[redacted] 18/2/11

..... / /

Minister for Climate Change and Sustainability

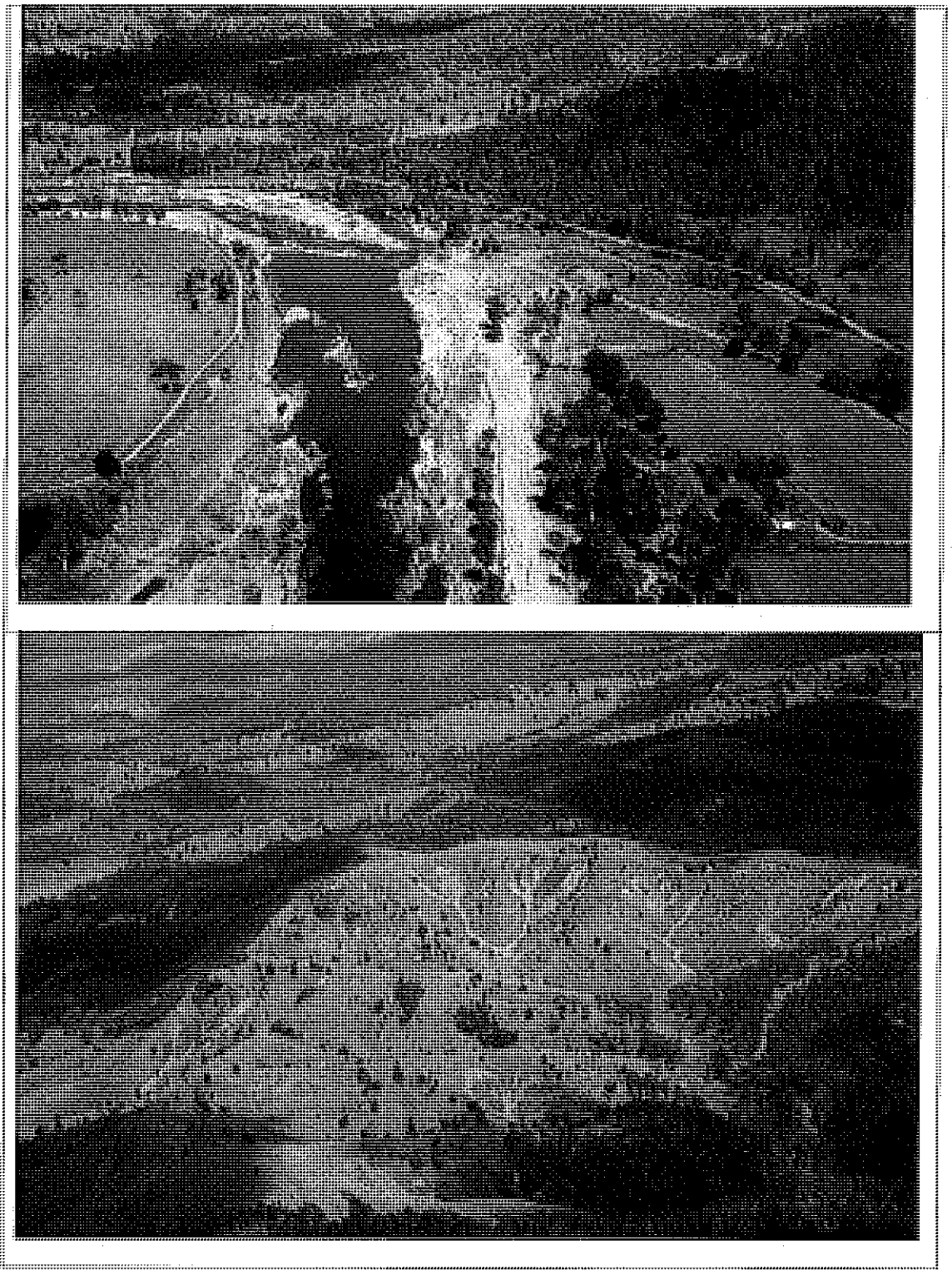
Principal Policy Advisor

Author	Cleared by	Cleared by
Name: Dr Paul Lawrence Position: Director Tel No: [redacted] Date: 7 January 2011	Name: Dr Christine Williams Position: Assistant Director-General ERS Tel No: [redacted]	Name: Terry Wall Position: Associate Director-General Tel No: [redacted]
	Name: Position: Tel No:	Name: Position: Tel No:

File Ref:

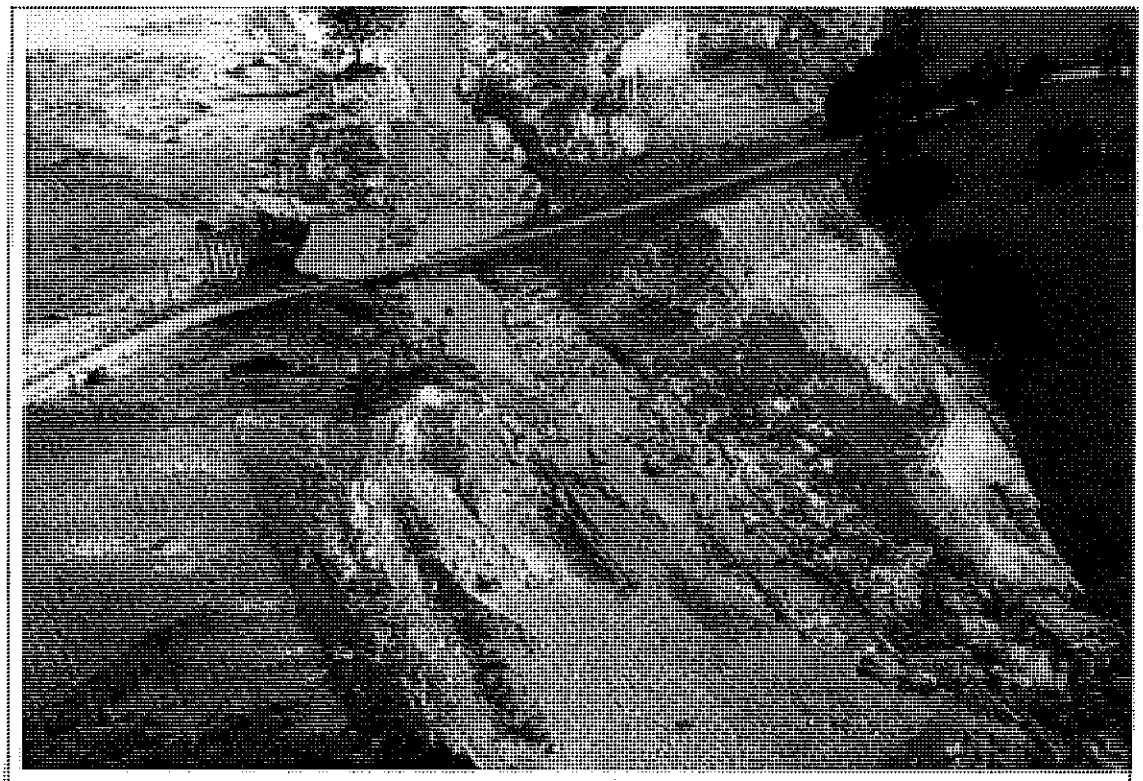
Attachment 1

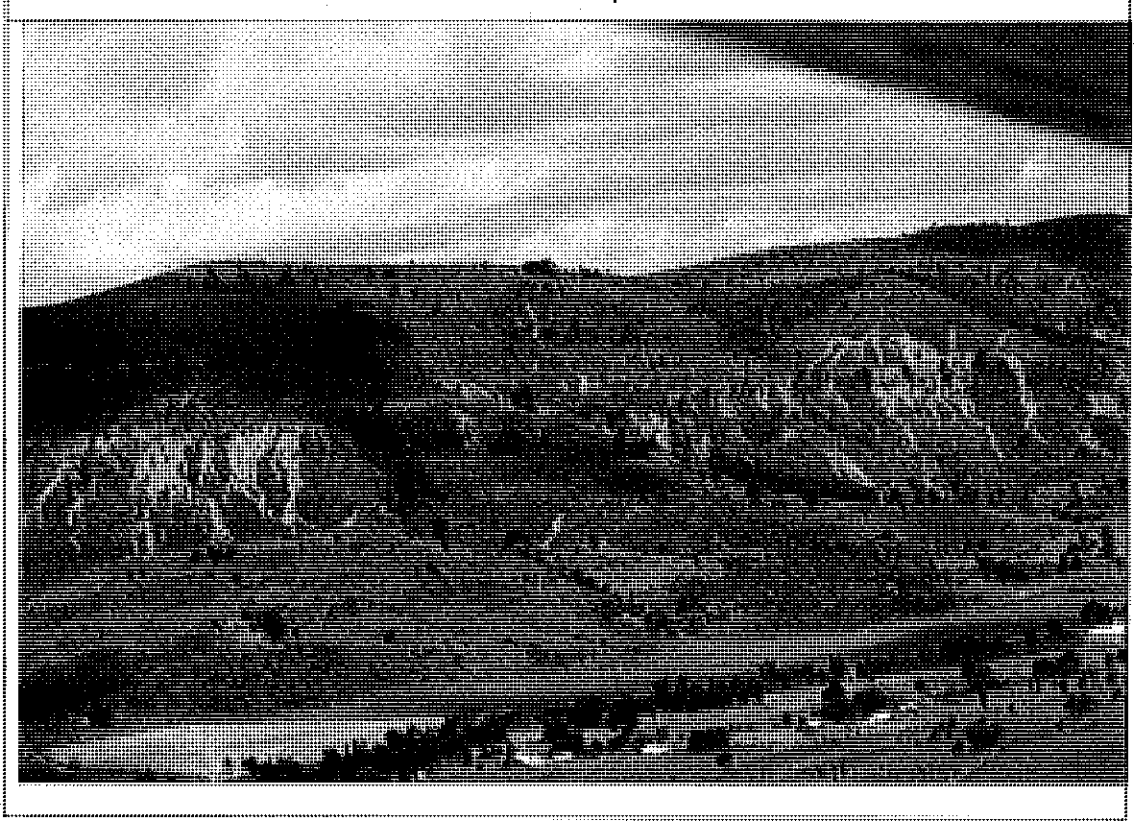
Photos of Land Degradation within the Upper Brisbane catchment



Attachment 2

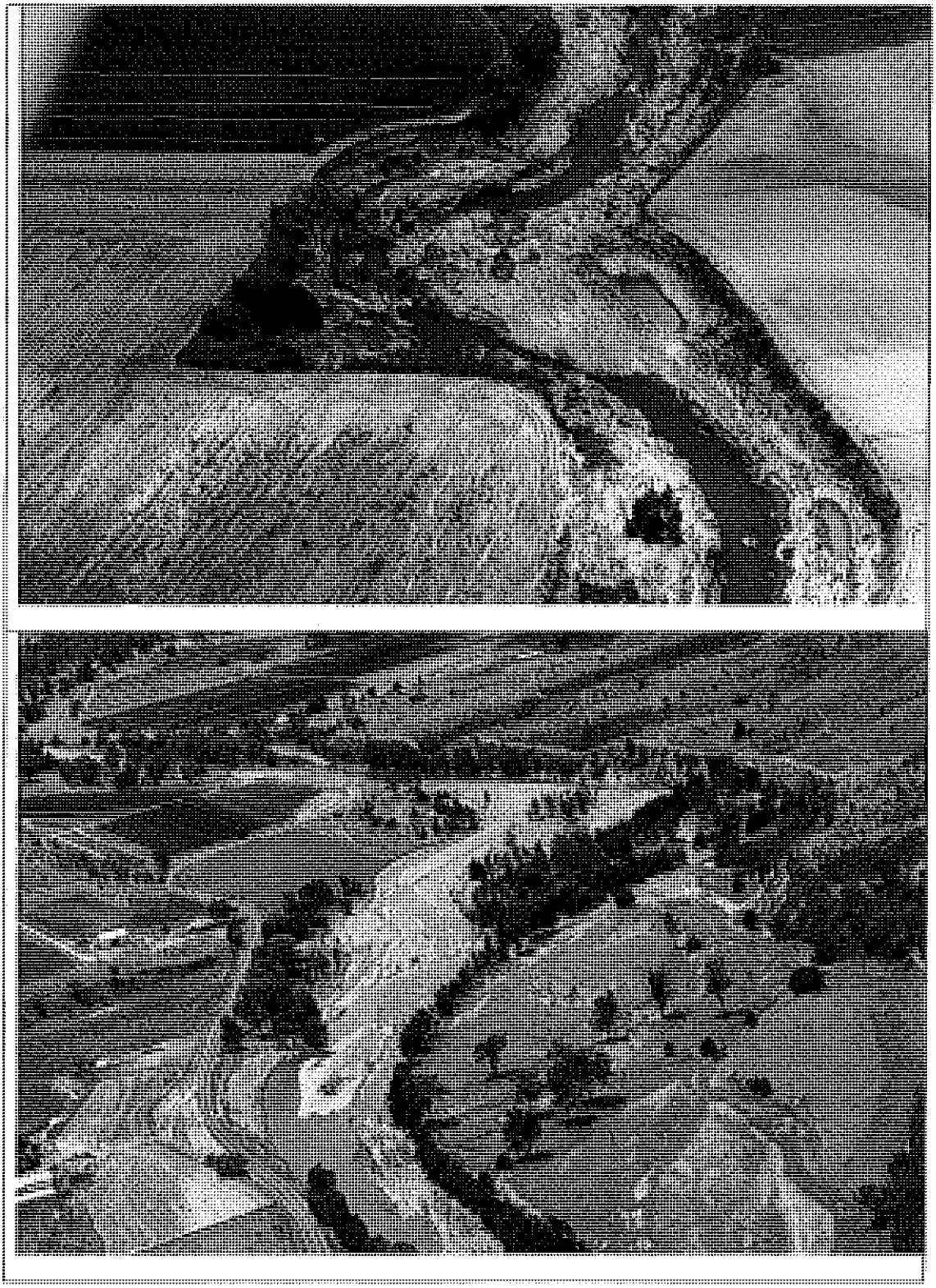
Photos of Land Degradation within the Lockyer Creek catchment





Attachment 2

Photos of Land Degradation within the Lockyer Creek catchment



Attachment 3

Proposed flight itinerary for inspecting the Upper Brisbane catchment

Time	Activity
8.00 am	Depart Archerfield airport. Accompanied by Dr Christine Williams, Assistant Director-General ERS DERM and Prof. Jon Olley, Griffith University Deputy Director Australian Rivers Institute.
8.30-10.00am	Inspection of land degradation areas within the Upper Brisbane catchment.
10.30am	Return to Acherfield

Proposed flight itinerary to inspect the Upper Brisbane and Lockyer Creek catchments

Time	Activity
8.00 am	Depart Archerfield Airport Accompanied by Dr Christine Williams, Assistant Director-General ERS DERM and Prof. Jon Olley, Griffith University Deputy Director Australian Rivers Institute.
8.30-10.30am	Inspection of land degradation areas within the Lockyer catchment and then Upper Brisbane catchment.
11.00 am	Return to Archerfield Airport

Author	Cleared by	Cleared by
Name: Dr Paul Lawrence Position: Director Tel No: [redacted] Date: 7 January 2011	Name: Dr Christine Williams Position: Assistant Director-General ERS Tel No: [redacted]	Name: Terry Wall Position: Associate Director-General Tel No: [redacted]
	Name: Position: Tel No:	Name: Position: Tel No:

File Ref:

Hon Kate Jones MP
Member for Ashgrove

Queensland Government

Minister for Environment
and Resource Management

Ref CTS 05163/11

10 MAY 2011

Mrs Dorothy Pratt MP
Member for Nanango
Shop 2/34 Alford Street
KINGAROY QLD 4610

[redacted]

Dear Mrs Pratt

Thank you for your letters of 7 and 21 March 2011 making representation on behalf of Mr Barry Dunning and other residents near Harlin, concerning the effects of recent flooding in the Brisbane River. Your email of 9 March 2011 to the Honourable Stirling Hinchliffe MP, Minister for Employment, Skills and Mining covering the same subject matter was also forwarded to me for reply.

I am advised that the Department of Environment and Resource Management is aware of the erosion caused by heavy flooding of the Brisbane River at Harlin. I am pleased to report that departmental officers met Mr Neil O'Conner, other locals and a representative of SEQ Catchments at the site on 10 March 2011. The officers observed the erosion of the riverbanks and land between the banks of the river previously used for grazing. The officers have also conveyed to me, the enormous power manifested by the flood waters in January. I am advised that during the inspection, advice was provided by the officers in relation to site specific riverine protection and remediation questions raised by those present at the meeting.

The department is also investigating allegations raised at the meeting regarding breaches of the *Water Act 2000* and *Sustainable Planning Act 2009* regarding nearby quarry operations in the river.

I hope this information is of assistance when replying to your constituent. Should you have any further enquiries, please do not hesitate to contact Mr Joshua Cooney, Principal Policy Advisor in my office on telephone 3239 0844.

Yours sincerely

Kate Jones MP
Minister for Environment and Resource Management

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CTS No. 05163/11

Department of Environment and Resource Management
MINISTERIAL BRIEFING NOTE

Advisor [redacted] OK
Dated 28 / 4 / 11
Approved Not Approved Noted
Further information required
Minister [redacted]
Dated 3 5 11

TO: Minister for Environment and Resource Management

SUBJECT: Brisbane River Erosion at Harlin

REQUESTED BY

- Minister's Office requested this brief by 1 April 2011. The response to this request has been delayed due to workload constraints and the need for consideration by numerous work units within South East Region.

TIMEFRAME

- Noting of this brief is non-urgent as the matter is already being addressed by the Department of Environment and Resource Management.

RECOMMENDATION

It is recommended that the Minister:

- **sign** the attached letter to the Hon Dorothy Pratt MLA (Attachment 1).

BACKGROUND

- This is a long-running issue for the department and was recently exacerbated as a result of the flooding in January 2011.
- Recent background is set out in the attached Departmental Liaison Officer responses (Attachment 2 CTS 01608/11 and Attachment 3 CTS 05811/11).

CURRENT ISSUES

- Local residents allege that nearby quarrying activities has led to increased velocities in the Brisbane River and this had increased erosion during the Brisbane River flood of 2011.
- On Thursday 10 March 2011, two departmental officers and an SEQ Catchments representative met a group of residents near Harlin to discuss these concerns.
- The officers saw, on four properties, erosion effects from flooding in the Brisbane River in January 2011, and also large scale stream bank slumping caused by rainfall-induced increases in tributary spring activity. Some damage to water pumps and pipes was also seen.
- Although some portions of the high banks of the Brisbane River at the site had been eroded, by far the larger areas which had been removed by flooding were grassed sandy areas inside the high banks of the river that are used for grazing. In one case, those areas appeared to have moved down to the junction of the Brisbane River and Neara Creek on a downstream property and were already beginning to show signs of re-grassing.
- The departmental officers saw no evidence to sustain the allegation that nearby quarrying activities caused an increase in the severity of erosion caused by the flood event.
- The residents also alleged that nearby quarries may have operated outside the limits of their development permits in terms of extraction above permit limits and beyond the boundary of the approved area. The department decided to investigate that allegation further.

Author	Cleared by	Cleared by	Recommended:
Name: Mike Thomas Position: Manager Tel No: [redacted] Date: 6 April 2011	Name: Andrew Connor Position: Regional Manager Tel No: [redacted] Name: Randall Hart Position: Regional Services Director, SER Tel No: [redacted]	Name: Mike Birchley Position: ADG RSD Tel No: [redacted] Name: Terry Wall Position: ADG OER Tel No: [redacted]	Name: John Bradley Director-General, DERM Tel No: [redacted] Date: [redacted] 12/4/11

File Ref:

- The residents sought and obtained advice from the two departmental officers and the SEQ Catchments representative about potential remedial actions for various aspects of the sites visited, including vegetation, erosion and slump management.
- The residents were appreciative of the visit by the department and SEQ Catchments and the meeting was cooperative and positive.

RESOURCE/IMPLEMENTATION IMPLICATIONS

- There are no resource or implementation implications.

PROPOSED ACTION

- The department will investigate boundary and gravel take allegations against the Karreman quarry operating at Harlin relevant to approvals under the *Sustainable Planning Act 2009* and *Water Act 2000*.

MINISTER'S COMMENTS

ATTACHMENTS

- Attachment 1 – Reply to Hon Dorothy Pratt MLA.
- Attachment 2 – First DLO response.
- Attachment 3 – Second DLO response.

Author	Cleared by	Cleared by	Recommended:
Name: Mike Thomas Position: Manager Tel No: [redacted] Date: 6 April 2011	Name: Andrew Connor Position: Regional Manager Tel No: [redacted] Name: Randall Hart Position: Regional Services Director, SER Tel No: [redacted]	Name: Mike Birchley Position: ADG RSD Tel No: [redacted] Name: Terry Wall Position: ADG OER Tel No: [redacted]	Name: John Bradley Director-General, DERM Tel No: [redacted] Date:

REGIONAL SERVICE DELIVERY DIVISION RESPONSE

[redacted]

REQUEST DATE: 31 January 2011

SUBJECT: Neil O'Conner – Erosion at Emu Creek.

REQUEST: Minister Robertson's office has been contacted by residents near Harlin on the Brisbane River above Wivenhoe, who have concerns in relation to gouging and changes in the course of the river that have occurred as a result of the recent flooding. It would be appreciated if the Department of Environment and Resource Management contact Mr Neil O'Conner, the unofficial spokesperson for the group to provide advice and assistance. Additionally, please arrange for a site inspection for the quarry to assess any impacts and notify of the arrangements for this inspection.

RESPONSE:

- Mr Mike Thomas, Manager, Logan, Scenic Rim and Redlands, Regional Service Delivery contacted Mr O'Conner on 31 January 2011.
- Mr O'Connor reported concerns among local residents about in-stream quarrying activities at Emu Creek and at two Karreman Quarry sites near the D'Aguilar highway on the Brisbane River and at Gregors Creek.
- Mr O'Connor mentioned that the residents had attended a meeting with Mr Shayne Newman MP, the local Federal Member of Parliament.
- Mr O'Connor was concerned that the department had lied to him in 1974 about quarry development in the area.
- Mr O'Conner asked for the department to send an officer to inspect the sites in the company of other residents.
- Mr O'Conner wants all of the quarries to be closed down immediately.
- Mr Thomas told Mr O'Connor that immediate closure of the quarries was unlikely; however, the department would send an officer out to inspect the sites and meet the residents when possible, subject to competing demands from the flood recovery program.
- Departmental officer, Mr Matthew Sciacca will contact Mr O'Conner to arrange a meeting pending immediate emergency response priority work in the Lockyer Valley.

Region / Business Group: South East Region / Environmental Services South
Briefing Officer: Mike Thomas, Manager Telephone: [redacted] Date: 02/02/2011
Approving Officer: Randall Hart, Regional Services Director Telephone: Date: 03/02/2011

REGIONAL SERVICE DELIVERY DIVISION RESPONSE

[redacted]

REQUEST DATE: 4 February 2011

SUBJECT: Neil O'Conner – Erosion at Emu Creek – Site Inspection

REQUEST: The Department of Environment and Resource Management is to provide an update once a site inspection has been undertaken and residents have been visited.

RESPONSE:

- Refer to CTS 01608/11 for previous information (Attachment 1)..
- On Thursday 10 March 2011, departmental officers Mr Matthew Sclacca and Mr Mike Thomas met with Mr Neil O'Conner, Mr Bruce Lord of SEQ Catchments and a group of residents at Mr O'Conner's property near Harlin.
- Departmental officers noted, on four properties, erosion effects of flooding in the Brisbane River in January 2011 and also large scale stream bank slumping caused by increases in tributary spring activity. Some damage to water pumps and pipes were also noted.
- Although some portions of the high banks of the Brisbane River at the site had been eroded, by far the larger areas which had been removed by flooding were grassed sandy areas inside the high banks of the river used for grazing. In one case, those areas appeared to have moved down to the junction of the Brisbane River and Neara Creek on a downstream property and were already beginning to show signs of re-grassing.
- The residents alleged that nearby quarrying activities had led to increased flow speeds in the river and increased erosion. The departmental officers saw no evidence to support that allegation.
- The residents also alleged that nearby quarries may have operated outside the limits of their development permits. The department has committed to investigate that allegation.
- The residents sought and obtained advice from the departmental officers and SEQWater regarding potential remedial actions for various aspects of the sites visited including vegetation, erosion and slump management.
- The residents thanked the department and SEQ Catchments. The meeting was cooperative and positive.

ATTACHMENTS:
Attachment 1 – CTS 01608/11

Region / Business Group: South East Region / Environmental Services South
Briefing Officer: Mike Thomas , Manager Telephone: [redacted] Date: 30/03/2011
Approving Officer: Randall Hart, Regional Services Director Telephone: Date: 31/03/2011

REGIONAL SERVICE DELIVERY DIVISION RESPONSE

REQUEST DATE: 31 January 2011

[redacted]

SUBJECT: Neil O'Conner – Erosion at Emu Creek.

REQUEST: Minister Robertson's office has been contacted by residents near Harlin on the Brisbane River above Wivenhoe, who have concerns in relation to gouging and changes in the course of the river that have occurred as a result of the recent flooding. It would be appreciated if the Department of Environment and Resource Management contact Mr Neil O'Conner, the unofficial spokesperson for the group to provide advice and assistance. Additionally, please arrange for a site inspection for the quarry to assess any impacts and notify of the arrangements for this inspection.

RESPONSE:

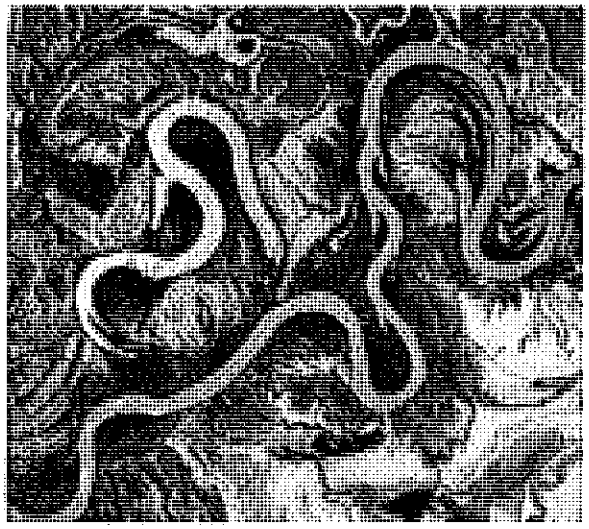
- Mr Mike Thomas, Manager, Logan, Scenic Rim and Redlands, Regional Service Delivery contacted Mr O'Conner on 31 January 2011.
- Mr O'Connor reported concerns among local residents about in-stream quarrying activities at Emu Creek and at two Karreman Quarry sites near the D'Aguilar highway on the Brisbane River and at Gregors Creek.
- Mr O'Connor mentioned that the residents had attended a meeting with Mr Shayne Newman MP, the local Federal Member of Parliament.
- Mr O'Connor was concerned that the department had lied to him in 1974 about quarry development in the area.
- Mr O'Conner asked for the department to send an officer to inspect the sites in the company of other residents.
- Mr O'Conner wants all of the quarries to be closed down immediately.
- Mr Thomas told Mr O'Connor that immediate closure of the quarries was unlikely; however, the department would send an officer out to inspect the sites and meet the residents when possible, subject to competing demands from the flood recovery program.
- Departmental officer, Mr Matthew Sciacca will contact Mr O'Conner to arrange a meeting pending immediate emergency response priority work in the Lockyer Valley.

Region / Business Group: South East Region / Environmental Services South
Briefing Officer: Mike Thomas, Manager Telephone: [redacted] Date: 02/02/2011
Approving Officer: Randall Hart, Regional Services Director Telephone: Date: 03/02/2011

What causes bank erosion?

Rivers and streams are products of their catchments. They are often referred to as dynamic systems which mean they are in a constant state of change.

The factors controlling river and stream formation are complex and interrelated. These factors include the amount and rate of supply of water and sediment into stream systems, catchment geology, and the type and extent of vegetation in the catchment. As these factors change over time, river systems respond by altering their shape, form and/or location. In stable streams the rate of these changes is generally slow and imperceptible.



Rivers are dynamic systems that change over time

Stream banks erode for many reasons

Stream bank erosion is a natural process that over time has resulted in the formation of the productive floodplains and alluvial terraces common to the middle and lower reaches of many of Australia's river systems.

Paradoxically, even stable river systems have some eroding banks. However, the rate at which erosion is occurring in stable systems is generally much slower and of a smaller scale than that which occurs in unstable systems.

Events like flooding can trigger dramatic and sudden changes in rivers and streams. However, land use and stream management can also trigger erosion responses. The responses can be complex, often resulting in accelerated rates of erosion and sometimes affecting stability for decades. Over-clearing of catchment and stream bank vegetation, poorly managed sand and gravel extraction, and stream straightening works are examples of management practices which result in accelerated rates of bank erosion.

Erosion can also be accelerated by factors such as:

- stream bed lowering or infill
- inundation of bank soils followed by rapid drops in flow after flooding
- saturation of banks from off-stream sources
- redirection and acceleration of flow around infrastructure, obstructions, debris or vegetation within the stream channel
- removal or disturbance of protective vegetation from stream banks as a result of trees falling from banks or through poorly managed stock grazing, clearing or fire
- bank soil characteristics such as poor drainage or seams of readily erodible material within the bank profile
- wave action generated by wind or boat wash;
- excessive or inappropriate sand and gravel extraction
- intense rainfall events (e.g. cyclones).

Processes of stream bank erosion

The various mechanisms of stream bank erosion generally fall into two main groups, bank scour and mass failure. In many cases of bank instability both will be evident, often with either scour or mass failure being dominant.

Bank scour is the direct removal of bank materials by the physical action of flowing water and is often dominant in smaller streams and the upper reaches of larger streams and rivers.

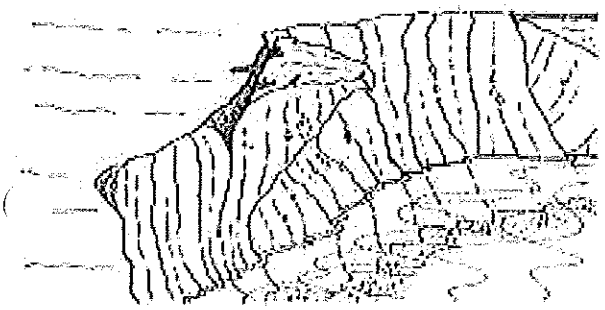
Mass failure, which includes bank collapse and slumping, is where large chunks of bank material become unstable and topple into the stream or river in single events. Mass failure is often dominant in the lower reaches of large streams and often occurs in association with scouring of the lower banks.

By looking carefully at the processes operating at a site it may be possible to narrow down the probable causes of instability.

Correct diagnosis of the underlying causes of erosion problems is important if successful and cost-effective solutions are to be generated. Assistance with identifying the causes of bank erosion and advice on potential solutions is available from the Department of Natural Resources and Water.

Bank scour

Bank scour is the direct removal of bank materials by the physical action of flowing water and the sediment that it carries.



Undercutting of the bank toe is a sign of bank scour

As flow speed increases, the erosive power of flowing water also increases and scour may occur. Increases in flow speed can be the result of natural (e.g. from the previous page d, f and i) and/or human induced processes (e.g. a and e).

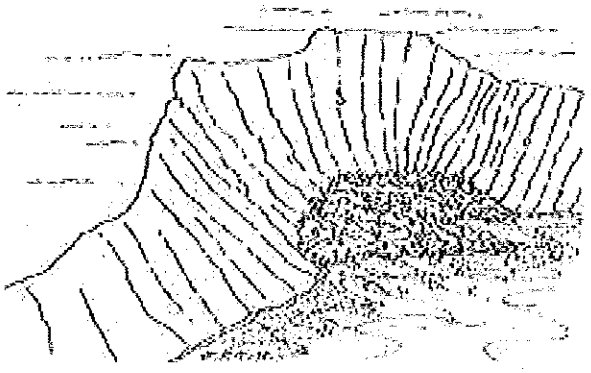
Undercutting of the bank toe is an obvious sign of scour processes.

Effective strategies for combating scour are generally aimed at reducing flow speed through revegetation and in some cases through strategic bank or channel works.

Mass failure

Mass failure describes the various mechanisms of bank erosion that result in sections of the bank sliding or toppling into the stream. Mass failure is sometimes described as collapse or slumping.

Bare and near-vertical banks or areas of slumped bank materials are obvious signs of these processes. The causes of these types of failures are often difficult to determine but can include natural (e.g. b or f) and/or human factors (e.g. c, e, g or h).



Slumping is a common type of mass failure

Collapse following undermining of the bank toe and slumping as a result of saturation after flooding are common examples of mass failure.

Effective strategies for combating slumping or bank collapse are generally aimed at stabilizing the bank toe and restoring bank vegetation.

Further information

For more detailed information on how to control stream bank erosion, or for permits for undertaking works within a watercourse, contact your local office of the Department of Natural Resources and Water.

See also in this series

R20 What causes streambed erosion

R30 Stream bank vegetation is VALUABLE

R33 Managing stock in and around waterways

March 2006
R2
For further information phone 13 13 04

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seqwater
WATER FOR LIFE

All due care and diligence has been applied to ensure the accuracy of the information provided.
Seqwater will endeavour to provide updated information should errors or omissions be identified.

Please note: All assets/sites are being assessed for damage, reliability and safety. Further details will be provided by 31 January 2011. This report is an indication only of current investigations.

Data is current ast at week ending ***21 January 2011***

Summary of Operational Alerts/ Investigations

Code	River System	STORAGE	Streambank Erosion	Fish Recovery/kills	Damage to Instrumentation	Damage to Irrigation Meters
MID BRISBANE						
165	Brisbane River	MT CROSBY WEIR	YES		To be advised	N/A
377	Brisbane River	WIVENHOE DAM	YES	YES		N/A
354	Stanley River	SOMMERSET DAM	YES			N/A
334	Pine River	NORTH PINE DAM	YES	YES		N/A
LOWER LOCKYER						
210	Buaraba Creek	ATKINSON DAM	YES	To be advised	To be advised	To be advised
217	Laidley Creek	BILL GUNN DAM				
602	Laidley Creek	LAIDLEY CK DIVERSION WEIR	YES			
603	Laidley Creek	SHOWGROUNDS WEIR	YES			
230	Lockyer Creek	BRIGHTVIEW WEIR	YES			
336	Lockyer Creek	O'REILLYS WEIR	YES			
CENTRAL LOCKYER						
249	Redbank Creek	LAKE CLARENDON		To be advised	To be advised	To be advised
2302	Redbank Creek	JORDAN II WEIR	YES			
WARRILL VALLEY						
247	Warrill Creek	CHURCHBANK WEIR	YES	To be advised	To be advised	N/A
323	Warrill Creek	MOOGERAH DAM	YES			N/A
2213	Warrill Creek	WARRILL CK DIV WEIR	yes			N/A
LOGAN RIVER						
318	Logan River	Maroon Dam		NIL	NIL	NIL
2192	Logan River	South Maclean Weir		NIL	NIL	NIL
2195	Logan River	Bromelton Weir	YES	NIL	NIL	NIL
2263	Logan River	Bromelton Off stream Storage		NIL	NIL	NIL
2268	Logan River	Cedar Grove Weir	YES	NIL	NIL	NO
NERANG RIVER						
312	Nerang River	LITTLE NERANG DAM	YES	NIL	NIL	N/A
706	Nerang River	HINZE DAM	YES	NIL	NIL	N/A
MARY RIVER						
214	Mary River	BAROON POCKET DAM	YES	NIL	NIL	NO
228	Mary River	BORUMBA DAM	YES	NIL	NIL	NO
244	Mary River	CEDAR POCKET DAM		NIL	NIL	NO

Queensland Government

File/Ref CBD/025213, CBD/025215, CBD/025217
CTS 021989/10

03 DEC 2010

Department of
Environment and Resource
Management

Mr Alex Fisher
Executive General Manager, Asset Delivery
Queensland Bulk Water Supply Authority
PO Box 16146
CITY EAST QLD 4002

Dear Mr Fisher

Thank you for your letter dated 27 August 2010 regarding approval for the updated interim program as required under section 13(3) (b) of the Moreton Resource Operations Plan (the Plan).

I note that the Authority has stated in its interim program that it complies with many of the plan's requirements and that most of the outstanding issues relating to water monitoring will be addressed by infrastructure upgrades and improvements to hydrometric information management to be completed by December 2012. I also note that tailwater quality monitoring will commence at Mt Crosby Weir in January 2011.

I am satisfied that the interim program as submitted meets the requirements set out under the Plan and accordingly, I have approved the program.

In considering the program, I noted particular anomalous matters that the Authority will need to address in the foreseeable future as compliance with the requirements of the Plan is necessary to ensure that water planning objectives and outcomes are achieved. These anomalies include the minimum flow requirements and tailwater monitoring for Mt Crosby Weir, tailwater monitoring at Somerset Dam and releases from infrastructure for particular purposes not recognised under the Plan.

The Authority's interim methods for monitoring minimum average flow through the fishway and over the crest of Mt Crosby Weir will be acceptable as an interim arrangement, as also is the case for outflow estimations from the recorded opening of the gates, sluices and valves at Somerset Dam.

However, as these interim methods will be insufficient to achieve necessary compliance with the Plan in the longer term, it will be necessary for the Authority to engage the Department of Environment and Resource Management at an early stage concerning potential solutions.

Department of Environment and Resource Management
GPO Box 2454 Brisbane
Queensland 4001 Australia
Telephone [redacted]
Facsimile [redacted]
Website www.derm.qld.gov.au
ABN 83 705 537 586

The Authority's releases from infrastructure that do not comply with sections 72 and 75 of the Plan and that are made in extraordinary or emergent circumstances may be the subject of an operational report submitted in accordance with section 166 of the Plan. However, any releases made contrary to the Plan provisions remain as instances of non-compliance, regardless of circumstances.

Accordingly, while it will be necessary for the Authority to lodge an operational report on every occasion that it makes a release not authorised under the Plan, it will not be appropriate to use this mechanism to deal with ongoing and routine releases that are unauthorised. Therefore, if the Authority intends to make presently unauthorised releases as part of continuing routine operations, it again should further engage the Department concerning potential solutions.

A copy of this letter has been sent to Mr Mark Pearson, Acting Regional Manager, Water Services – South East Region of the department.

Should you have any further enquiries, please do not hesitate to contact Ms Karin Van Der Heijde Senior Policy Officer, of the department on telephone 3224 7503.

Yours sincerely

Gary Burgess
A/General Manager
Water Allocation and Planning

Seqwater Interim Program – Moreton Resource Operations Plan

The Moreton Resource Operations Plan (the ROP) commenced on 7 December 2009. The Queensland Bulk Water Supply Authority (trading as Seqwater) is the Resource Operations Licence Holder under the ROP for the following Water Supply Schemes:

- Central Brisbane River Water Supply Scheme;
- Pine Valleys Water Supply Scheme; and
- Stanley River Water Supply Scheme.

Where Seqwater, as the ROL holder, is unable to meet requirements of the ROP, a structured process is available whereby a statement of programs currently in existence can be prepared and submitted to the Department of Environment and Resource Management, to be followed by an Interim Program. The box below sets out the relevant provisions under the ROP.

Relevant ROP Requirement

Interim Program

s13(1) The chief executive and the resource operations licence holder must implement requirements of this plan as soon as is practical within the timeframes stated below.
s13(2) Subsections 3 to 11 apply where a resource operations licence holder is unable to meet the requirements of this plan on the day this plan commences.
s13(3) The resource ooperations licence holder must –

(a) within 2 months of commencement of this plan, submit a statement of programs currently in existence, to the chief executive for approval; and
(b) **within 6 months of commencement of this plan, submit a program for meeting the requirements of this plan to the chief executive for approval, including a timetable and interim methods to be used.**

s13(4) The resource operations licence holder may, where an emergency or operational incident results in an inability to comply with any rules or requirements of this plan, submit an interim program for meeting the requirements of this plan to the chief executive for approval, **including timetable and interim methods to be used.**
s13(5) Where the submitted program relates to the Water Monitoring Data Collection Standards, the program must include the accuracy of methods currently used.
s13(6) The chief executive, in considering any submitted program, may request additional information.
s13(7) The chief executive, in considering any submitted program, may either–

(a) approve the program with or without conditions;
(b) amend and approved the amended program; or
(c) require the resource operations licence holder to submit a revised program.

s13(8) Within 10 business days of making a decision on a program submitted under this section the chief executive must notify the resource operations licence holder of the decision.
s13(9) Following approval of the program by the chief executive, the resource operations licence holder must–

(a) implement and operate in accordance with the approved program; and
(b) make public details of the approved program on their internet site.

s13(10) Where there is conflict between the provisions of this plan and the provisions of an approved program, the approved program prevails for the time that the approved program is in place.
S13(11) Where this section applies, the resource operations licence holder may continue to operate under the existing program until the program submitted under this section is approved.

Seqwater submitted a Statement of Current Programs to DERM on 5 February 2010, in accordance with Section 13 of the ROP.

The following document sets out Seqwater's Interim Program for the Moreton ROP, as provided for under s13 of the ROP. It is submitted to the Department of Environment and Resource Management for approval.

Seqwater Interim Program – Moreton Resource Operations Plan

Current as at 25 May 2010

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Departmental water monitoring data collection standards 11(1) Where this plan required monitoring by a resource operations licence holder, including measurement, collection, analysis and storage of data, the resource operations licence holder must ensure the monitoring is consistent with the Water Monitoring Data Collection Standards.	Refer ss151-160.	There is currently limited monitoring of listed infrastructure under the ROP, however, a review will be undertaken (due for a staged completion, with final stage completed by 1 March 2012) to ensure monitoring is consistent with the Queensland Government Water Monitoring Data Collection Standards. The following sets out the timeline for the review: North Pine Dam: Review 1 July 2010; Implementation 1 September 2010 Sideling Creek Dam: Review 1 July 2010; Implementation 1 September 2010 Wivenhoe Dam: Review 1 October 2010; Implementation 1 January 2011 Somerset Dam: Review 1 October 2010; Implementation 1 January 2011 Enoggera Dam: Review 1 October 2011; Implementation 1 January 2012 Gold Creek Dam: Review 1 October 2011; Implementation 1 January 2012 Caboolture River: Review 1 January 2012; Implementation 1 March 2012	1 September 2010 - 1 March 2012.
Departmental water monitoring data reporting standards 12(1) Where this plan requires transfer of data or reporting by a resource operations licence holder the resource operational licence holder must ensure the transfer or reporting is consistent with the Water Monitoring Data Collection Standards.	Refer ss161-167.	Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards (Feb 2007) to its current reporting procedures.	Refer ss161-167.
Central Brisbane River and Stanley River Water Supply Schemes – Operating levels for infrastructure 72(3) The resource operations licence holder must not release water from any infrastructure unless the release is necessary to— (a) meet minimum flow rates in section 75; or (b) supply downstream demand.	Not compliant with ROP (releases made for operational purposes and water quality and ecosystem health including fish management)	Seqwater will continue to make releases from infrastructure for consumption, flood mitigation, operational maintenance and fish recovery/maintenance.	Nil.
Central Brisbane River and Stanley River Water Supply Schemes – Streamflow Requirement 75 When critical water sharing arrangements are not in force, the resource operations licence holder must release a minimum flow of 8.64ML/day from Mount Crosby Weir.	No operational outlet works at Mt Crosby Weir, therefore no managed releases made.	As there are no operable outlet works at Mt Crosby Weir (and cannot be implemented without significant investment, including possible reconstruction of the weir), overflows are dependent upon releases from Wivenhoe and projected water supply demands and local inflows, the latter two components being outside Seqwater control. As a result, Seqwater has very limited control over releases from Mt Crosby Weir on a daily basis. As such, it is proposed that this requirement be deemed as satisfied if a minimum average flow of 8.64ML/day (for any given month) flows over Mt Crosby Weir, rather than a minimum flow of 8.64ML/day (for any given day).	Seqwater would be compliant with a requirement for a minimum average flow of 8.64ML/day for any given month from 1 July 2010. Compliance is not able to be achieved for a minimum flow of 8.64Ml/day for any given day.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Central Brisbane River and Stanley River Water Supply Schemes – Announced Allocations 76 The resource operations licence holder must— (a) calculate an announced allocation for each priority group for use in defining the share of water available to be taken under water allocations in that priority group; (b) use the water sharing rules specified in this part to calculate announced allocations throughout the water year; (c) calculate and set the announced allocation for each priority group to take effect on the first day of each water year; (d) following the commencement of a water year— (i) recalculate the announced allocation to take effect no later than 5 business days following the first day of the month; (ii) reset the announced allocation if a recalculation indicates that the recalculated announced allocation would— (A) for medium priority water allocations increase by 10 or more percentage points; (B) for high priority water allocations increase by 5 or more percentage points; or (C) increase to 100 per cent. (e) within 5 business days of setting an announced allocation under subsection 1(c) or the first calendar day of every month when resetting the announced allocation under subsection 1(d)— (i) publish details of the announced allocation; and (ii) make public details of the announced allocation, including parameters for determining the announced allocation, on the resource operations licence holder's internet site; (f) not reduce the announced allocation during a water year; (g) round the announced allocation to the nearest whole percentage point (h) not set an announced allocation that is greater than 100 per cent.	Not compliant with ROP (no programs currently in existence – MP customers transferred to Seqwater on ROP gazettal)	New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.
Central Brisbane River and Stanley River Water Supply Schemes – Announced Allocations for Medium Priority Water Allocations 77(1) The announced allocation for medium priority water allocations in the Central Brisbane River Water Supply Scheme is the announced allocation percentage stated in Attachment 5, Table 5, column 2 corresponding to the combined percentage of useable volume in storage of Wivenhoe and Somerset dams stated in Attachment 5, Table 5, column 1. 77(2) the combined percentage of useable volume in storage of Wivenhoe and Somerset dams must be calculated using the following formula— SPUVS = ((UVWivenhoe+UVSomerset)/CUFSV)*100 77(3) The parameters used in the formula for combined percentage of volume in storage are defined in Attachment 5, Table 6.	Not compliant with ROP (no programs currently in existence – MP customers transferred to Seqwater on ROP gazettal) Please note: the volume stored in Split Yard Creek Dam may influence the Announced Allocation.	New Medium Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.
Central Brisbane River and Stanley River Water Supply Schemes – Announced Allocation for 'High Priority A' Water Allocations 78 (1) The announced allocation for 'High Priority A' water allocations within the Central Brisbane River Water Supply Scheme must be as follows— (a) 100 per cent when the combined percentage of useable volume in storage of Wivenhoe and Somerset dams is greater than or equal to 25 per cent or (b) when the combined percentage of useable volume in storage of Wivenhoe and Somerset dams is less than 25 per cent, the announced allocation percentage for 'High Priority A' water allocations must be calculated using the following formula— AAHPA=((UV-(AAMP*MPA)+DIVHPA+DIVMP)/HPAA)*100 78(2) The parameters used in the formula for announced allocation are defined in Attachment 5, Table 4. 78(3) For subsection 1 the combined percentage of useable volume in storage of Wivenhoe and Somerset dams must be calculated using the formula in	Not compliant with ROP (no programs currently in existence)	New High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
section 77(2) of this plan.			
Central Brisbane River and Stanley River Water Supply Schemes – Critical Water Sharing Arrangements 80(1) Critical water sharing arrangements are in force when the combined percentage of the volume of water in storage in Wivenhoe and Somerset Dams is less than 15 percent. 80(2) During times when critical water sharing arrangements are in force the resource operations licence holder must— (a) cease making releases from Mount Crosby Weir under section 75 of this plan; (b) when at the start of the water year the combined percentage of useable volume in storage of Wivenhoe and Somerset dams is less than 15 per cent, set the announced allocation for medium priority water allocations in the Central Brisbane River Water Supply Scheme to zero per cent; and 80(3) For subsection 1 the combined percentage of volume of water in storage for Wivenhoe and Somerset Dams must be calculated using the formula in section 77(2) of this plan.	Not compliant with ROP (no programs currently in existence)	New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). New Medium Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.
Central Brisbane River and Stanley River Water Supply Schemes – Seasonal water assignment rules 88(1) The resource operations licence holder may approve a seasonal assignment of a volume of water provided that the total volume of water use in a water year for each zone will not exceed the maximum allowable water use volume in Attachment 5, Table 9 for each zone. 88(2) The resource operations licence holder is responsible for dealing with applications for seasonal water assignment where the resource operations licence holder distributes water to the assignee.	Not compliant with ROP (no programs currently in existence, customers unmetered)	Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place for all schemes from 1 July 2010, however, it should be noted that Seasonal Water Assignments in the Central Brisbane River Water Supply Scheme are connected to implementation of a metering program (anticipated to take until December 2012).	Metering program to be undertaken in close consultation with Mid-Brisbane irrigators (likely to take until December 2012).
Pine Valleys Water Supply Schemes – Operating Levels for Infrastructure 97(1) The operating levels for the infrastructure in the Pine Valleys Water Supply Scheme are specified in Attachment 6, Table 1. 97(2) The resource operations licence holder must not release or supply water from any infrastructure when the water level in that infrastructure is at or below its minimum operating level. 97(3) The resource operations licence holder must not release water from any infrastructure unless the release is necessary to supply downstream demand and is made in accordance with this plan.	Not compliant with ROP (releases made for operational purposes and for water quality and ecosystem health including fish management)	s97(1): Attachment 6, Table 1 incorrectly specifies the Minimum Operating Level for North Pine Dam as EL 14.2m AHD and Minimum Operating Volume as 2100ML. The correct Minimum Operating Level is EL 12.8m AHD and the correct Minimum Operating Volume is 1310ML. s97(2): Seqwater will continue to release or supply water from North Pine Dam in accordance with the correct Minimum Operating Level of EL 12.8m AHD rather than the incorrect Minimum Operating Level of EL 14.2m AHD as specified in Attachment 6, Table 1. Seqwater requests DERM correct this error in the ROP. s97(3): Seqwater will continue to make releases from infrastructure for consumption, flood mitigation, operational maintenance and fish recovery/maintenance.	Nil.
Pine Valleys Water Supply Schemes – Announced Allocations 100 The resource operations licence holder must— (a) calculate an announced allocation for each priority group for use in defining the share of water available to be taken under water allocations in that priority group; (b) use the water sharing rules specified in this part to calculate announced allocations throughout the water year; (c) calculate and set the announced allocation for each priority group to take effect on the first day of each water year; (d) following the commencement of a water year— (i) recalculate the announced allocation to take effect no later than 5 business days following the first day of the month; (ii) reset the announced allocation if a recalculation indicates that the recalculated announced allocation would— (A) for high priority water allocations increase by 5 or more percentage points; or (B) increase to 100 per cent (e) within 5 business days of setting an announced allocation under subsection 1(c) or the first calendar day of every month when resetting the announced allocation under subsection 1(d) make public details of the announced allocation, including parameters for determining the announced allocation, on the resource operations licence holder's internet site for the Pine Valleys Water Supply	Not compliant with ROP (no programs currently in existence)	New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.

Relevant ROP Requirement	Programs Currently in Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Scheme; (f) not reduce the announced allocation during a water year; (g) round the announced allocation to the nearest whole percentage point; and (h) not set an announced allocation that is greater than 100 per cent. 101(1) The announced allocation for 'High Priority A' water allocations in the Pine Valleys Water Supply Scheme must be as follows— (a) 100 per cent when the level of water in storage in North Pine Dam is greater than E.L. 29.3m AHD; and (b) When the water level of water in storage in North Pine Dam is equal to or less than E.L. 29.3m AHD the announced allocation percentage for high priority water allocations must be calculated using the following formula— AAHPA=((UV+DIVHPA)/HPAA)*100 101(2) The parameters used in the formula for announced allocations are defined in Attachment 6, Table 2. 102 The total volume of water taken under a water allocation in a water year must not exceed the nominal volume of the water allocation multiplied by the announced allocation and divided by 100.			
Pine Valleys Water Supply Schemes – Critical Water Sharing Arrangements 103(1) Critical water sharing arrangements are in force when the water level in North Pine Dam is equal to or less than E.L. 29.3m AHD. 103(2) During times when critical water sharing arrangements are in force the resource operations licence holder must calculate the announced allocation for high priority water allocations in accordance with section 101(1)(b) of this plan.	Not compliant with ROP (no programs currently in existence)	New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). New High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.
Pine Valleys Water Supply Schemes – Seasonal Water Assignment Rules 110(1) The resource operations licence holder may approve a seasonal assignment of a volume of water provided that the total volume of water use in a water year for each zone will not exceed the maximum allowable water use volume in Attachment 6, Table 3 for each zone. 110(2) The resource operations licence holder is responsible for dealing with applications for seasonal water assignment where the resource operations licence holder distributes water to the assignee.	Not compliant with ROP (no programs currently in existence)	Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place by 1 July 2010.	1 July 2010.
Resource operations licence holder monitoring and reporting – Monitoring data must be made available 151 The resource operations licence holder must provide any monitoring data required under this chapter to the chief executive upon request and within the time requested.	Not compliant with ROP	Requests for data outside of ROP reporting requirements will be provided within required timeframes. Please note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	1 July 2010 (please note waiting periods).
Monitoring requirements – Streamflow and infrastructure water level 152(1) The resource operations licence holder must record water level and volume and stream flow data in accordance with Attachment 9, Table 1. 152(2) Infrastructure inflows may be determined based upon an infrastructure inflow derivation technique supplied by the resource operations licence holder and approved by the chief executive.	Not compliant with ROP (ALERT data available for Baxters Ck and Dayboro WWTP)	152(2) Consistent inflow derivation methodology will be developed by July 2011 for all storages. In the interim, existing methodology inherited from previous asset owners will be used where in existence. Please refer to Attachment 9, Table 1 at end of document.	1 July 2010 – July 2011.

Relevant ROP Requirement	Programs Currently in Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Monitoring requirements – Releases from infrastructure 153(1) This section applies to the following infrastructure— (a) Cressbrook Dam; (b) Mount Crosby Weir; (c) North Pine Dam; (d) Perseverance Dam; (e) Somerset Dam; and (f) Wivenhoe Dam. 153(2) The resource operations licence holder must measure and record for each release of water from infrastructure listed in subsection 1— (a) the daily volume released; (b) the release rate and for each change in release rate— (i) the date and time of the change; and (ii) the new release rate; (c) the reason for each release; and (d) the device used for each release. 153(3) The resource operations licence holder for infrastructure mentioned in subsection 1(c) and 1(f) must record— (a) the inlet level used for each release of water; and (b) the reason for taking water via a particular inlet level.	153(1)(b) No measured releases made 153(1)(c) Operational Log ex SunWater system 153(1)(e) Operational Log ex SunWater system 153(1)(f) Operational Log ex SunWater system 153(2) Data is recorded in Operational Log 153(3) Data is recorded in Operational Log	153(1)(b): No operable outlet works exist at Mount Crosby Weir and cannot be implemented without significant investment. Releases are not made – only overflows, which are monitored and recorded. As such, it is proposed Seqwater report the overflows in compliance with ss153(2) and 153(3) instead of releases since none are made.	1 July 2010 (note: overflows and not releases will be reported for Mt Crosby Weir).
Monitoring requirements – Announced allocations 154 The resource operations licence holder must record details of announced allocation determinations including— (a) the announced allocations for medium and high priority water allocations; (b) the date announced allocations are determined; and (c) the value of each parameter applied for calculating the announced allocation.	Not compliant with ROP (no programs currently in existence)	New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.
Monitoring requirements – Water taken by water users 155 The resource operations licence holder must record the total volume of water taken, by each water user for each zone as follows— (a) the total volume of water taken in each quarter; (b) the total volume of water entitled to be taken at any time; and (c) the basis for determining the total volume of water entitlement to be taken at any time.	Only HP water take measured – no meters for measuring MP water take	Compliance with these requirements for the Central Brisbane River Water Supply Scheme is dependent on the development and implementation of a metering program within the Scheme (anticipated to be an ongoing program which will need to be implemented in close consultation with the Mid-Brisbane irrigators, and will likely take until December 2012). All other schemes will be compliant from 1 July 2010.	1 July 2010 for all schemes except Central Brisbane River Water Supply Scheme (anticipated to take until December 2012).
Monitoring requirements – Seasonal water assignment of water allocations 156 The resource operations licence holder that approves a seasonal water assignment must record details of seasonal water assignment arrangements including— (a) the name of the assignee, volume and location of water that has been seasonally assigned by an assignor; (b) the name of the assignor, volume and location of the water that has been seasonally assigned to an assignee; and (c) the effective date of seasonal water assignments.	Not compliant with ROP (no programs currently in existence)	Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place for all schemes from 1 July 2010, however, it should be noted that Seasonal Water Assignments in the Central Brisbane River Water Supply Scheme are connected to implementation of a metering program (anticipated to take until December 2012 – please refer to ss88 and 164 for further detail).	1 July 2010 for all schemes except Central Brisbane River Water Supply Scheme (anticipated to take until December 2012).
Monitoring requirements – Critical water sharing arrangements 157 The resource operations licence holder must record details of critical water sharing arrangements including the following— (a) the commencement date(s) and effective period of critical water sharing arrangements; and (b) the effectiveness of the critical water sharing arrangements.	Not compliant with ROP (no programs currently in existence)	New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	1 July 2010.
Monitoring requirements – Water Quality 158 the resource operations licence holder must monitor and record water quality data in relation to relevant infrastructure listed in Attachments 5, 6 and 7.	<u>Somerset Dam</u> **Inflow:** None. Quality monitoring and recording is event-related only. Water quality meters are DERM infrastructure. **Headwater:** Real-time telemetered VPS pH, Cond., Turb., Chl, BGA, DO; Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO;	Seqwater is currently compliant with the monitoring requirements for Wivenhoe Dam and Mt Crosby Weir (with the exception of tailwater monitoring since the downstream area is estuarine) and will be reported from 1 July 2010. North Pine Dam requires some parameter additions to the inflow site on the North Pine River and the addition of a tailwater site to be compliant with the ROP requirements. Seqwater is currently reviewing the North Pine Monitoring Program which will include the requirements under the ROP (scheduled for completion by 1 July 2010) and will be implemented by 1 September 2010 (including training, reporting and scheduling). In the interim, additional parameters will be added to the existing gauging and water quality site on the North Pine River to be sampled on a monthly basis as follows:	1 January 2011.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
	Monthly (SB) – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, H2S, DOC, TOC, NH4, NOX, FRP, TN, TP, silica, Chl a, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** Fortnightly – Total Cyano, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, DOC, TOC, NH4, NOX, FRP, TN, TP, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. <u>Wivenhoe Dam</u> **Inflow** – (Caboonbah): Fortnightly – Total Cyanobacteria, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. Monthly (SB) – Total Cyanobacteria, EC, TC, Chl a, Fe, Mn, true colour, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Headwater:** Real-time telemetered VPS pH, Cond., Turb., Temp., Chl, BGA, DO Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly (SB) – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, H2S, DOC, TOC, NH4, NOX, FRP, TN, TP, silica, Chl a, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour,TSS, DOC, TOC, NH4, NOX, FRP, TN, TP, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. <u>North Pine Dam</u> **Inflow:** None. Quality monitoring and recording is event-related only. **Headwater:** Real-time telemetered VPS pH, Cond., Turb., Temp., Chl, BGA, DO Fortnightly – Total Phyto, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly (SB) – Total Phyto, EC, TC, Chl a, Fe, Mn, true colour, TSS, H2S, DOC, TOC, NH4, NOX, FRP, TN, TP, silica, Chl a, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** None. <u>Mt Crosby Weir (also TS sampling)</u>	• Inflow: electrical conductivity, temperature, dissolved oxygen, pH, turbidity, total nutrients, dissolved nutrients • Tailwater: electrical conductivity, temperature, dissolved oxygen, pH, turbidity, total nutrients, dissolved nutrients, total sulphides Somerset Dam requires the addition of an inflow site on the Stanley River. The Somerset Dam Monitoring Program Review is scheduled for completion on 1 October 2010, with implementation (including training, reporting and scheduling) by 1 January 2011.	

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
	Inflow: Kholo: Fortnightly – total phytoplankton, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Headwater:** Fortnightly – Total Cyano, EC, TC, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO Monthly – Total Cyano, EC, TC, Chl a, Fe, Mn, true colour, TSS, DOC, TOC, NH4, NOX, FRP, TN, TP, depth probe pH, Cond., Turb., Temp., Chl, BGA, DO. **Tailwater:** None, estuarine		
Monitoring requirements – Bank condition 159(1) The resource operations licence holder must inspect banks for evidence of collapse or erosion within the ponded areas and downstream of the relevant infrastructure listed in Attachments 5, 6 and 7 following instances of— (a) rapid water level changes; (b) large flows through infrastructure; or (c) other occasions when collapse or erosion of banks may be likely. 159(2) For subsection 1, downstream of the relevant infrastructure means the distance of influence of infrastructure operations.	Not compliant with ROP (inspections undertaken for ponded areas but not stream bank or downstream) No reporting or monitoring currently undertaken for ROP purposes however Dam Safety monitor dam wall and embankments directly surrounding dam storage.	Ponded area bank inspections for erosion are currently being undertaken on a weekly basis. Seqwater will add interim downstream visual bank inspections to weekly surveillance inspections with results collated quarterly and reported (commencing 1 July 2010 and implemented by September 2010). These interim downstream visual inspections will allow the distance of influence of infrastructure for each storage to be determined and an appropriate monitoring and inspection program to be implemented (commencing December 2010 and fully implemented by December 2011).	1 July 2010 – December 2011.
Reporting requirements 161 The resource operations licence holder must provide— (a) quarterly reports; (b) annual reports for the previous water year; (c) operational reports; and (d) emergency reports.	Not compliant with ROP. No reporting.	Refer ss162-167	Refer ss162-167.
Reporting requirements – Quarterly Report 162(1) The resource operations licence holder must submit a quarterly report to the chief executive after the end of each quarter, of every water year. 162(2) The report must contain the following data— (a) stream flow and infrastructure water levels—all records referred to in section 152 of this plan; (b) the total volume of water for each quarter— (i) taken for each zone; (ii) entitled to be taken from each zone; (c) water quality—all records referred to in section 158 of this plan; (d) a summary of bank condition monitoring and incidences of slumping, undertaken in accordance with section 159 of this plan; and (e) the details and status of any programs implemented under section 13 of this plan.	Not compliant with ROP. No reporting.	Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards (Feb 2007) to its current reporting procedures. Commencing 1 July 2010 the following will be implemented: • ROP datasets will be supplied quarterly, as required under the ROP. • ROP Compliance Report will be submitted with the quarterly reporting process, including exceptions to ROP requirements and an update on the Interim Program, as required under the ROP. Results of weekly bank condition monitoring will be collated quarterly and reported, with progressive implementation commencing 1 July 2010 and fully implemented by December 2011. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to ss152, 158 and 159 for further details.	1 July 2010 – December 2011.
Reporting requirements – Annual Report 163(1) The resource operations licence holder must submit an annual report to the chief executive after the end of the water year. 163(2) The annual report must include— (a) water quantity monitoring results required under section 164 of this plan; (b) details of the impact of infrastructure operation on water quality as required under section 164 of this plan; (c) a discussion about any issues that arose as a result of the implementation and application of the rules and requirements of this plan.	Not compliant with ROP. No reporting.	Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to s164 for further details.	1 July 2010 – December 2012

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
Reporting requirements – Water quantity monitoring – Annual Report 164 The resource operations licence holder must include in the annual report under section 163— (a) A summary of announced allocation determinations, including— (i) an evaluation of the announced allocation procedures and outcomes; and (ii) the date and value for the initial announced allocation and for each change made to an announced allocation; (b) instances where critical water sharing arrangements have been implemented— (i) an evaluation of the announced allocation procedures and outcomes; and (ii) the commencement date(s) and effective period(s) for each stage of the arrangements and outcomes; (c) records from infrastructure—records referred to in section 153; (d) the total annual volume of water taken by each water user, specified by zone, namely— (i) the total annual volume of supplemented water taken; (ii) the total annual volume of supplemented water entitled to be taken; and (iii) the basis for determining the volume entitled to be taken; (e) details of seasonal water assignments, namely— (i) the total number of seasonal water assignments arrangements; and (ii) the total volume of water seasonally assigned; (f) all details of changes to infrastructure or the operation of the infrastructure that may impact on compliance with rules in this plan; and (g) details of any new monitoring devices used such as equipment to measure stream flow.	Not compliant with ROP. No reporting.	Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to ss76, 77, 78, 80, 88, 100, 101, 103, 110, 153, 155, 156 and 157 for further detail. s164(a): New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). s164(b): New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). s164(c): No operable outlet works exist at Mount Crosby Weir and cannot be implemented without significant investment. Releases are not made – only overflows, which are monitored and recorded. As such, it is proposed Seqwater report the overflows in compliance with ss153(2) and 153(3) instead of releases since none are made. Please refer to s153 for further details. ss164(d-e): Compliance with these requirements for the Central Brisbane River Water Supply Scheme is dependent on the development and implementation of a metering program within the Scheme (anticipated to be an ongoing program and will need to be implemented in close consultation with the Mid-Brisbane irrigators, timeframe likely to take until December 2012). All other schemes will be compliant from 1 July 2010. ss164(f-g): Seqwater will be compliant with these requirements from 1 July 2010.	ss164(a-b, f-g): 1 July 2010. s164(c): 1 July 2010 (note: overflows rather than releases will be reported for Mt Crosby Weir). Please refer to s153 for further details. s164(d-e): 1 July 2010 – December 2012. Please refer to ss88, 155 and 156 for further details.
Reporting requirements – Impact of infrastructure operation on natural ecosystems – Annual report 165 The resource operations licence holder must include in the annual report under section 163— (a) a summary of environmental considerations made by the resource operations licence holder in making operational and release decisions; (b) a summary of the environmental outcomes of the decision including any adverse environmental impacts; (c) a summary of bank condition and fish stranding monitoring and assessment, including— (i) results of investigations of bank slumping or erosion identified in ponded areas or downstream of infrastructure; (ii) results of investigations of fish stranding downstream of infrastructure; and (iii) changes to to the operation of infrastructure to reduce instances of bank slumping, erosion or fish stranding; (d) a discussion and assessment of the following water quality issues— (i) thermal and chemical stratification in each water storage associated with infrastructure; (ii) contribution of the water storage and its management to the quality of water released; (iii) cumulative effect of successive water storages associated with infrastructure on water quality; (iv) cyanobacteria population changes in response to stratification in each water storage; and (v) any changes to the monitoring program as a result of evaluation of the data.	Not compliant with ROP. No reporting.	Seqwater will submit an annual report as required, commencing for the 2010/2011 water year. Collation of data for required reporting is dependent upon the implementation of relevant interim programs for various requirements as specified under the ROP. Refer to ss 158 and 159 for further details.	1 July 2010 – December 2011.
Reporting requirements – Operational Report	Not compliant with ROP.	ss166(a)(i), (b): Seqwater will submit operational reports as required, commencing for the 2010/2011 water year.	1 July 2010 – December 2011.

Relevant ROP Requirement	Programs Currently In Existence (as submitted to DERM in February 2010)	Interim Program, including Methodology	Timetable
166 The resource operations licence holder must— (a) notify the chief executive within one business day of becoming aware of any of the following operational incidents— (i) a non-compliance by the resource operations holder with the rules in this plan; and (ii) instances of fish stranding or bank slumping within the impounded areas or downstream of infrastructure listed in Attachment 9, Table 1 or watercourses associated with the operation of the Central Brisbane River, Cressbrook Creek, Pine Valleys and Stanley River water supply schemes; (b) provide to the chief executive a report which includes details of— (i) the incident; (ii) conditions under which the incident occurred; and (iii) any response or activities carried out as a result of the incident; (c) notify the chief executive upon commencement and cessation of critical water sharing arrangements; and (d) notify the chief executive on approval of any seasonal water assignment, including— (i) the name and location of the assignees and assignors; and (ii) the zone or zones where water is being seasonally assigned to and from; (e) notify the chief executive upon making a decision relating to an initial announced allocation and/or its recalculation; (f) transfer to the chief executive— (i) details of any arrangements of addressing circumstances where the resource operations licence holder is unable to supply water allocations under subsection (e); and (ii) relevant supporting information used in making a decision under subsection (e).	No reporting.	s166(a)(ii): Process for reporting instances of fish standing and bank slumping will be progressively implemented beginning 1 July 2010 with finalisation by December 2011. Ponded area bank inspections for erosion are currently being undertaken on a weekly basis. Seqwater will add interim downstream visual bank inspections to weekly surveillance inspections with results collated quarterly and reported (commencing 1 July 2010 and implemented by September 2010). These interim downstream visual inspections will allow to the distance of influence of infrastructure for each storage to be determined and an appropriate monitoring and inspection program to be implemented (commencing December 2010 and fully implemented by December 2011). s166(c): New Critical Water Sharing Arrangements processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010). s166(d): Procedures for monitoring and approving Seasonal Water Assignments have been developed and will be in place for all schemes from 1 July 2010, however, it should be noted that Seasonal Water Assignments in the Central Brisbane River Water Supply Scheme are connected to implementation of a metering program (anticipated to take until December 2012 – please refer to ss88 and 164 for further detail). s166(e-f): New Medium Priority and High Priority Announced Allocation processes and procedures will be in place by the commencement of the 2010/2011 Water Year (i.e. from 1 July 2010).	
Reporting requirements – Emergency report 167 In an emergency where the resource operations licence holder cannot comply with a rule in this plan as a result of an emergency, the resource operations licence holder must— (a) notify the chief executive upon discovery of the emergency; and (b) provide to the chief executive a report that includes— (i) details of the emergency; (ii) conditions under which the emergency occurred; (iii) any responses or activities carried out as a result of the emergency; and (iv) any rules specified in this plan that the resource operations licence holder is either permanently or temporarily unable to comply with due to the emergency.	Not compliant with ROP. No reporting.	Seqwater will submit emergency reports as required, commencing for the 2010/2011 water year.	1 July 2010.

Attachment 4(b) – Water licences granted to the Queensland Bulk Water Supply Authority.

Table 1. Water licence to interfere with the flow of water in Cabbage Tree Creek (Kholo)

Licence Details:			Interim Program, including Methodology	Timetable
Licensee	Queensland Bulk Water Supply Authority			
Expiry Date	5 years from issue			
Activity	Interfere with the flow of water in Cabbage Tree Creek (Kholo) by impounding water on or adjoining land described as Lot 149 on S311960. Maximum volume of water stored at full supply level not to exceed 26000 megalitres. Maximum height of impounded water at full supply level	Compliant with ROP.		

	must not exceed RL 50.9 metres.			
Purpose	Conserve Water			
Conditions	Schedule B Conditions: (1) The licensee must monitor and record – (a) daily volumes of water released from Cabbage Tree Creek Dam under the authority of this licence; (b) the rate of release; (c) where multi level intakes are installed, the inlet level used; (d) the reason for each release and where multi level intakes are installed, the reason for using the particular inlet level; (e) continuous time series water level data for the ponded area of Cabbage Tree Creek Dam; and (f) water quality data in accordance with the Queensland Government's Water Monitoring Data Collection Standards. (2) The licensee must ensure that quarterly reports are provided to the chief executive in accordance with the Queensland Government's Water Monitoring Data Reporting Standards. Such reports must include all data required under condition1. The licensee must forward the all reports to the chief executive at Brisbane within 3 months after the end of each quarter of the water year. (3) Where the licensee is unable to comply with any conditions of this licence, the licensee must provide a report to the chief executive within five business days of the incident of non-compliance. The report must include details and circumstances of the non-compliance. (4) The licensee must provide the monitoring data required under this licence to the chief executive upon request and within the time requested.	No releases made due to poor water quality. 1(c) Only single intake level exists (2),(3),(4) Not compliant with ROP (no reporting undertaken)	(1)(a-e): Compliant from 1 July 2010. (1)(f): Seqwater applies the Queensland Government Water Monitoring Data Collection Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality program for this site, as set out below: There is currently no monitoring on this system. Seqwater will undertake a review of the Mid-Brisbane River Monitoring Program (scheduled for completion by 1 October 2010) and implement the program (including training, reporting and scheduling) by 1 January 2011. Whilst undertaking the Program, Seqwater will sample the following target parameters for ROP purposes on a monthly basis: • Inflow: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients • Headwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients surface and bottom, blue-green algae • Tailwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity, total nutrients, dissolved nutrients and total sulphides (2): Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality program for this site, as set out above. (3): Current process in place for reporting operational events/issues. An Exception Report is also submitted quarterly detailing any exceptions to reporting requirements. (4) Requests for data outside of ROP reporting requirements will be provided within required timeframes. Place note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	1 January 2011.

Table 2. Water licence to interfere with the flow of water in Caboolture River

Licence Details:			**Interim Program, including Methodology**	**Timetable**
Licensee	Queensland Bulk Water Supply Authority			
Expiry Date	5 years from issue			
Activity	Interfere with the flow of water in Caboolture River by impounding water on or adjoining land described as Lot 5 on RP885624. Maximum volume of water stored at full supply level not to exceed 1300 megalitres. Maximum height of impounded water at full supply level must not exceed AHD 3.96 metres.			
Purpose	Conserve Water			

Conditions	Schedule B Conditions: (1) The licensee must monitor and record – (a) daily volumes of water released from Caboolture Weir under the authority of this licence; (b) the rate of release; (c) the reason for each release; (d) continuous time series water level data for the ponded area of Caboolture Weir; and (e) water quality data in accordance with the Queensland Government's Water Monitoring Data Collection Standards. (2) The licensee must ensure that quarterly reports are provided to the chief executive in accordance with the Queensland Government's Water Monitoring Data Reporting Standards. Such reports must include all data required under condition 1. The authorisation holder must forward the all reports to the chief executive at Brisbane within 3 months after the end of each quarter of the water year. (3) Where the licensee is unable to comply with any conditions of this licence, the licensee must provide a report to the chief executive within five business days of the incident of non-compliance. The report must include details and circumstances of the non-compliance. (4) The licensee must provide the monitoring data required under this licence to the chief executive upon request and within the time requested.	Not compliant with ROP (no reporting).	(1): Seqwater applies the Queensland Government Water Monitoring Data Collection Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality (as set out below) and water quantity program (anticipated to be completed by December 2014) for this site. There is currently no monitoring on this system. Seqwater will undertake a review of the Caboolture River Monitoring Program (scheduled for completion by January 2012) and implement the program (including training, reporting and scheduling) by 1 March 2012. Whilst undertaking the Program, Seqwater will sample the following target parameters for ROP purposes on a monthly basis: • Inflow: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients • Headwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients surface and bottom, blue-green algae • Tailwaters: none planned current as downstream is estuarine (2): Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality (as set out above) and water quantity program (anticipated to be completed by December 2014) for this site. (3): Current process in place for reporting operational events/issues. An Exception Report is also submitted quarterly detailing any exceptions to reporting requirements. (4) Requests for data outside of ROP reporting requirements will be provided within required timeframes. Place note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	1 March 2012 – December 2014.

Table 3. Water licence to interfere with the flow of water in Enoggera Creek

Licence Details:			**Interim Program, including Methodology**	**Timetable**
Licensee	Queensland Bulk Water Supply Authority			
Expiry Date	5 years from issue			
Activity	Interfere with the flow of water in Enoggera Creek by impounding water on or adjoining land described as Lot 4 on SP167641. Maximum volume of water stored at full supply level not to exceed 4500 megalitres. Maximum height of impounded water at full supply level must not exceed RL 74.37 metres.			
Purpose	Conserve Water			
Conditions	Schedule B Conditions: (1) The licensee must monitor and record – (a) daily volumes of water released from Enoggera Dam under the authority of this licence; (b) the rate of release; (c) where multi level intakes are installed, the inlet level used; (d) the reason for each release and where multi level intakes are installed, the reason for using the particular inlet level; (e) continuous time series water level data for the ponded area of Enoggera Dam; and (f) water quality data in accordance with the	Not compliant with ROP (no reporting).	(1)(a-d): Water can be released via a scour valve, otherwise water spills through low level ungated outlets (formerly sluice gates) and/or spillway. A draw down curve is used to calculate the rate of release for scour valve (compliant with requirements in licence) and spills are derived via a headwater rating. (1)(e): Continuous time serious water levels data is monitored and recorded for the ponded area. (1)(f): There is currently no monitoring on this system. Seqwater will undertake the Enoggera Creek Monitoring Program (scheduled for completion in December 2011) and implement the program (including training, reporting and scheduling) by 1 January 2012. Whilst undertaking the Program, Seqwater will sample the following target parameters for ROP purposes on a monthly basis: • Inflow: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients • Headwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients surface and bottom, blue-green algae	July 2011 – 1 January 2012.

	Queensland Government's Water Monitoring Data Collection Standards. (2) The licensee must ensure that quarterly reports are provided to the chief executive in accordance with the Queensland Government's Water Monitoring Data Reporting Standards. Such reports must include all data required under condition 1. The authorisation holder must forward the all reports to the chief executive at Brisbane within 3 months after the end of each quarter of the water year. (3) Where the licensee is unable to comply with any conditions of this licence, the licensee must provide a report to the chief executive within five business days of the incident of non-compliance. The report must include details and circumstances of the non-compliance. (4) The licensee must provide the monitoring data required under this licence to the chief executive upon request and within the time requested.		• Tailwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients, dissolved nutrients and total sulphides Seqwater applies the Queensland Government Water Monitoring Data Collection Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality (as set out above) and water quantity program (anticipated for July 2011) for this site. (2): Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality (as set out above) and water quantity program (anticipated for July 2011) for this site. (3): Current process in place for reporting operational events/issues. An Exception Report is also submitted quarterly detailing any exceptions to reporting requirements. (4) Requests for data outside of ROP reporting requirements will be provided within required timeframes. Place note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	

Table 4. Water licence to interfere with the flow of water in Gold Creek

Licence Details:			**Interim Program, including Methodology**	**Timetable**
Licensee	Queensland Bulk Water Supply Authority			
Expiry Date	5 years from issue			
Activity	Interfere with the flow of water in Gold Creek by impounding water on or adjoining land described as Lot 235 on S3139S. Maximum volume of water stored at full supply level not to exceed 1450 megalitres. Maximum height of impounded water at full supply level must not exceed AHD 95.75 metres.			
Purpose	Conserve Water			
Conditions	Schedule B Conditions: (1) The licensee must monitor and record – (a) daily volumes of water released from Gold Creek Dam under the authority of this licence; (b) the rate of release; (c) where multi level intakes are installed, the inlet level used; (d) the reason for each release and where multi level intakes are installed, the reason for using the particular inlet level; (e) continuous time series water level data for the ponded area of Gold Creek Dam; and (f) water quality data in accordance with the Queensland Government's Water Monitoring Data Collection Standards. (2) The licensee must ensure that quarterly reports are provided to the chief executive in accordance with the Queensland Government's Water Monitoring Data Reporting Standards. Such reports must include all data required under condition 1. The authorisation holder must forward the all reports to the chief executive at Brisbane within 3 months after the end of	Not compliant with ROP (no reporting).	(1): Seqwater applies the Queensland Government Water Monitoring Data Collection Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality (as set out below) and water quantity program (anticipated for July 2011) for this site: There is currently no monitoring on this system. Seqwater will undertake the Gold Creek Monitoring Program (scheduled for completion in December 2011) and implement the program (including training, reporting and scheduling) by 1 January 2012. Whilst undertaking the Program, Seqwater will sample the following target parameters for ROP purposes on a monthly basis: • Inflow: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients • Headwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients surface and bottom, blue-green algae • Tailwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients, dissolved nutrients and total sulphides (2): Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality (as set out above) and water quantity program (anticipated for July 2011) for this site. (3): Current process in place for reporting operational events/issues. An Exception Report is also submitted quarterly detailing any exceptions to reporting requirements. (4) Requests for data outside of ROP reporting requirements will be provided within required timeframes. Place note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	July 2011 – 1 January 2012.

	each quarter of the water year. (3) Where the licensee is unable to comply with any conditions of this licence, the licensee must provide a report to the chief executive within five business days of the incident of non-compliance. The report must include details and circumstances of the non-compliance. (4) The licensee must provide the monitoring data required under this licence to the chief executive upon request and within the time requested.			

Table 5. Water licence to interfere with the flow of water in Kilcoy Creek

Licence Details:			Interim Program, including Methodology	Timetable
Licensee	Queensland Bulk Water Supply Authority			
Expiry Date	5 years from issue			
Activity	Interfere with the flow of water in Kilcoy Creek by impounding water on or adjoining land described as Lot 1 on RP86175. Maximum volume of water stored at full supply level not to exceed 188 megalitres. Maximum height of impounded water at full supply level must not exceed RL 3.9 metres.			
Purpose	Conserve Water			
Conditions	Schedule B Conditions: (1) The licensee must monitor and record – (a) daily volumes of water released from Kilcoy Weir under the authority of this licence; (b) the rate of release; (c) the reason for each release; (d) continuous time series water level data for the ponded area of Kilcoy Weir; and (e) water quality data in accordance with the Queensland Government's Water Monitoring Data Collection Standards. (2) The licensee must ensure that quarterly reports are provided to the chief executive in accordance with the Queensland Government's Water Monitoring Data Reporting Standards. Such reports must include all data required under condition 1. The authorisation holder must forward the all reports to the chief executive at Brisbane within 3 months after the end of each quarter of the water year. (3) Where the licensee is unable to comply with any conditions of this licence, the licensee must provide a report to the chief executive within five business days of the incident of non-compliance. The report must include details and circumstances of the non-compliance. (4) The licensee must provide the monitoring data required under this licence to the chief executive upon request and within the time requested.	Not compliant with ROP (no reporting). No reference to Kilcoy Off-Stream Storage	(1)(a-d): Seqwater do not own the gauging station required for monitoring and recording. This is a DERM gauging station, situated downstream of the weir – (143312A, installed in 2005). (1)(e): Seqwater applies the Queensland Government Water Monitoring Data Collection Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality program for this site, as set out below: There is currently no monitoring on this system. Seqwater will undertake a review of the Somerset Catchment Monitoring Program (scheduled for completion by 1 October 2010) and implement the program (including training, reporting and scheduling) by 1 January 2011. Whilst undertaking the Program, Seqwater will sample the following target parameters for ROP purposes on a monthly basis: • Inflow: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients • Headwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients surface and bottom, blue-green algae • Tailwaters: total nutrients, dissolved nutrients and total sulphides (2): Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality program for this site. (3): Current process in place for reporting operational events/issues. An Exception Report is also submitted quarterly detailing any exceptions to reporting requirements. (4) Requests for data outside of ROP reporting requirements will be provided within required timeframes. Place note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	(1)(a-d): Nil. (1)(e),(2): 1 January 2011.

Table 6. Water licence to interfere with the flow of water in Sideling Creek

Licence Details:			Interim Program, including Methodology	Timetable
Licensee	Queensland Bulk Water Supply Authority			
Expiry Date	5 years from issue			
Activity	Interfere with the flow of water in Sideling Creek by impounding water on or adjoining land described as Lot 1 on RP79370. Maximum volume of water stored at full supply level not to exceed 24800 megalitres. Maximum height of impounded water at full supply level must not exceed EL 20.42 metres.			
Purpose	Conserve Water			
Conditions	Schedule B Conditions: (1) The licensee must monitor and record – (a) daily volumes of water released from Sideling Creek Dam under the authority of this licence; (b) the rate of release; (c) where multi level intakes are installed, the inlet level used; (d) the reason for each release and where multi level intakes are installed, the reason for using the particular inlet level; (e) continuous time series water level data for the ponded area of Sideling Creek Dam; and (f) water quality data in accordance with the Queensland Government's Water Monitoring Data Collection Standards. (2) The licensee must ensure that quarterly reports are provided to the chief executive in accordance with the Queensland Government's Water Monitoring Data Reporting Standards. Such reports must include all data required under condition 1. The authorisation holder must forward the all reports to the chief executive at Brisbane within 3 months after the end of each quarter of the water year. (3) Where the licensee is unable to comply with any conditions of this licence, the licensee must provide a report to the chief executive within five business days of the incident of non-compliance. The report must include details and circumstances of the non-compliance. (4) The licensee must provide the monitoring data required under this licence to the chief executive upon request and within the time requested.	Not compliant with ROP (no reporting).	(1)(a-e): Please note that no releases are made from this infrastructure – any water which flows past is via spills. (1)(f): Seqwater applies the Queensland Government Water Monitoring Data Collection Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality program for this site, as set out below: There is currently no monitoring on this system. Seqwater will undertake a review of the North Pine Catchment Monitoring Program (scheduled for completion by 1 July 2010) and implement the program (including training, reporting and scheduling) by 1 September 2010. Whilst undertaking the Program, Seqwater will sample the following target parameters for ROP purposes on a monthly basis: • Headwaters: electrical conductivity, temperature, dissolved oxygen, pH, turbidity with depth, total nutrients and dissolved nutrients surface and bottom, blue-green algae • Tailwaters: none planned current as dry creek bed (2): Seqwater applies the Queensland Government Water Monitoring Data Reporting Standards to its current reporting procedures. Collation of data for required reporting is dependent upon the implementation of a water quality program for this site, as set out above. (3): Current process in place for reporting operational events/issues. An Exception Report is also submitted quarterly detailing any exceptions to reporting requirements. (4) Requests for data outside of ROP reporting requirements will be provided within required timeframes. Place note, however, that a standard waiting period of 7-14 days applies to all ad-hoc requests and a longer waiting period may apply depending on the detail of the request.	1 September 2010.

Attachment 4(e) – Water Licences to be Amended, Table 5 – Water Licence to Interfere with Water in Wararba Creek

This licence has not yet been issued to Seqwater by DERM. Any necessary Interim Programs associated with this licence will be submitted following the issue of the licence.

Attachment 8, Table 1 – Water Allocation Schedule

Relevant ROP Requirement	Programs Currently In Existence	Interim Program, including Methodology	Timetable
Water Allocation Number 137: Brisbane Zone, Any Purpose, 25ML, High Class A Priority, "This authorisation was authorised to continue under section 360ZDP of the *Water Act 2000*.	The map in Attachment 2(b) of the ROP does not include Somerset Dam, where part of this water allocation has always been taken. Due to the boundaries of the Brisbane Zone, this allocation is currently being taken outside of the specified zone in the ROP.	The zone where this entitlement has been issued does not include Somerset Dam, where part of this water allocation has always been taken. Due to the boundaries of the Brisbane Zone, this allocation is currently being taken outside of the specified zone in the ROP.	
Water Allocation Number 139: Mid-Brisbane Zone, Any Purpose, 150ML, Medium Priority, "This authorisation was authorised to continue under section 360ZDP of the *Water Act 2000*.	In accordance with current take of water from the Mid-Brisbane zone.		

Attachment 9 – Resource operations licence holder monitoring: Locations where continuous time series height and flow data and storage water level data are required.

Location	Continuous time series storage water level data	Continuous time series flow data	Programs Currently In Existence	Interim Program, including Methodology	Timetable
Mount Crosby Weir inflow		Y	Not continuous	A daily inflow derivation model is being developed which will incorporate outflow from Wivenhoe Dam, flow from Lockyer Creek and local area, change in Mt Crosby water levels and local irrigation and water supply demands.	1 July 2010.
Mount Crosby Weir headwater level	Y		Continuous	Water level is monitored via ALERT to a 20mm resolution.	1 July 2010.
Mount Crosby Weir tailwater		Y	Not continuous	Downstream of Mt Crosby Weir is tidal and, as such, a downstream gauging station will not provide estimates of river flow. Releases are not made from Mt Crosby Weir and any flow through the fish way and over the weir crest will provide an estimate of the flow from the weir.	Estimate of flow from the weir in place by 30 December 2010.
North Pine Dam inflow		Y	Not continuous	A new daily inflow model is being developed and will be available by 1 July 2010.	1 July 2010.
North Pine Dam headwater level	Y		Continuous	Compliant.	1 July 2010.
North Pine Dam tailwater		Y	Not continuous	Water level is monitored continuously at the Dayboro Rd WPS Weir about 1km downstream of North Pine Dam. At present, this is only available via SCADA and is not rated. Until the rating is developed and equipment installed at the site to enable remote monitoring, flow downstream of North Pine Dam can be estimated from the gate and valve openings at the Dam (anticipated for July 2011). A rating can be developed for the Dayboro Rd Weir based on recorded flows and heights.	July 2011.
Somerset Dam inflow		Y	Not continuous	A new daily inflow model is being developed and will be in place by 1 July 2010.	1 July 2010.
Somerset Dam headwater level	Y		Continuous	Compliant.	1 July 2010.
Somerset Dam tailwater		Y	Not continuous	Somerset Dam tailwater is affected by levels in Wivenhoe Dam. When full, the water in Wivenhoe back up to the toe of Somerset Dam. As such, a tailwater gauge is considered inappropriate. Outflows from Somerset can be estimated from the recorded openings of the gates, sluices and valves at the dam.	Nil
Wivenhoe Dam inflow		Y	Not continuous	A new daily inflow model is being developed and will be available by 1 July 2010.	1 July 2010.
Wivenhoe Dam headwater level	Y		Continuous	Compliant.	1 July 2010.
Wivenhoe Dam tailwater		Y	Not continuous	Please note: Water level is continuously monitored and recorded via ALERT and on-site logger with a resolution of 20mm which is owned by DERM not Seqwater (143035A). The site is rated but can be affected by backwater from Lockyer Creek. Discharge from the dam can also be estimated via the rated gates and valves. Since the gauge is owned by DERM, Seqwater will not undertake monitoring for tailwater at this site.	Seqwater will not undertake monitoring for tailwater at this site since the gauge is owned by DERM (143035A).

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

SEQWATER INCIDENT REFERENCE	INIR- TBA

Notification Report Submitted By:
Queensland Bulk Water Supply Authority (QBWSA) Trading as Seqwater Karalee Regional Office PO Box 2437 North Ipswich Q 4305

Contact:
Karen Burgh ROP ROL Coordinator Telephone: [redacted] Facsimile: Email:

Date of Submission	31/01/2011

As per the Resource Operations Licence (ROL) and/or Interim Resource Operations Licence (IROL), Seqwater wishes to report the following information to DERM. Additional information will be provided as it becomes available. All due care and diligence has been applied to ensure the accuracy of the information provided. Seqwater will endeavour to provide updated information should errors or omissions be identified.

Seqwater is not aware of any non-compliance by it with the rules in the Resource Operations Plan with regard to water releases for flood mitigation purposes from Wivenhoe Dam. Such releases are authorised by Seqwater's Interim Program, approved under section 13 of the Moreton ROP on 3 December 2010.

Incident Information	
Area:	South East Queensland Region
Type of Incident:	Various
Location of Incident:	Various
Classification: (Minor/Moderate/Major)	Various

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Incident Reference Information	
Dam Operations Coordinator:	Murray Dunstan – North Region Jayam Tennakoon – Central Region Craig Duncan – South Region
Details of alert notification previously sent to DERM	**From:** Karen Burgh **Sent:** Friday, 21 January 2011 11:06 AM [redacted] **Subject:** Alert Notification/ Operational & Incident Reports_January 2011 Floods_Brisbane River, Bremer River, Warrill Creek and Lockyer Creek **Importance:** High
Detail of Incident	
Date of Incident:	4/01/2011 to Current
Time of Incident:	Not applicable
Raised By:	Karen Burgh
Details of incident:	Operational procedures in accordance with Seqwater's 'Flood Mitigation Manual for Wivenhoe and Somerset Dams', prepared and approved under chapter 4, part 2 of the Water Supply (Safety and Reliability) Act 2008, were taken from 4/1/2011 to 20/01/2011. Operational procedures under the FLOOD MITIGATION MANUAL in accordance with the approved INTERIM PROGRAM under the Moreton ROP led to instances of fish stranding and bank slumping within relevant areas.
Short Term Actions	
Immediate actions taken to manage the incident	Various issues are being investigated and reported as information becomes available.
Further Investigations	
Findings	Refer to attachment 1 to 8 for current issues raised and under investigation Refer to Appendix A for final fish count
Current Status:	**On going**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 1

Release from Storages							
ROP/IROL	Catchment	STORAGE CODE	SCHEME NAME	RELEASED FROM	RELEASED TO	Actions	Findings
ROP	Moreton Basin	165	Central Brisbane	MT CROSBY WEIR	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program
ROP	Moreton Basin	377	Central Brisbane	WIVENHOE DAM	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program
ROP	Moreton Basin	334	Pine River	NORTH PINE DAM	North Pine River	Flood operations applied to North Pine Dam intermittently from 9/10/2010 to approximately 20/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program
ROP	Moreton Basin	3S4	Stanley River	SOMMERSET DAM	Wivenhoe Dam	Flood operations applied to Somerset Dam between 7/1/2011 to approximately 18/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program

Attachment 2

Storage Heights								
ROP/ROL	CATCHMENT	Scheme Name	Site ID	Site Location	G/S	Alert	Findings	Actions
ROP	Logan Basin	Logan River	116	Logan R. at Bromelton Weir H/W	145025A		Under investigation	To be advised
ROP	Logan Basin	Logan River	555	South Maclean Weir HW	145023A		Possible Capillary Damage.	Site under investigation
ROP	Moreton Basin	Central Brisbane	568	Mt Crosby Weir HW	143003A	540199	Possible Capillary Damage.	Site under investigation
IROL	Moreton Basin	Central Lockyer	111	Laidley Ck at Showground Weir H/W	143225A		To be advised	Site under investigation
IROL	Moreton Basin	Warrill Valley	106	Warrill Ck at Junction Weir H/W	143117A		To be advised	Site under investigation

Attachment 3

Stream Height							
ROP/ROL	CATCHMENT	Scheme Name	Site ID	Description	G/S	Findings	Actions
ROP	Logan Basin	Logan River	117	Logan R. at Bromelton Weir T/W	145024A	To be advised	Under investigation
IROL	Mary River Basin	Upper Mary	102	Yabba Ck at Borumba Dam T/W	138119A	To be advised	Under investigation
IROL	Moreton Basin	Warrill Valley	105	Reynolds Ck at Moogerah T/W	143103B	To be advised	Under investigation
IROL	Moreton Basin	Warrill Valley	107	Warrill Ck at Junction Weir T/W	143118A -	To be advised	Under investigation
ROP	Moreton	Brisbane	564	Brisbane River and Wivenhoe Dam TW	143035A	No data for Wivenhoe TW. No tailwater gauge remaining.	Site under review for remedial works.

Attachment 4

Stream Flows							
ROP/IROL	Catchment	Scheme	Site ID	CLASS	Description	Findings	Actions
ROP	Logan Basin	Logan River	117	CONT	Logan R. at Bromelton Weir T/W	To be advised	Under investigation
IROL	Mary Basin	Upper Mary	102	CONT	Borumba Dam T/W	To be advised	Under investigation
ROP	Moreton Basin	Brisbane	564		Brisbane River at Wivenhoe Dam TW	No data for Wivenhoe TW. No tail water gauge remaining.	Site under review for remedial works
IROL	Moreton Basin	Warrill Valley	105	CONT	Reynolds Ck at Moogerah T/W	To be advised	Under investigation
IROL	Moreton Basin	Warrill Valley	107	CONT	Warrill Ck at Junction Weir T/W	To be advised	Under investigation

Attachment 5

Stream Bank Monitoring						
IROL/ROP	Catchment	STORAGE CODE	SCHEME NAME	Storage Site	Findings	Action
ROP	Logan	2195	Logan River	Bromelton Weir	Bank erosion below rock protection mattress on left embankment approx. 20m below wall.	Under investigation
ROP	Logan	2268	Logan River	Cedar Grove Weir	Bank erosion approx. 200 meters downstream on the left embankment. No infrastructure impacted	Site under investigation
ROP	Moreton	334	Pine River	North Pine Dam	Damage to vegetation downstream of dam.	Vegetation has been removed and chipped (to Grant Street)
ROP	Moreton	377	Central Brisbane	Wivenhoe DAM	River banks have slumped throughout the Mid Brisbane Water supply Scheme, extent is unknown.	Investigations on-going
ROP	Moreton	165	Central Brisbane	MT Crosby Weir	River banks have slumped throughout the Mid Brisbane Water supply Scheme, extent is unknown.	Investigations on-going
IROL	Mary River	214	Baroon Pocket	Baroon Pocket Dam	Several small to medium landslips around the reservoir rim.	Site under review for remedial works
IROL	Moreton	165	Lower Lockyer	Atkinson Dam	Minor erosion throughout the water supply scheme.	Major slumping at Wilson's weir. Site under review
IROL	Mary River	173	Upper Mary	Borumba Dam	Erosion to DS of dam and access roads, minor landslips	Site under review for remedial works
IROL	Mary River	239	Upper Mary	Cedar Pocket Dam	Erosion noted on the LHS bank d/s of the spillway.	Site under review for remedial works
			Upper Mary	Imbil Weir	Imbil weir under water.	Site will be investigated when practicable.
IROL	Moreton	-	Warrill valley	Warrill Diversion Weir	Bank erosion up to approx 20mtres downstream of the weir on both sides of the embankment.	Site under review for remedial works

Attachment 6

Water Quality						NOTES
ROP /IROL	Catchment	Site Id	Scheme	Site Location	Freq	
ROP	Moreton Basin	573	Pine River	North Pine Dam TW	M	No sampling due to accessibility of site. Site under investigation for February
ROP	Moreton Basin	565	Central Brisbane	Wivenhoe Dam HW	M	No sampling. Safety issue (flood releases)
ROP	Moreton Basin	564	Central Brisbane	Wivenhoe Dam TW	M	Accessibility issues due to road access/closure
ROP	Moreton Basin	568	Central Brisbane	Mt Crosby Weir HW	M	No access (flood releases)
ROP	Moreton Basin	567	Central Brisbane	Mt Crosby Weir TW	M	No access (flood releases)

Attachment 7

Water Diversions							
IROL /ROP	SCHEME	CODE	Water course	Zone from	Zone to	Freq	NOTES
IROL	CENTRAL LOCKYER	CLIP	Redbank Creek Pump Station to Lake Clarendon	CL02	CL02	Monthly	Site under investigation for remedial works

Attachment 8

Water Taken Requirements					
Scheme	Zone	Zone Description	Usage Description	ML Allowed	Notes
BRISBANE	BNSMB	Mid Brisbane Zone	Qbwsa _ High	25	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	Qbwsa_Medium	150	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	SEQWGM_High_Town water supply	278725	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_Morganvale water board_High	250	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_Superco_Medium	80	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	Irrigation usage	6811	Investigation for Mid Brisbane Zone ongoing
LLIP	LL01	Lockyer Ck AMTD 36.4-43.5Km Brightview Weir Storage	Irrigation and other usage	1770	While in overflow supply for irrigation can be met.
LLIP	LL02	Lockyer Ck AMTD 15-36.4Km D/S Brightview Weir to Buaraba Ck Jn	Irrigation and other usage	3348	No supply up till Buaraba Creek Junction
LLIP	LL03	Lockyer Ck AMTD 1.4-15Km Buaraba Ck Jn to O'Reily's Weir	Irrigation and other usage	3010	No supply (releases cannot be made via Brightview Channel)
LLIP	LL04	O/S storage Atkinson Dam pounded, B/view Ch, Buaraba Supply Ch	Irrigation and other usage	2502	No supply via Brightview Channel.
LLIP	LL06	woolshed Ck Woolshed Creek	Irrigation and other usage	284	No supply (releases cannot be made via Brightview Channel)
LLIP	LL07	Blind Gully Blind Gully	Irrigation and other usage	316	No supply (releases cannot be made via Brightview Channel)
UPRMRY	MRY02	Mary River - from Yabba Creek junction with the Mary River to Bell's Bridge AMTD 226.7 - 161km)	Irrigation and other usage	8111	The pie creek pump station was affected by debris and sand. No affect for supply of irrigation while creek is flowing. Customer meters within this zone may have been affected.

Appendix A

Current at 27/01/2011

Fish Recoveries/Kill							
Code	River System	STORAGE	Fish Recovery/kills	Dates	Findings	Total Recovered	Total kills
MID BRISBANE							
377	Brisbane River	WIVENHOE DAM	YES	19/01/2011	Flood releases	220	41
377	Brisbane River	WIVENHOE DAM	YES	20/01/2011	Flood releases	274	34
334	Pine River	NORTH PINE DAM	YES	14/01/2011	Flood releases	269	159
334	Pine River	NORTH PINE DAM	YES	18/01/2011	Flood releases	219	40
334	Pine River	NORTH PINE DAM	YES	20/01/2011	Flood releases	148	116

North Pine Dam

Current as at 27/01/2011

Fish Species	Number	
	Alive	Dead
Lungfish	46	
Bass	19	2
Yellow Belly	122	14
Tilapia		169
Eel Tailed Catfish	337	
Bony Bream		122
Spangled Perch	104	8
Mullet	8	

Wivenhoe Dam

Current as at 27/01/2011

Fish Species	Number	
	Alive	Dead
Lungfish	104	5
Bass		
Yellow Belly	45	
Tilapia		70
Eel Tailed Catfish	85	
Bony Bream	20	
Spangled Perch	40	
Eel	200	

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

SEQWATER INCIDENT REFERENCE	INIR- 1515

Notification Report Submitted By:
Queensland Bulk Water Supply Authority (QBWSA) Trading as Seqwater Karalee Regional Office PO Box 2437 North Ipswich Q 4305

Contact:
Karen Burgh ROP ROL Coordinator Telephone: [redacted] Facsimile: Email:

Date of Submission	25 March 2011

As per the Resource Operations Licences (ROL) and/or Interim Resource Operations Licences (IROL), Seqwater wishes to report the following updated information to DERM. All due care and diligence has been applied to ensure the accuracy of the information provided. Seqwater will endeavour to provide updated information should errors or omissions be identified.

Seqwater is not aware of any non-compliance by it with the rules in the Resource Operations Plan with regard to water releases for flood mitigation purposes from Wivenhoe Dam. Such releases are authorised by Seqwater's Interim Program, approved under section 13 of the Moreton ROP on 3 December 2010.

Incident Information	
This update to the incident report submitted on Thursday, 3 February 2011 for Operational Reporting, January 2011 Floods.	
Area:	South East Queensland Region
Type of Incident:	Various
Location of Incident:	Various
Classification: (Minor/Moderate/Major)	Various

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Incident Reference Information	
Dam Operations Coordinator:	Murray Dunstan – North Region Jayam Tennakoon – Central Region Craig Duncan – South Region
Details of alert notification previously sent to DERM	**From:** Karen Burgh **Sent:** Friday, 21 January 2011 11:06 AM [redacted] **Subject:** Alert Notification/ Operational & Incident Reports January 2011 Floods_Brisbane River, Bremer River, Warrill Creek and Lockyer Creek **Importance:** High
Details of report submission to DERM	**From:** Karen Burgh **Sent:** Thursday, 3 February 2011 5:46 PM **To:** 'Vanderheijde Karin'; Latham Will; Cock Don; Bass Bruce; Miller George; Hundy Fred **Subject:** Incident Report_January 2011 Floods_030211
Detail of Incident	
Date of Incident:	4/01/2011 to 20/01/2011.
Time of Incident:	Not applicable
Raised By:	Karen Burgh
Details of incident:	Operational procedures in accordance with Seqwater's 'Flood Mitigation Manual for Wivenhoe and Somerset Dams', prepared and approved under chapter 4, part 2 of the Water Supply (Safety and Reliability) Act 2008, were taken from 4/1/2011 to 20/01/2011. Operational procedures under the FLOOD MITIGATION MANUAL in accordance with the approved INTERIM PROGRAM under the Moreton ROP led to instances of fish stranding and bank slumping within relevant areas. Details where the collection of data may not be consistent with Queensland Government Water Monitoring Data Reporting Standards or the monitoring responsibilities of the ROP/IROL are in attachment one (1) to eight (8).

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Short Term Actions	
Immediate actions taken to manage the incident	Various issues are being investigated and reported as information becomes available. Monitoring devices used to record or measure water quantity and quality data are being reviewed to assess the need for remedial works.
Further Investigations	
Findings	For an update on issues raised, current investigations and findings, refer to attachment 1 to 8 A summary of minor fish recovery events are detailed in Appendix A.
Current Status:	**In Progress/On going**
Next Report Date:	**29 April 2011**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 1

Release from Storages							
ROP/IROL	Catchment	STORAGE CODE	SCHEME NAME	RELEASED FROM	RELEASED TO	Actions	Findings
ROP	Moreton Basin	165	Central Brisbane	MT CROSBY WEIR	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program
ROP	Moreton Basin	377	Central Brisbane	WIVENHOE DAM	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program
ROP	Moreton Basin	334	Pine River	NORTH PINE DAM	North Pine River	Flood operations applied to North Pine Dam intermittently from 9/10/2010 to approximately 20/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program
.OP	Moreton Basin	354	Stanley River	SOMMERSET DAM	Wivenhoe Dam	Flood operations applied to Somerset Dam between 7/1/2011 to approximately 18/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 2

Storage Heights								
ROP/ROL	**CATCHMENT**	**Scheme Name**	**Site ID**	**Site Location**	**G/S**	**Alert**	**Findings**	**Actions**
ROP	Logan Basin	Logan River	116	Logan R. at Bromelton Weir H/W	145025A		Site Operational	**Closed 3/3/2011**
ROP	Logan Basin	Logan River	555	South Maclean Weir HW	145023A		Capillary damage	Under remedial review
ROP	Moreton Basin	Central Brisbane	568	Mt Crosby Weir HW	143003A	540199	Capillary damage.	Under remedial review
IROL	Moreton Basin	Central Lockyer	111	Laidley Ck at Showground Weir H/W	143225A		Site operational	**Closed 3/3/2011**
IROL	Moreton Basin	Warrill Valley	106	Warrill Ck at Junction Weir H/W	143117A		Suspect sensor	Under remedial review
IROL	Moreton Basin	Warrill Valley	103	Warrill Ck at Churchbank Weir H/W	143105A		Site Operational	Under review. Remedial work required to verify data

Attachment 3

Stream Height							
ROP/ROL	**CATCHMENT**	**Scheme Name**	**Site ID**	**Description**	**G/S**	**Findings**	**Actions**
ROP	Logan Basin	Logan River	117	Logan R. at Bromelton Weir T/W	145024A	Site Operational	**Closed 03/03/2011**
IROL	Mary River Basin	Upper Mary	102	Yabba Ck at Borumba Dam T/W	138119A	Damaged sensor.	Under Remedial Review
IROL	Moreton Basin	Warrill Valley	105	Reynolds Ck at Moogerah T/W	143103B	Site Operational	**Closed 3/03/2011**
IROL	Moreton Basin	Warrill Valley	107	Warrill Ck at Junction Weir T/W	143118A -	Suspect Sensor	Under remedial review
ROP	Moreton	Brisbane	S64	Brisbane River and Wivenhoe Dam TW	143035A	Major damage to capillary	Under remedial review

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 4

Stream Flows [1]						
ROP/IROL	**Catchment**	**Scheme**	**Site ID**	**Description**	**Findings**	**Actions**
ROP	Logan Basin	Logan River	117	Logan R. at Bromelton Weir T/W	Site Operational	**Closed 03/03/2011**
IROL	Mary River Basin	Upper Mary	102	Yabba Ck at Borumba Dam T/W	Damaged sensor.	Under Remedial Review
IROL	Moreton Basin	Warrill Valley	10S	Reynolds Ck at Moogerah T/W	Site Operational	**Closed 3/03/2011**
IROL	Moreton Basin	Warrill Valley	107	Warrill Ck at Junction Weir T/W	Suspect Sensor	Under remedial review
ROP	Moreton	Brisbane	564	Brisbane River and Wivenhoe Dam TW	Major damage to capillary	Under remedial review

[1] Rating reviews may be required

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 5

Stream Bank Monitoring						
IROL ROP	Catchment	Storage Code	Scheme Name	Storage Site	Findings	Action
ROP	Logan	2195	Logan River	Bromelton Weir	Bank erosion below rock protection mattress on left embankment approx. 20m below wall.	Under investigation
ROP	Logan	2268	Logan River	Cedar Grove Weir	Bank erosion approx. 200 meters downstream on the left embankment. No infrastructure impacted	Monitor, ongoing
ROP	Moreton	334	Pine River	North Pine Dam	There was severe erosion at the toe of the flip bucket. Much of the works installed last year to improve fish passage downstream have been destroyed.	Damage vegetation has begun to be been removed and chipped from both banks (to Grant Street)
ROP	Moreton	377	Central Brisbane	Wivenhoe DAM	River banks have slumped throughout the Mid Brisbane Water supply Scheme, extent is unknown.	Investigations on-going
ROP	Moreton	165	Central Brisbane	MT Crosby Weir	River banks have slumped throughout the Mid Brisbane Water supply Scheme, extent is unknown.	Investigations on-going
IROL	Mary River	214	Baroon Pocket	Baroon Pocket Dam	Several small to medium landslips around the reservoir rim.	Site in review to determine remedial work
IROL	Moreton	165	Lower Lockyer	Atkinson Dam	Erosion throughout the water supply scheme including: Wilson's weir, Brightview Channel, Glenore Grove Weir , Jordans Weir, O'reily's weir	Sites in review for remedial works
IROL	Mary River	173	Upper Mary	Borumba Dam	Some significant damage to downstream toe of dam and downstream access roads. Some considerable landslips on the left hand side of spillway.	Site in review for remedial works
IROL	Mary River	239	Upper Mary	Cedar Pocket Dam	Erosion noted on the LHS bank d/s of the spillway.	Site in review for remedial works
IROL	Mary River		Upper Mary	Imbil Weir	No Damage. No repairs required	Closed 07/03/2011
IROL	Moreton	-	Warrill valley	Warrill Diversion Weir	Bank erosion up to approx 20mtres downstream of the weir on both sides of the embankment.	Embankment repairs complete. Gauging station repairs once water level recedes.

Attachment 6

Water Quality

ROP /IROL	Catchment	Site Id	Scheme	Site Location	Freq	FINDINGS	ACTION
ROP	Moreton Basin	573	Pine River	North Pine Dam TW	M	Sampling resumed February as required	**CLOSED** 10/03/2010
ROP	Moreton Basin	565	Central Brisbane	Wivenhoe Dam HW	M	Sampling resumed in February as required	**CLOSED** 10/03/2010
)P	Moreton Basin	564	Central Brisbane	Wivenhoe Dam TW	M	Sampling resumed February as required. Site has been slightly relocated due to access issues to the area	**CLOSED** 10/03/2010
ROP	Moreton Basin	568	Central Brisbane	Mt Crosby Weir HW	M	Access/ sampling resumed February as required however due to weir overtopping samples were taken from the adjacent bank	**CLOSED** 10/03/2010
ROP	Moreton Basin	567	Central Brisbane	Mt Crosby Weir TW	M	Access/sampling resumed February as required however due to weir overtopping samples were not taken as specified in the DERM manual	**CLOSED** 10/03/2010

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 7

Water Diversions							
IROL /ROP	SCHEME	CODE	Water course	Zone from	Zone to	Freq	NOTES
IROL	CENTRAL LOCKYER	CLIP	Redbank Creek Pump Station to Lake Clarendon	CL02	CL02	Monthly	Site under investigation for remedial works

Attachment 8

Water Taken Requirements					
Scheme	Zone	Zone Description	Usage Description	ML Allowed	Notes
BRISBANE	BNSMB	Mid Brisbane Zone	QBWSA _ High	25	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	QBWSA_Medium	150	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	SEQWGM_High_TWS	278725	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_ High	250	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_ Medium	80	Investigation for Mid Brisbane Zone ongoing
BRISBANE	BNSMB	Mid Brisbane Zone	Irrigation usage	6811	Investigation for Mid Brisbane Zone ongoing
LLIP	LL01	Lockyer Ck AMTD 36.4-43.5Km Brightview Weir Storage	Irrigation and other usage	1770	While in overflow supply for irrigation can be met.
LLIP	LL02	Lockyer Ck AMTD 15-36.4Km D/S Brightview Weir to Buaraba Ck Jn	Irrigation and other usage	3348	No supply up till Buaraba Creek Junction
LLIP	LL03	Lockyer Ck AMTD 1.4-15Km Buaraba Ck Jn to O'Reilys Weir	Irrigation and other usage	3010	No supply (releases cannot be made via Brightview Channel)
LLIP	LL04	O/S storage Atkinson Dam pounded, B/view Ch, Buaraba Supply Ch	Irrigation and other usage	2502	No supply via Brightview Channel.
LLIP	LL06	woolshed Ck Woolshed Creek	Irrigation and other usage	284	No supply (releases cannot be made via Brightview Channel)
LLIP	LL07	Blind Gully Blind Gully	Irrigation and other usage	316	No supply (releases cannot be made via Brightview Channel)
UPRMRY	MRY02	Mary River - from Yabba Creek junction with the Mary River to Bell's Bridge AMTD 226.7 - 161km)	Irrigation and other usage	8111	The pie creek pump station was affected by debris and sand. No affect for supply of irrigation while creek is flowing. Customer meters within this zone may have been affected.

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Appendix A

Table 1 – Total numbers of fish kills and recoveries for Wivenhoe and North Pine Dams.

Fish Recoveries/Kill				For the Period of: 04/01/2011 to 10/03/2011				
Code	**River System**	**STORAGE**	**Fish Recovery /kills**	**Dates**	**Findings**	**Total Recovery**	**Total kills**	**Comments**
377	Brisbane River	WIVENHOE DAM	YES	19/01/2011	Flood releases.	220	41	High volume flow
377	Brisbane River	WIVENHOE DAM	YES	20/01/2011	Flood releases.	274	34	High volume flow
377	Brisbane River	WIVENHOE DAM	YES	02/03/2011	Flood releases.	100	60	Ceased flow
377	Brisbane River	WIVENHOE DAM	YES	29/01/2011 to 30/01/2011	Flood releases.	36	3	Decreased flow
Sub Total for Wivenhoe Dam						630	138	
334	Pine River	NORTH PINE DAM	YES	14/01/2011	Flood releases	269	159	High volume flow
334	Pine River	NORTH PINE DAM	YES	18/01/2011	Flood releases	219	40	High volume flow
334	Pine River	NORTH PINE DAM	YES	20/01/2011	Flood releases	148	116	High volume flow
334	Pine River	NORTH PINE DAM	YES	21/02/2011	Flood releases	88	131	Increased movement of rocks
Sub Total for North Pine Dam						724	446	
323	Reynolds Creek	MOOGERAH DAM	YES	3/02/2011	Flood event	Nil	350	High volume flow
Sub Total for Moogerah Dam						0	350	
Total numbers						**1350**	**934**	

Table 2 – Fish (species) count for **North Pine Dam** from 04/01/2011 to 10/03/2011

North Pine Dam

Fish Species	Number	
	Alive	Dead
Bass	27	7
Bony Bream	5	137
Eel Tailed Catfish	377	23
Lungfish	50	0
Mullet	14	3
Spangled Perch	129	58
Tilapia	0	204
Yellow Belly	122	14
Total	**724**	**446**

Table 3 – Fish (species) count for **Wivenhoe Dam** from 04/01/2011 to 10/03/2011

Wivenhoe Dam

Fish Species	Number	
	Alive	Dead
Bass	0	0
Bony Bream	70	0
Eel	200	0
Eel Tailed Catfish	5	0
Lungfish	20	0
Spangled Perch	85	15
Tilapia	155	8
Yellow Belly	45	0
Gar	0	115
Goldfish	50	0
Total	**630**	**138**

Table 4 – Fish (species) count for **Moogerah Dam** from 04/01/2011 to 10/03/2011

Moogerah Dam

	Number	
Fish Species	Alive	Dead
Bony Bream	Nil	350
Total	0	350

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

SEQWATER INCIDENT REFERENCE	INIR- 1515 (3)

Notification Report Submitted By:
Queensland Bulk Water Supply Authority (QBWSA) Trading as Seqwater Karalee Regional Office PO Box 2437 North Ipswich Q 4305

Contact:
Karen Burgh ROP ROL Coordinator Telephone: [redacted] Facsimile: Email:

Date of Submission	29 April 2011

As per the Resource Operations Licences (ROL) and/or Interim Resource Operations Licences (IROL), Seqwater wishes to report the following updated information to DERM. All due care and diligence has been applied to ensure the accuracy of the information provided.

Seqwater is not aware of any non-compliance by it with the rules in the Resource Operations Plan with regard to water releases for flood mitigation purposes from Wivenhoe Dam. Such releases are authorised by Seqwater's Interim Program, approved under section 13 of the Moreton ROP on 3 December 2010.

Incident Information	
This report provides an update to the incident report submitted for the January 2011 floods on Thursday, 25 March detailing instances for the January 2011 Floods.	
Area:	South East Queensland Region
Type of Incident:	Various
Location of Incident:	Various
Classification: (Minor/Moderate/Major)	Various

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Incident Reference Information	
Dam Operations Coordinator:	Murray Dunstan – North Region Jayam Tennakoon – Central Region Craig Duncan – South Region
Details of alert notification previously sent to DERM	**From:** Karen Burgh **Sent:** Friday, 21 January 2011 11:06 AM [redacted] **Subject:** Alert Notification/ Operational & Incident Reports January 2011 Floods_Brisbane River, Bremer River, Warrill Creek and Lockyer Creek **Importance:** High
Details of Incident Report submissions to DERM	▪ **Initial Report** **From:** Karen Burgh **Sent:** Thursday, 3 February 2011 5:46 PM **To:** 'Vanderheijde Karin'; Latham Will; Cock Don; Bass Bruce; Miller George; Hundy Fred **Subject:** Incident Report_January 2011 Floods_030211 ▪ **Update 1** **From:** Karen Burgh **Sent:** Friday, 25 March 2011 2:50 PM **To:** 'Vanderheijde Karin'; 'Latham Will'; 'Cock Don'; 'Miller George' **Subject:** Incident Report Update_January 2011 Floods_250311

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Detail of Incident	
Date of Incident:	4/01/2011 to 20/01/2011
Time of Incident:	Not applicable
Raised By:	Karen Burgh
Details of incident:	Details where the collection of data may not be consistent with Queensland Government Water Monitoring Data Reporting Standards or the monitoring responsibilities of the ROP/IROL are in attachment one (1) to eight (8). Operational procedures in accordance with Seqwater's 'Flood Mitigation Manual for Wivenhoe and Somerset Dams', prepared and approved under chapter 4, part 2 of the Water Supply (Safety and Reliability) Act 2008, were taken from 4/1/2011 to 20/01/2011. Operational procedures under the FLOOD MITIGATION MANUAL in accordance with the approved INTERIM PROGRAM under the Moreton ROP led to instances of fish stranding and bank slumping within relevant areas.
Short Term Actions	
Immediate actions taken to manage the incident	Various issues are being investigated and reported as information becomes available. Monitoring devices used to record or measure water quantity and quality data are being reviewed to assess the need for remedial works.
Further Investigations	
Findings	For an update on issues raised, current investigations and findings, refer to attachment 1 to 8. A summary of minor fish recovery events are detailed in Appendix A.
Current Status:	**On going**
Next Report Update:	**31 May 2011**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 1

Release from Storages							
ROP/IROL	**Catchment**	**STORAGE CODE**	**SCHEME NAME**	**RELEASED FROM**	**RELEASED TO**	**Actions**	**Findings**
ROP	Moreton Basin	165	Central Brisbane	MT CROSBY WEIR	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status: Closed 27/04/2011**
ROP	Moreton Basin	377	Central Brisbane	WIVENHOE DAM	Brisbane River	Flood operations from Wivenhoe between 7/1/2011 to 19/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status: Closed 27/04/2011**
ROP	Moreton Basin	334	Pine River	NORTH PINE DAM	North Pine River	Flood operations applied to North Pine Dam intermittently from 9/10/2010 to approximately 20/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status: Closed 27/04/2011**
.OP	Moreton Basin	354	Stanley River	SOMMERSET DAM	Wivenhoe Dam	Flood operations applied to Somerset Dam between 7/1/2011 to approximately 18/1/2011.	Operation procedures followed in accordance with flood mitigation manual and approved interim program. **Status: Closed 27/04/2011**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 2

Storage Heights								
ROP/ROL	CATCHMENT	Scheme Name	Site ID	Site Location	G/S	Alert	Actions	Findings
ROP	Logan Basin	Logan River	116	Logan R. at Bromelton Weir H/W	145025A		Site was reviewed for flood damage/ maintenance	Site Operational **Status: Closed 3/3/2011**
ROP	Logan Basin	Logan River	555	South Maclean Weir HW	145023A		Site was reviewed for flood damage/ maintenance.	Capillary damage. Site under review for remedial works. **Status:** In progress
ROP	Moreton Basin	Central Brisbane	568	Mt Crosby Weir HW	143003A	540199	Site was reviewed for flood damage/ maintenance	Capillary damage. Scoping for remedial works in progress. **Status:** In progress
IROL	Moreton Basin	Central Lockyer	111	Laidley Ck at Showground Weir H/W	143225A		Site was reviewed for flood damage/ maintenance.	Site operational **Status: Closed 3/3/2011**
IROL	Moreton Basin	Warrill Valley	106	Warrill Ck at Junction Weir H/W	143117A		Site was reviewed for flood damage/ maintenance.	Suspect sensor. Site under review for remedial works. **Status:** In progress
IROL	Moreton Basin	Warrill Valley	103	Warrill Ck at Churchbank Weir H/W	143105A		Site was reviewed for flood damage/ maintenance.	Site is operational. Scoping for remedial works in progress. **Status:** In progress

Attachment 3

Stream Height							
ROP/ROL	**CATCHMENT**	**Scheme Name**	**Site ID**	**Description**	**G/S**	**Actions**	**Findings**
ROP	Logan Basin	Logan River	117	Logan R. at Bromelton Weir T/W	145024A	Site was reviewed for flood damage/ maintenance.	Site is Operational **Status: Closed 03/03/2011**
IROL	Mary River Basin	Upper Mary	102	Yabba Ck at Borumba Dam T/W	138119A	Site was reviewed for flood damage/ maintenance.	Damaged Sensor. Scoping for remedial works in progress **Status:** In progress
IROL	Moreton Basin	Warrill Valley	105	Reynolds Ck at Moogerah T/W	143103B	Site was reviewed for flood damage/ maintenance. .	Site Operational **Status: Closed 3/03/2011**
IROL	Moreton Basin	Warrill Valley	107	Warrill Ck at Junction Weir T/W	143118A -	Site was reviewed for flood damage/ maintenance.	Damage to sensor . Scoping for remedial works in progress **Status:** In progress
ROP	Moreton	Brisbane	564	Brisbane River and Wivenhoe Dam TW	143035A	Site was reviewed for flood damage/ maintenance.	Major damage to capillary. Scoping for remedial works in progress **Status:** In progress

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 4

Stream Flows [1]						
ROP/IROL	**Catchment**	**Scheme**	**Site ID**	**Description**	**Actions**	**Findings**
ROP	Logan Basin	Logan River	117	Logan R. at Bromelton Weir T/W	Site was reviewed for flood damage/ maintenance.	Site is Operational **Status:** **Closed 03/03/2011**
IROL	Mary River Basin	Upper Mary	102	Yabba Ck at Borumba Dam T/W	Site was reviewed for flood damage/ maintenance.	Damaged Sensor. Scoping for remedial works in progress **Status:** In progress
IROL	Moreton Basin	Warrill Valley	105	Reynolds Ck at Moogerah T/W	Site was reviewed for flood damage/ maintenance. .	Site Operational **Status:** **Closed 3/03/2011**
IROL	Moreton Basin	Warrill Valley	107	Warrill Ck at Junction Weir T/W	Site was reviewed for flood damage/ maintenance.	Damaged Sensor . Scoping for remedial works in progress **Status:** In progress
ROP	Moreton	Brisbane	564	Brisbane River and Wivenhoe Dam TW	Site was reviewed for flood damage/ maintenance.	Major damage to capillary. Scoping for remedial works in progress **Status:** In progress

[1] Rating reviews may be required

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Attachment 5

Stream Bank Monitoring						
IROL ROP	Catchment	Storage Code	Scheme Name	Storage Site	Actions	Findings
ROP	Logan	2195	Logan River	Bromelton Weir	Site investigated for erosion. Erosion found below rock protection mattress on left embankment approx. 20m below wall. Downstream repairs awaiting remediation will be assessed when river flows recede sufficiently.	No risk to infrastructure at present. Progress will be monitored and reported via annual reporting. **Status:** **Closed 28/04/2010**
ROP	Logan	2268	Logan River	Cedar Grove Weir	Site investigated for erosion The erosion which is approx. 200m downstream has no impact to infrastructure. Routine surveillance in place to monitor changing conditions.	Erosion DS is being monitored tri-weekly. No further changes or erosion has occurred.. Progress will be monitored and reported via annual reporting. **Status:** **Closed 28/04/2010**
ROP	Moreton	334	Pine River	North Pine Dam	There was severe erosion at the toe of the flip bucket. Much of the works installed last year to improve fish passage downstream have been destroyed.	Remedial works have been scheduled and will progress after wet season. Progress will be monitored and reported via annual reporting. **Status:** **Closed 28/04/2010**
OP	Moreton	377	Central Brisbane	Wivenhoe DAM	Investigations to rehabilitate eroded riverbeds (up to viewing platform) are in planning.	River banks have slumped throughout the Mid Brisbane Scheme. Progress will be monitored and reported via annual reporting **Status:** **Closed 28/04/2010**
ROP	Moreton	165	Central Brisbane	MT Crosby Weir	Investigations to rehabilitate banks and damaged retaining wall d/s of weir are in planning.	Progress will be monitored and reported via annual reporting. **Status:** **Closed 28/04/2010**
IROL	Mary River	214	Baroon Pocket	Baroon Pocket Dam	Site in review for a stability monitoring program. Several areas of unstable slope has been identified around the reservoir rim.	Ongoing monitoring. Progress will be monitored and reported via annual reporting. **Status:** **Closed 28/04/2010**

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Stream Bank Monitoring						
IROL ROP	Catchment	Storage Code	Scheme Name	Storage Site	Actions	Findings
IROL	Moreton	165	Lower Lockyer	Atkinson Dam	Sites under review for remedial works	Erosion throughout the water supply scheme including: Wilson's weir, Brightview Channel, Glenore Grove Weir , Jordans Weir, O'reily's weir **Status:** In progress
IROL	Mary River	173	Upper Mary	Borumba Dam	Site has been reviewed for remedial works. Awaiting report to confirm works schedule/program	Some significant damage to downstream toe of dam and downstream access roads. Some considerable landslips on the left hand side of spillway. **Status:** In progress
IROL	Mary River	239	Upper Mary	Cedar Pocket Dam	Site has been assessed for remedial works. Erosion noted on the LHS bank d/s of the spillway.	On going monitoring in place. There will be no repairs undertaken at Cedar Pocket dam due to limited damage. **Status:** **Closed 27/03/2011**
IROL	Mary River		Upper Mary	Imbil Weir	Site has been assessed for remedial works.	No Damage. No repairs required **Status:** **Closed 07/03/2011**
IROL	Moreton	-	Warrill valley	Warrill Diversion Weir	Site was assessed for remedial works. Bank erosion up to approx 20mtres downstream of the weir on both sides of the embankment.	Embankment repairs complete. On going monitoring in place. **Status:** **Closed 27/03/2011**

Attachment 6

Water Quality

ROP /IROL	Catchment	Site Id	Scheme	Site Location	Freq	Action	Findings
ROP	Moreton Basin	573	Pine River	North Pine Dam TW	M	No sampling due to accessibility to site throughout January.	Sampling resumed in February as required **Status:** **Closed 10/03/2011**
ROP	Moreton Basin	565	Central Brisbane	Wivenhoe Dam HW	M	No sampling throughout January due to flood releasing and safety.	Sampling resumed in February as required **Status:** **Closed 10/03/2011**
ROP	Moreton Basin	564	Central Brisbane	Wivenhoe Dam TW	M	Sampling resumed February as required.	Site has been slightly relocated due to access issues to the area **Status:** **Closed 10/03/2011**
ROP	Moreton Basin	568	Central Brisbane	Mt Crosby Weir HW	M	No sampling due to accessibility of road access to site throughout January.	Access/ sampling resumed February as required however due to weir overtopping samples were taken from the adjacent bank **Status:** **Closed 10/03/2011**
ROP	Moreton Basin	567	Central Brisbane	Mt Crosby Weir TW	M	Access/sampling restricted throughout January.	Sampling resumed February as required however due to weir overtopping samples were not taken as specified in the DERM manual **Status:** **Closed 10/03/2011**

Attachment 7

Water Diversions							
IROL /ROP	SCHEME	CODE	Water course	Zone from	Zone to	Actions	Findings
IROL	CENTRAL LOCKYER	CLIP	Redbank Creek Pump Station to Lake Clarendon	CL02	CL02	Site under investigation for remedial works	**Status:** In progress

Attachment 8

Water Taken Requirements					
Scheme	**Zone**	**Zone Description**	**Usage Description**	**ML Allowed**	**Actions/Findings**
BRISBANE	BNSMB	Mid Brisbane Zone	QBWSA _ High	25	As part of the Moreton ROP implementation plan for Seqwater, a metering program is being developed to ensure allocation holders in the Mid Brisbane Zone are metered. For standardisation, all existing meters will be assessed. The Seqwater's Moreton ROP Interim Program was updated and submitted to DERM on the 27/08/2010. **Status: Closed 28/04/2011**
BRISBANE	BNSMB	Mid Brisbane Zone	QBWSA_Medium	150	
BRISBANE	BNSMB	Mid Brisbane Zone	SEQWGM_High_TWS	278725	
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_ High	250	
BRISBANE	BNSMB	Mid Brisbane Zone	Industrial_ Medium	80	
BRISBANE	BNSMB	Mid Brisbane Zone	Irrigation usage	6811	
LLIP	LL01	Lockyer Ck AMTD 36.4-43.5Km Brightview Weir Storage	Irrigation and other usage	1770	While in overflow, supply for irrigation can be met. Site to be reviewed for remedial works. **Status:** In progress
LLIP	LL02	Lockyer Ck AMTD 15-36.4Km D/S Brightview Weir to Buaraba Ck Jn	Irrigation and other usage	3348	No supply up till Buaraba Creek Junction. Site to be reviewed for remedial works. **Status:** In progress
LLIP	LL03	Lockyer Ck AMTD 1.4-15Km Buaraba Ck Jn to O'Reilys Weir	Irrigation and other usage	3010	No supply (releases cannot be made via Brightview Channel). Site to be reviewed for remedial works. **Status:** In progress
LLIP	LL04	O/S storage Atkinson Dam pounded, B/view Ch, Buaraba Supply Ch	Irrigation and other usage	2502	No supply via Brightview Channel. Site to be reviewed for remedial works. **Status:** In progress
LLIP	LL06	woolshed Ck Woolshed Creek	Irrigation and other usage	284	No supply (releases cannot be made via Brightview Channel). Site to be reviewed for remedial works. **Status:** In progress

Dams and Catchments – Resource Operating Licence (ROL) Operational Incident Report Notification to DERM

Water Taken Requirements					
Scheme	**Zone**	**Zone Description**	**Usage Description**	**ML Allowed**	**Actions/Findings**
LLIP	LL07	Blind Gully Blind Gully	Irrigation and other usage	316	No supply (releases cannot be made via Brightview Channel). Site to be reviewed for remedial works. **Status:** In progress
UPRMRY	MRY02	Mary River - from Yabba Creek junction with the Mary River to Bell's Bridge AMTD 226.7 - 161km)	Irrigation and other usage	8111	Pie Creek pump station cleared. There is some damage to a small number of customer meters. Customer meters have been scheduled for replacement. **Status:** **Closed 28/04/2011**

Appendix A

Table 1 – Total numbers of fish kills and recoveries for Wivenhoe and North Pine Dams.

Fish Recoveries/Kill				For the Period of: 04/01/2011 to 10/03/2011				
Code	**River System**	**STORAGE**	**Fish Recovery /kills**	**Dates**	**Findings**	**Total Recovery**	**Total kills**	**Comments**
377	Brisbane River	WIVENHOE DAM	YES	19/01/2011	Flood releases.	220	41	High volume flow
377	Brisbane River	WIVENHOE DAM	YES	20/01/2011	Flood releases.	274	34	High volume flow
377	Brisbane River	WIVENHOE DAM	YES	02/03/2011	Flood releases.	100	60	Ceased flow
377	Brisbane River	WIVENHOE DAM	YES	29/01/2011 to 30/01/2011	Flood releases.	36	3	Decreased flow
Sub Total for Wivenhoe Dam						630	138	
334	Pine River	NORTH PINE DAM	YES	14/01/2011	Flood releases	269	159	High volume flow
334	Pine River	NORTH PINE DAM	YES	18/01/2011	Flood releases	219	40	High volume flow
334	Pine River	NORTH PINE DAM	YES	20/01/2011	Flood releases	148	116	High volume flow
334	Pine River	NORTH PINE DAM	YES	21/02/2011	Flood releases	88	131	Increased movement of rocks
Sub Total for North Pine Dam						724	446	
323	Reynolds Creek	MOOGERAH DAM	YES	3/02/2011	Flood event	Nil	350	High volume flow
Sub Total for Moogerah Dam						0	350	
Total numbers						**1350**	**934**	

Table 2 – Fish (species) count for **North Pine Dam** from 04/01/2011 to 10/03/2011

North Pine Dam

Fish Species	Number	
	Alive	Dead
Bass	27	7
Bony Bream	5	137
Eel Tailed Catfish	377	23
Lungfish	50	0
Mullet	14	3
Spangled Perch	129	58
Tilapia	0	204
Yellow Belly	122	14
Total	**724**	**446**

Table 3 – Fish (species) count for **Wivenhoe Dam** from 04/01/2011 to 10/03/2011

Wivenhoe Dam

Fish Species	Number	
	Alive	Dead
Bass	0	0
Bony Bream	70	0
Eel	200	0
Eel Tailed Catfish	5	0
Lungfish	20	0
Spangled Perch	85	15
Tilapia	155	8
Yellow Belly	45	0
Gar	0	115
Goldfish	50	0
Total	**630**	**138**

Table 4 – Fish (species) count for **Moogerah Dam** from 04/01/2011 to 10/03/2011

Moogerah Dam

Fish Species	Number	
	Alive	Dead
Bony Bream	141	3500
Total	0	3500

CTS No. 02831/11

URGENT

Advisor ..... OK
Dated / /
Approved Not Approved Noted
Further information required

Minister.....
Dated / /

Department of Environment and Resource Management
MINISTERIAL BRIEFING NOTE

TO: **Minister for Environment and Resource Management**

SUBJECT: **South East Queensland Catchments Inc. – Caring for our Country Emergency Provisions Investment Proposal for 2011 Flood Recovery**

TIMEFRAME

- Approval/Noting of this brief is required **as soon as possible** so that Australian Government Ministers are aware of Queensland Government support when considering funding for a Caring for our Country emergent flood recovery investment proposal (*Moreton Bay Coastal Hotspot – Building resilience through the assessment, stabilization and rehabilitation of catchment waterways impacted by the 2011 floods prioritised by sediment export potential*) which has been submitted by South East Queensland Catchments Inc (SEQC) (**Attachment 1**).

RECOMMENDATION

It is recommended that the Minister:

- **note** the information contained in this brief regarding background and current Queensland Government support for the role that SEQC is undertaking in post-flood rehabilitation of South East Queensland waterway assets.
- **sign** the letter to the Honourable Tony Burke MP, Minister for Sustainability, Environment, Water, Population and Communities and Senator the Honourable Joe Ludwig, Minister for Agriculture, Fisheries and Forestry (**Attachment 2**) which provides Queensland Government support for funding for the Caring for our Country investment proposal titled: *Moreton Bay Coastal Hotspot – Building resilience through the assessment, stabilization and rehabilitation of catchment waterways impacted by the 2011 floods prioritised by sediment export potential.*

BACKGROUND

- Simon Warner, Chief Executive Officer, SEQC has been making a number of representations to Queensland Government representatives (both Ministerial and Departmental) about SEQC's significant role in current and future flood recovery efforts across south east Queensland.
- To date, SEQC has been actively working to provide support and information to landholders and to assess the extent of the widespread damage throughout the region's catchments.
- At a meeting held on Thursday 17 February 2011, which was attended by the Honourable Stephen Robertson, MP, former Minister for Natural Resources, Mines & Energy and Minister for Trade, Ian Rickuss, MP, Member for Lockyer, Wayne Wendt, State Member for Ipswich, John Bradley, Director-General, the Department of Environment and Resource Management (DERM), and Simon Warner, a number of actions were agreed, including the fact that the Department would organise a letter of support for the SEQC Caring for our Country investment proposal for the Minister's signature.

Author	Cleared by ✓Endorsed	Cleared by	Recommended:
Name: Debbie Guzek Position: Principal Project Officer Tel No: [redacted] Date: 22/02/11	Name: Fred Tromp 24/2 Position: Director, Regional NRM Programs Tel No [redacted] Name: Bob Speirs ✓Endorsed Position: General Manager, NRM Programs and Policy Tel No: [redacted]	Name: Tony Roberts Position: Assistant Director General, Natural Resources and Environment Tel No: [redacted] 28/2 Name: Position: Tel No:	Name: John Bradley Director-General, DERM Tel No: [redacted] Date: [redacted] 2/3

Rec'd - ODG
28 FEB 2011

File Ref:

CURRENT ISSUES

- SEQC has recently submitted an additional 2010-11 Investment Proposal (**Attachment 1**) to the Australian Government under the emergency provisions of the Caring for our Country program business plan.
- If successful, this investment proposal for $2.5m titled - *Moreton Bay Coastal Hotspot – Building resilience through the assessment, stabilization and rehabilitation of catchment waterways impacted by the 2011 floods prioritised by sediment export potential* will provide initial funding to support SEQC's immediate post-flood recovery response.
- Australian Government funding for this investment will align with and support a number of investment proposals for Queensland Government funding currently being drafted for consideration by the Reconstruction Authority.

RESOURCE/IMPLEMENTATION IMPLICATIONS

- SEQC has consistently managed a portfolio of natural resource management (NRM) projects worth $11m per annum while maintaining a high standard of accountability and governance.
- In addition, SEQC has also recently demonstrated an ability to effectively and efficiently manage a one-off environmental recovery grant, namely the $2m 2009-10 Australian Government funded *Moreton Bay Oil Spill Restoration Program.*

* Note tagged items. JB.

PROPOSED ACTION

- Should the SEQC investment proposal be successful, DERM, through the Regional NRM Programs Branch will administer the contractual arrangements on behalf of the Australian Government under the Transitional Arrangement and Financial Arrangement established to deliver the Australian Government's Caring for our Country program and Queensland's complementary regional NRM program, Q2 Coasts and Country.

OTHER INFORMATION

- *Consultation:* N/A
- *Legislation:* N/A
- *Key Communication Messages:* N/A

MINISTER'S COMMENTS

Minister - endorsed to go [redacted]

2/3

ATTACHMENTS

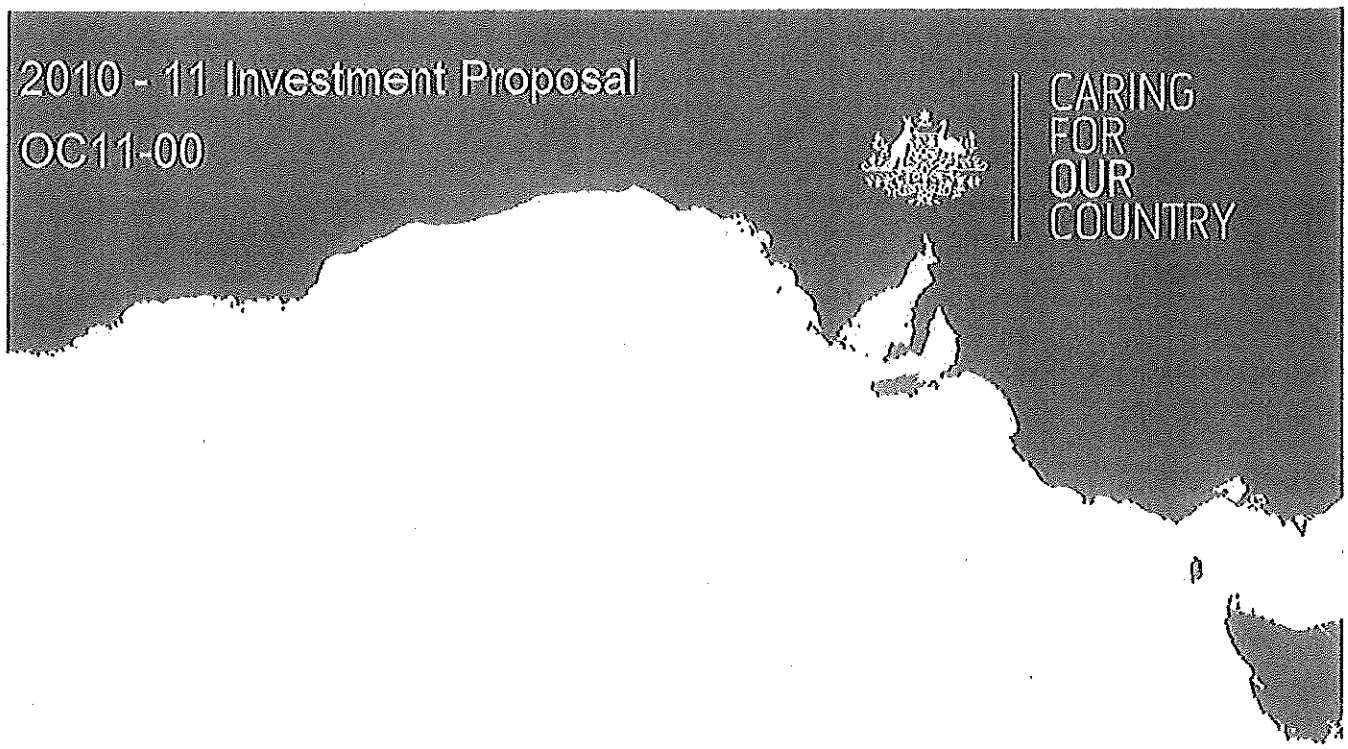
- Attachment 1 – Caring for our Country 2010-2011 Investment Proposal
- Attachment 2 – Ministerial Letter of Support to the Hon. Tony Burke MP and Senator, the Hon. Joe Ludwig

Author	Cleared by	Cleared by	Recommended:
Name: Debbie Guzek Position: Principal Project Officer Tel No: [redacted] Date: 22/02/11	Name: Fred Tromp Position: Director, Regional NRM Programs Tel No: [redacted]	Name: Tony Roberts Position: Assistant Director General, Natural Resources and Environment Tel No: [redacted]	Name: John Bradley Director-General, DERM Tel No: [redacted] Date:
	Name: Bob Speirs Position: General Manager, NRM Programs and Policy Tel No: [redacted]	Name: Position: Tel No:	

2010 - 11 Investment Proposal

OC11-00

CARING FOR OUR COUNTRY



Proposal title

Please provide a title which clearly indicates what your proposal will achieve

Moreton Bay Coastal Hotspot -- Building resilience through the assessment, stabilization and rehabilitation of catchment waterways impacted by the 2011 floods prioritised by sediment export potential.

Proposal summary

Please provide a short description of your proposal.

Major flooding events occurred in SEQ in the wet season of 2010-11 resulting in massive loads of sediment and other contaminants being flushed through the waterway network into the Moreton Bay coastal hotspot (Ramsar site). There is widespread scouring of channels, bank erosion, lateral gully erosion, landslips, sediment redistribution, topsoild removal, channel redirection and vegetation removal. Many areas are highly unstable and further sediment export will occur in future rain events -- a likely scenario given the wetter than average predictions for 2011. This project will assess, prioritise and implement stabilisation and rehabilitation works in the Lockyer Bremer, Mid Brisbane and Upper Brisbane catchments to prevent further major sediment loads being exported from the rural catchments into Moreton Bay.

Funding sought	$ 2,500,000.00

Proposed duration

Proposed start date (mm/yyyy)	04/2011
Proposed completion date (mm/yyyy)	06/2012

Caring for our Country 2010-11 Investment Proposal

SECTION 1: PROPONENT DETAILS

The *Proponent Details* are required for the legal entity with whom the Australian Government will form a contract, if this proposal is successful.

Organisation details

Organisation Name	SEQ Catchments Limited
Organisation/Company ABN	91 115 662 989
Is your organisation registered for GST?	Yes

Entity type Australian Public Company

Is your organisation an Aboriginal or Torres Strait organisation	No
Is your organisation a regional natural resource management organisation	Yes

Proponent contact information – primary contact person

The primary contact person should be a person in the lead organisation who is readily contactable in March–May 2010 during the proposal assessment period and will be involved in the day–to–day management of the project.

	Title	First name	Last name
Name	Mr	Tony	Costantini
Position in organisation	Chief Operating Officer		
Business phone number	[redacted]		
After hours phone number			
Fax			
Mobile			
PO Box/Street Address	PO Box 13204 George Street		
Town/Suburb	George Street Brisbane		
State	Queensland	Postcode	4003
Email	[redacted]		

Caring for our Country 2010-11 Investment Proposal

Authorised person – person who will sign the contract

This is the person with power to bind the organisation in a contract for the value of this proposal.

Is the authorised person the same as the proponent organisation contact person (details in above

No

	Title	First name	Last name
Name	Mr	Simon	Warner
Position in organisation	Chief Executive Officer		
Business phone number	[redacted]		
After hours phone number			
Fax			
Mobile			
PO Box/Street Address	PO Box 13204 George Street		
Town/Suburb	George Street Brisbane		
State	Queensland	Postcode	4003
Email	[redacted]		

Proponent contact information – secondary contact person

The secondary contact person should be a person who is readily contactable in March–May 2010 and will only be contacted where the primary contact person is unavailable.

	Title	First name	Last name
Name	Mr	Tony	McKew
Position in organisation	Landscape Restoration Manager		
Business phone number	[redacted]		
After hours phone number			
Fax			
Mobile			
Email			

SECTION 3: TARGETS

Which Caring for our Country Sustainable Practices target/s does your proposal address?
Select up to 3 targets.
(Your proposal will be assessed against how well your project addresses these target/s .)

Coastal Environments and Critical Aquatic Habitats

- Improving coastal hotspots

Sustainable Practices

- Improving management practices
- Improving knowledge and skills

Additional Targets
Please indicate any additional targets your project will address.

What part of the selected target/s will your project meet?

Improving coastal hotspots
Please select which priority coastal hotspot your proposal addresses.

- Moreton Bay (QLD) **Yes**

Improving management practices

How many of the following types of farmers/Indigenous land managers will improve their practices and the area over which management practices will be improved?

- Cropping farmers (including horticulturists) **Yes**
  Number **15**
  Over **1000** hectares

- Grazing farmers (including dairy farmers) **Yes**
  Number **50**
  Over **4000** hectares

Please specify the natural resource condition issue/s that your proposal addresses.

- Reducing the risk of soil loss through wind and water erosion **Yes**
- Carbon content of soils **Yes**

Ground cover management practices to reduce wind and water erosion and increase carbon content of soils

- Increased retention of crop residues (stubble) **Yes**
- Adoption of and management for ground cover targets (cropping and grazing systems) such as rotational grazing **Yes**
- Terracing and contour planting (horticulture) **Yes**
- Reduction in the use of fallowing **Yes**
- Increased proportion of perennial vegetation in pastures **Yes**
- Innovative practices **Yes**
  Please specify porous & leaky weirs, managing drainage lines across property boundaries, gully rehabilitation, rehabilitation of landslips, stream channel stabilization.

Additional practices to increase soil carbon

- Increased use of green manure crops **Yes**

Improving knowledge and skills

- How many farmers, fishers or land managers will demonstrate an improvement in knowledge and skills in natural resource management under your proposal? **65**

Caring for our Country 2010-11 Investment Proposal

SECTION 6: LOCATION AND DETAILS OF THE PROPOSAL

Nearest town or named locality

Please list the nearest town or named locality to your project. If your project is across a large area, choose a central point.

Gatton

Latitude and longitude

Please provide the latitude and longitude of your project in decimal degrees. If your proposal covers a large area, provide the latitude and longitude of a point at the centre of the project area.

Location of your proposal - Latitude	-27.5587
Location of your proposal - Longitude	152.2761

Does your proposal cover multiple sites? Yes

Where are the sites your proposal covers?

Lockyer Creek catchment, Bremer River catchment, Upper Brisbane catchment and Mid-Brisbane catchment. All these streams drain to Moreton Bay. A map showing the location of the catchments can be accessed at http://www.healthycountry.com.au/HealthyCountry.aspx.

Will your project take place on?

- Private land
- Public land

Please add the State/s and/or Territories and corresponding natural resource management region/s in which your project will be undertaken to the table below.

State or Territory	Natural Resource Management region/s
Queensland	South East

SECTION 3: PROPOSAL DESCRIPTION

Issues

Specific issues to be addressed

What specific issue/s is your proposal planning to address?

How have the particular areas to be addressed been identified?

The SEQ Healthy Waterways Strategy 2007-12 (WQIP) identified that
* 80% of sediment entering Moreton Bay comes from non-urban sources & is 30 times the pre-European load.
* Gully and channel erosion generates 75% of sediment export.
* There needs to be a 50% reduction in non-urban diffuse loads by 2026 to prevent further water quality & ecosystem health declines in the Moreton Bay hotspot.

The Ecosystem Health Reporting Program found that in 2009 much of Moreton Bay went from a B to a D rating as a result of 2009 being a wet year resulting in large sediment loads being exported from the catchment. 2010 was also a wet year and in January 2011, the region experienced a major flooding event. Initial assessments indicate that very high rainfalls along the scenic rim in the headwaters of Lockyer Creek and the Brisbane River resulted in a large body of water rising rapidly and rushing down the channel system, particularly through Lockyer Creek. All the tributaries on the scenic rim side appear to be scoured down to bedrock with the majority of the sediment being exported to Moreton Bay. The system is showing similar impacts to those that occurred as a result of the 1974 flooding with large volumes of sediment being mobilized, transported through the channel network and into Moreton Bay including extensive scouring of the channel system. An initial assessment report on the impact of the floods in the non-urban waterways is attached at Appendix A.

A flood response taskforce of scientists has been established to determine the impact of the floods on Moreton Bay and its waterways and to determine how long it will take to recover and a flood response steering group (NRM regional body, local governments, water utilities and Government agencies) is coordinating the NRM response.

Evidence from the past indicates that Southeast Queensland experiences decadal cycles of drier and wetter than average periods. There is evidence to indicate that Southeast Queensland is now in a wetter than average decadal cycle and can expect further significant runoff events. There is thus an urgency to undertake stabilization and rehabilitation works in areas with a high potential for further sediment export including bank, channel, gully and landslip stabilization. Landholders also need urgent advice to ensure that recovery works they undertake do not exacerbate or cause further sediment loss.

Activities proposed

What activities will your project carry out?

- Please include the cost of each major activity.
- Please **do not** include conservation covenanting activities in this section.

The following will be undertaken in the Lockyer, Bremer, Mid Brisbane and Upper Brisbane catchments:

- In-field rapid assessment of channels including bank erosion, lateral gully erosion, landslips, sediment redistribution, topsoil removal, channel redirection, vegetation removal and infrastructure damage; Assessment of the effectiveness of stabilization and rehabilitation works undertaken prior to the floods; Acquisition of LiDAR data of the Lockyer and Bremer. As LiDAR data of the area was acquired prior to major flood event, it will be possible to compare the data and determine the impact of the flood on channel geomorphology. Review by technical expert group and advice to landholders on the design of stabilization and rehabilitation works ($206,000).
- Devolved grants to landholders to assist with stabilization and rehabilitation of areas with a high potential to produce further significant sediment export from rain events in the near future including: fencing out gullies and streambanks to prevent stock access; off-stream watering points & revegetation; installation of porous weirs/rock chutes; engineering drainage & channels; and sediment interception measures on cropping land (chiefly Lockyer). ($1,305,800). Devolved grants administration ($261,200).
- MERI - Monitoring of management interventions & sediment export, including water quality and ecosystem health in each catchment. The data from the monitoring program will be used to determine the effectiveness of various rehabilitation techniques & changed management practices in reducing stream sediment loads and to callibrate and test the sediment budget model (hillslope, gully, streambank, total sediment & floodplain deposition parameters). This will examine the effectiveness of different interventions to the currently funded MERI in the open call project OC11-00517 ($200,000).
- Project Management/facilitation ($187,000).
- Community Engagement including steering committee costs, landholder extension and communications ($90,000).
- Project Administration - $250,000.

Devolved grants

If you are seeking funding for a devolved grants component please outline

- the type of devolved grants, market based instrument or economic incentive that will be used to deliver the Caring for our Country target/s
- the target audience and likely degree of adoption
- the size of the grants/incentives for groups
- the expected administration costs for your organisation to run these grants
- how much funding will be delivered to on-ground activities.

Incentive grants will be used targeted at the landholders identified through the in-field rapid assessment & technical review process. Work over the past 3 years has engaged many of these landholders, who since the floods have actively sought out assistance from SEQ Catchments. Thus adoption is likely to be very high (>80%).

Grants will be offered to landholders identified during the in-field assessment process and following assessment by the technical assessment panel.

The size of individual grants will vary in accordance with the works that need to be undertaken generally from $10,000 to $100,000. From projects that have already been undertaken it is likely that some of the major gully rehabilitation & drainage works may exceed $100,000.

Because the scientific data (sediment budgets & rehabilitation priorities, types of works) for the target catchments is largely complete & engagement with landholders is already at a high level as a result of the floods, a high proportion of the funds can be directed to on-ground works. The budget breakdown is:

- on-ground works -$1,305,800
- subcontracting administration - $261,200
- in-field assessment, technical advice, acquisition & analysis of LIDAR data, and design of on-ground works $206,000
- community engagement - $90,000
- project management/facilitation - $187,000
- project administration - $250,000
- MERI - $200,000

Project manager or facilitator services

- What activities they will undertake
- What amount of funding will be required to cover their costs

The project will include a supervisor (0.3fte for 15 months - $33,500) and a coordinator (1fte for 15 months - $112,500) Oncosts for the supervisor and coordinator include travel and general operation of $41,000. The Coordinator will:

* coordinate tha activities of the in-field assessment teams, the technical advice group and the steering committee of partner organizations (SEQ Catchments, local governments, state agencies, water utilities and community groups), landholder/community engagement and on-ground works;
* manage financial and reporting requirements;
* manage overall communication & marketing of the project, its activities and achievements.

The initial site assessment teams will require 12 people for a month ($100,000) to undertake the assessments. Their operating costs will include vehicle and travel ($16,000). The technical review team (6 people for 1 month) will require $20,000 for consultants/labour and $30,000 for travel and general operating.

How have you explored and addressed opportunities for Indigenous people to participate in your project?
Please include any use of traditional ecological knowledge and land and sea country management plans.

The project has not involved Indigenous people but if Indigenous work crews are available, every effort will be made to engage them where appropriate in the on-ground works component of the project.

How many Indigenous people will be employed under your proposal?

0 Number of indigenous people employed

How will you engage other community members in your project?
Please outline

- the engagement activities planned
- the scale of this involvement
- the potential to raise community awareness and enhance skills

ngagement will be through the in-field assessment process and local landholders directly contacting SEQ Catchments or their local government for assistance. As at 31 January 2011 and before targeted media communications in the affected catchments, there had been approximately 90 enquiries from landholders for assistance. Local community committees are also already established in each of the catchments. They oversee the landholder engagement process & on-ground works.

There is an SEQ Catchments website and a Healthy Country website already established. They will be used to post information- http://www.healthycountry.com.au/HealthyCountry.aspx). Reports are posted on the website & newsletters are regularly provided.

Landholder "champions" have been identified in each catchment. During 2009 and 2010 a number of rehabilitation works have been undertaken in each of the catchments commencing on the "champions" properties. These works will be used to engage & raise the awareness & capacity of the other landholders in understanding the scale of the sediment export problem & the effectiveness & costs of different rehabilitation techniques.

Caring for our Country 2010-11 Investment Proposal

How many young people (aged 15 to 30) will be engaged by your project?

30	Number of young people

Organisation of project

How will you develop and manage the activities under your proposal?
How will you ensure that your partners and subcontractors deliver their contributions in a timely and efficient way?

This project involves a number of partner organizations working together under the coordination of SEQ Catchments. The delivery of this project depends on effective coordination and efficient delivery. This will be achieved by:

- having an overall project coordinator to coordinate the activities of all the partners;
- a steering committee of all the partners chaired by SEQ Catchments;
- a technical support group with specialist expertise in river geomorphology, soil science, hydrology and design of works;
- 6 site assessment teams to respond to landholder enquiries for assistance;
- 3 local landholder committees (Bremer, Logan, Lockyer) comprised of local landholders, landcare and catchment groups, industry groups, State & local Government extension staff). The committees are responsible for engagement of landholders within each catchment, coordinating extension activities, overseeing delivery of local on-ground priority actions, coordinating with local government & industry body programs & coordinating local MERI activities.
- SEQ Catchments is also part of the Lockyer and Somerset flood recovery subgroups working with local government to provide support to the recovery effort.
- All on-ground work will be undertaken under contract to landholders through the devolved grants process. SEQ Catchments has a contract management system and considerable expertise in managing contracts to ensure delivery is on time, on budget and of a high standard.

How will you monitor and evaluate your outcomes?

A Monitoring & Evaluation Strategy has already been prepared for the Healthy Country program until 6/2011. A copy is available at: http://www.healthycountry.com.au/HealthyCountry/Resources/ScienceandPlanningResources.aspx. A MERI plan was also recently developed for the Caring for our Country Open Grants Project "Targeted works to reduce sediment export to waterways entering Moreton Bay".

MERI plan will be prepared for this project building on the existing plans. The focus is on obtaining field data on hillslope, gully & channel erosion rates, water quality data for sediments and nutrients, riparian condition and effectiveness of rehabilitation works. An emphasis will also be put on evaluating the effectiveness of on-ground stabilization and rehabilitation works which were implemented prior to the floods in reducing sediment export in order to build up a suite of works designs suitable for the flow regimes found in sub-tropical river systems found in SEQ.

Achievements against target/s

Please explain why your activities will lead to improvements in terms of each selected target

Improving coastal hotspots

A number of projects funded by the Australian and State Governments have been working toward delivering the WQIP target "By 2026, non-urban diffuse source pollutant loads entering receiving waters will be reduced by 50% of the loads in 2006 and in-stream ecosystem health will improve in targeted catchments." These have been focused on developing the proof of concept in focal catchments in the Lockyer Bremer and Logan – streams which flow to Moreton Bay.

Initial assessments of stabilization and rehabilitation works already implemented indicate that some of the works have been effective in reducing sediment export and some have been impacted and will need to be repaired (see Flood Impacts Report Appendix A).

The works that will be undertaken as part of this project will:

- Repair previously implemented works that have been damaged;
- Identify areas that are at high risk of producing high sediment export loads during rainfall events in the short term, e.g. landslips and potential landslip areas, gullies, unstable bank and channel formations and implement stabilization and rehabilitation works.

It is expected that these works will result in the prevention of significant quantities of sediment being exported to Moreton Bay in future rain events.

The assessment of the effectiveness of works that were already implemented under varying conditions (from the rapid – major flash flooding that occurred in the Lockyer to the more slowly rising flooding that occurred in the Bremer) will enable a much improved understanding of the what types of works/designs work under different soil and climatic conditions.

The analysis of before and after LIDAR will allow for a vastly improved understanding of how the system operates in major flooding events and will allow for much improved understanding of how sediment is being transported through the system thus improving the ability to target future works aimed at reducing sediment export to Moreton Bay.

Improving management practices

The properties identified as being most at risk of producing further high sediment loads from rainfall in the short term and those where previous sediment export prevention methods have been damaged. They will be targeted for extension services to improve the overall farming management practices as well as rehabilitation of high sediment yielding gullies, landslips, streams and hillslopes. Improved management practices (BMP's) to reduce sediment runoff will include changed grazing practices, changes to crop cover, rotation & tillage practices etc.

Improving knowledge and skills

Whilst the rehabilitation works & incentive payments for improved management practices will be targeted to high sediment exporting properties, the training through workshops, demonstration field days, fact sheets & newsletters will be available to all interested landholders. These will be run by the 3 Catchment Coordinators (2010-2012).

It is proposed to:
*undertake demonstration field days in sediment control techniques, pasture management, crop management, gully, channel & hillslope erosion rehabilitation techniques - 65 landholders
* provide information via fact sheets, newsletters & through the website to all landholders in the catchments - 400 landholders.

Why are your proposed activities the most appropriate and technically feasible means of delivering these selected target/s?

The sediment budget models developed by the Australian Rivers Institute (eWaterCRC) have been able to determine for each of the areas, the sources of sediment, the processes (e.g. gully, channel, hillslope) and the export load quantities. Additional LiDAR data acquired following the floods and compared against that obtained before the floods plus the rapid in-field assessment will allow for areas at the highest risk from major sediment export in the short-term to be identified and those properties targeted. The Healthy Country project has been trialing a suite of management interventions. Information from how these designs have withstood the various flooding conditions experienced during the 2010-11 wet season will be used to improve the design of on-ground stabilization and rehabilitation works.

Thus the proposed activities are underpinned by rigorous science & excellent on-ground understanding of the socio-economic drivers that determine landholder engagement & uptake.

What scientific, case studies or other evidence supports your claims in the two questions immediately above.

The Healthy Country proof-of-concept project has been operating for 3 years now and there have been considerable scientific study into the geomorphology of the catchments, sediment transport processes, design of on-ground works, best management practices for various grazing and cropping enterprises and landholder engagement processes.
SPOT 2.5m imagery was used to determine land cover classification in the 3 areas. The resulting maps were used to target landholder engagement activities in the areas with significant erosion sources

Sediment budgets were developed for the 3 catchments through improving the SedNet model to include higher resolution datasets such as 25m land use, 2.5m topography, detailed floodplain mapping & field survey based estimates of channel geometry.

The sediment budgets were validated using sediment tracing studies to determine the origin of fine sediments collected from the stream network.

Further detail, maps, graphs, tables can be found at
http://www.healthycountry.com.au/HealthyCountry/Resources/ScienceandPlanningResources.aspx
Olley, J et al 2009
Phase 2a report: Rehabilitation priorities Knapp Creek - Final Report,
Phase 2b report: Rehabilitation priorities Upper Bremer River. (Draft),
Phase 2c report: Rehabilitation priorities Lockyer Focal Area (Draft), eW ater CRC, Griffith Uni Nathan

Project manager or facilitator services

If your proposal involves the use of a project manager or facilitator please outline:

- Why these positions are essential to the achievement of the targets you have selected
- How will the sevices provided lead to improved on ground outcomes of these targets

This project will require coordination between field staff working directly with landholders, technical assessment panels and a wide range of partners and supporter organisations, including local governments, water utilities, State agencies, industry bodies as well as the reconstruction taskforce and subgroups formed from it. Effective coordination will be essential to prevent duplication and overlap, to integrate this project with other services being provided to flood impacted landholders and to ensure that reconstruction of public and private infrastructure is undertaken in a way that minimises the extent of sediment load export from future rain events. The large number of players operating in the flood recovery process will necessitate having a project manager/coordinator full time for the life of the project.

The in-field assessment staff (12 for one month) will be essential to assess the extent of landscape damage and to prepare reports for consideration by the technical assessment team. These staff (which will include people well known to and respected by landholders) will be the first point of contact with landholders. There is already a large demand from landholders for staff to visit their properties and give advice on how they should manage the flood impacts.

How will the outcomes of your project be maintained into the future?

All landholder contracts will contain a clause requiring the landholder to maintain the works for 5-10 years (depending on the nature of the works). This is considered to be sufficient for the works to be fully functioning (i.e. riparian vegetation to be established & functioning, gullies to be remediated and revegetated & leaky weirs to be fully operational). Landholders will be responsible for maintaining fences for the expected life of the fence and to undertake ongoing weed control.

What are the ongoing annual costs of maintaining the benefits from this project after the project is finished?

The projects will require on-going maintenance including maintaining fences & drainage control works & controlling weeds especially while vegetation is being established. It is estimated that on-going maintenance would be around 10-15% annually of the costs of the works, i.e. $130,000 to $196,000.

How do you propose that any ongoing costs required to maintain the benefits from this project would be funded?

Ongoing maintenance costs will be the responsibility of the landholder under the contract each landholder will enter into in order to receive on-ground works funding. It is expected that the ongoing maintenance will become part of general farm enterprise management under the property management plan.

Related projects or proposals

Please identify any other proposals or projects that are linked to this one.

Describe the linkages and any synergies with this one.

The Qld Government is investing $20m over 4 yrs 2007-2011 towards delivering the SEQ Healthy Waterways Strategy (the WQIP for the Moreton Bay hotspot) including:
* Healthy Country - $8.5m to reduce rural diffuse pollution loads;
* Water Sensitive Urban Design - $3.9m to reduce urban diffuse pollution;
* Managing & Preventing Coastal Algal Blooms - $1.6m;
* Social Capital Building - $6.0m including communication, education, M&E & decision support tools.
http://www.healthycountry.com.au/HealthyCountry/Resources/ScienceandPlanningResources.aspx

Caring for Our Country - $1.5m over 2010-2012 - Targeted works to reduce sediment export to waterways entering Moreton Bay.

Risk Management

Please define the major risks associated with this proposal and what management actions you will put in place to minimise or avoid these risks

What are the risks?	Impact of the risk	Likelihood of it occurring	Overall risk	Mitigation strategy
Landholders unwilling to undertake works because they do not have sufficient funds available or do not see it as a priority	Major	Unlikely	Medium	From initial requests for assistance this is unlikely to be a problem because there are likely to be far more landholders wanting assistance than resources available to assist them.
Technical support in river geomorphology / hydrology /soil science	Moderate	Possible	Medium	SEQ Catchments has approached a number of professional bodies and interstate regional NRM bodies for probono technical support.

Seasonal conditions prevent on-ground works being undertaken	Moderate	Possible	Medium	On-ground works will be scheduled to include seasonal conditions
More flooding before on-ground works are full established resulting in works being damaged or destroyed	Major	Probable	High	Appropriate design will be included to minimize risk
Coordinators/technical staff leaving	Moderate	Possible	Medium	Being located in SEQ means there are a pool of people with skills available to replace staff leaving. SEQC have a high staff retention rate.

Does your proposal include activities that are likely to have a significant adverse impact on any matters of national environmental significance?

No

Caring for our Country 2010-11 Investment Proposal

SECTION 3: PARTNERSHIP AND SUPPORT DETAILS

Partnership arrangements

Please add any organisations that are partners in delivering this proposal to the table below. Only include partners that add value and more effectively deliver the outcomes sought.

Name of partnering organisation	Contact person	Phone number	Role in the project
Lockyer Regional Council	Mr Hayden Wright Cr Dave Neuendorf		Flood recovery coordinator Chair Natural Environment Sub Group
Somerset Regional Council	Cr Robin Caddy		Chair Somerset Regional Recovery Group, Natural environment Sub Group
Healthy Waterways Partnership	Olwyn Crimp		Project Manager for the Science and Planning component. Integrates the scientific work undertaken by eWater CRC/Griffith Uni in sediment budget & spatial optimisation modelling & recommended rehabilitation techniques with the SEQ Catchments field coordinators.
Australian Rivers Institute/ Griffith University	Prof Jon Olley		Analysis of LIDAR data for Bremer and Lockyer focal areas, provision of technical advice on works design
Department of Environment & Resource Management	Mr Mike Patchett		Funding for acquisition of LIDAR data.
Qld Farmers Federation	Mr Dan Galligan		CEO of QFF and link to intensive landholder groups in target catchments
SEQ Water	Dr Adrian Volders		Funding for acquisition of LIDAR data.

Support for your proposal

Please add the organisations or individuals that are providing technical support to your proposal, but are not considered direct partners to the table below.

Name/s of organisations supporting your proposal	Contact person	Phone number	Type of support being provided

Land owner/managers approval for activities on site

Have you identified all land owners/managers on whose land your proposed activities will occur? No

Please list the land owners/managers that you have identified to the table

Site	Land owner/manager	Contact phone number	Approval status

Caring for our Country 2010-11 Investment Proposal

SECTION 5: ORGANISATIONAL CAPACITY

Describe the capability and capacity of your organisation to implement this proposal

Please detail the skills and resources you have available to enable your organisation to successfully complete this project within the budget and timeframe outlined (maximum 200 words).

SEQC is able to both effectively implement and manage projects in NRM having developed a strong team and reputation for getting projects on the ground and completed.

Skills and experience within SEQC include
* natural resource management (terrestrial, riparian, coastal, vegetation, fire and erosion),
* sustainable land management,
* project and financial management,
* coordination and SMART NRM planning from the property to a regional level,
* qualified social scientists, trainers, facilitators and educators,
* specialist M&E staff,
* advanced GIS and mapping capacity drawn on regularly for regional services.

SEQC has consistently managed a portfolio of projects worth $11m per annum while maintaining a high standard of accountability and governance as evidenced by positive results from annual performance and financial audits. Reporting to date has been on time and accepted, confirming that SEQC has delivered against funding contracts.

All SEQC projects are managed. They are developed using standard templates that meet the expectations of funding partners and are tracked using management systems to ensure transparency and accountability. Quality Assurance processes are used in managing devolved grants.

SEQC have already demonstrated an ability to effectively and efficiently manage a previous one-off environmental recovery grant, namely the $2 million 2009-10 Moreton Bay Oil Spill Restoration Program (SE TAG 01).

Do you have any overdue reports or acquittals from previous Australian Government environmental or natural resource management funding programs?

No

Budget for proposal

Caring for our Country target	Financial year	Caring for our Country funding	
		Funding	GST
Improving coastal hotspots	2010-11	$ 485,000.00	$ 48,500.00
	2011-12	$ 1,985,000.00	$ 198,500.00
	Subtotal:	$ 2,470,000.00	$ 247,000.00
Improving management practices	2010-11	$15,000.00	$1,500.00
	2011-12	$15,000.00	$1,500.00
	Subtotal:	$30,000.00	$3,000.00
	Total:	**$ 2,500,000.00**	**$ 250,000.00**
Of this what funding is allocated to MERI planning and implementation		$ 200,000.00	

Caring for our Country 2010-11 Investment Proposal

Other source/s of cash funding

Are you applying for coinvestment funding? No

Please indicate other cash funding which is necessary for the completion of your project.

Organisation	Contct person	Phone	Security of funds	Amount (GST excl)
Department of Environment and Resource Management	Mr Michael Patchett	[redacted]	Allocated	$80,000.00
SEQ Water	Dr Adrian Volders		Allocated	$80,000.00
Total other cash funding				**$160,000.00**

Total project budget

Caring for our Country funding (GST excl)	Other funding (GST excl)	Total Amount (GST excl)
$ 2,500,000.00	$160,000.00	$ 2,660,000.00

Cost Sharing

Please indicate any in kind contributions to this proposal

Organisation	Contact person	Phone number	Amount (GST excl)
Landholders	Various		$261,160
Australian Rivers Institue	Professor Jon Olley	[redacted]	$60,000
Consultants including Alluvium			$40,000
Local Governments			$30,000
Total			**$391,160**

. lease provide a justification for your local market rates calculation of the in kind contribution.

With the targeted rehabilitation works, the in-kind contribution rate from landholders will depend on the nature of the works. For activities such as fencing, the currently operating rate is to require matching funds. For some of the major works that may be required in dealing with in-stream, gullies and landslips (which may involved several adjoining landholders), in-kind contributions will need to be worked out on a case by case basis taking into account the mix of public and private benefits secured.

The Australian Rivers Institute will analyse the LiDAR data to report on changes to the channel network and export loads as a result of the flooding. The rate is calculated on a month of time of Prof Olley plus use of equipment.

Cost sharing arrangements

Some landholders who undertake training and implement rehabilitation works & improved management practices will have an economic benefit derived from retaining soil and nutrients on their properties & improving soil carbon & nutrient balances.

In some instances the fencing out of gullies and streams, revegetation and drainage channel modifications will result in an economic cost for some landholders as it will include involve removing from production some areas currently being grazed and/or cropped.

Please justify the budget and in kind contributions against the level of public and private benefit outcomes.

Caring for our Country 2010-11 Investment Proposal

Declarations

Proponents should note that, by completing and submitting this proposal, they agree to the following statements.
I certify that:

- to the best of my knowledge, the information provided in this proposal is complete and correct and no information is false or misleading. I understand that it is an offence under the *Criminal Code Act 1995* to provide false or misleading information
- I understand that the Australian Government is under no obligation to provide funding for this
- I understand that the Australian Government assumes no responsibility for any investment in activities relating to this proposal that are made before the formation of a contract with the
- I/the organisation I represent supports this proposal and, if successful, agrees to enter into a contract with the Australian Government to deliver the proposal and administer the proposal's
- I have the agreement of all partners to the contents of this proposal
- I will spend the funding and implement the proposal in the ways described in the proposal, unless otherwise agreed by all parties
- the proposal has not already received funding in part or in full from any other funding source, except as identified in this proposal
- I/the organisation I represent understand that any payments made by the Australian Government in relation to this proposal are subject to the *A New Tax System (Goods and Services) Act 1999*
- I consent, on behalf of all parties, to this proposal being referred to third parties for assessment
- I understand that the Australian Government may undertake external assessments or feasibility studies in relation to this proposal
- I understand that the Australian Government may undertake to negotiate components of this proposal to ensure that the most appropriate package for investment and delivery of Caring for our Country targets is in place
- I consent to publication of the above information by the Australian Government if I am awarded funding under this grants program
- I agree that I accept full responsibility to ensure that all of the necessary planning, regulatory and other approvals, permits and permissions are obtained before commencing this proposal

The Australian Government thanks you for your interest in Caring for our Country and for the time and effort you have made in preparing this proposal.

Prepared by:	Debbie Guzek	Approved by:	Tony Roberts
Title:	Principal Project Officer	Title:	Assistant Director General, Natural Resources and Environment
Division/Region:	Regional NRM Programs	Telephone:	[redacted]
Telephone:	[redacted]	Date Approved:	
Date Prepared:	22/02/11		
Date Received in MO:	MO Clearance by:	Date Cleared:	

Ref: CTS 02831/11

The Honourable Tony Burke MP
Minister for Sustainability, Environment, Water, Population and Communities
PO Box 6022
CANBERRA ACT 2600

Senator the Honourable Joe Ludwig
Minister for Agriculture, Fisheries and Forestry
PO Box 6022
CANBERRA ACT 2600

Dear Ministers

I refer to a recent submission of a Caring for our Country program flood recovery investment proposal by South East Queensland Catchments Inc. (SEQC) titled - *Moreton Bay Coastal Hotspot – Building resilience through the assessment, stabilization and rehabilitation of catchment waterways impacted by the 2011 floods prioritised by sediment export potential.*

I understand that under the Caring for our Country Business Plan 2010-11, the Australian Government may consider assisting in the recovery of the natural environment from the sudden and extreme impacts of natural disasters, where this aligns with Caring for our Country targets and outcomes and there is the capacity to achieve a positive outcome for the environment.

As you are aware, major flooding events occurred across south east Queensland in the wet season of 2010-11 resulting in widespread scouring of channels, bank erosion, lateral gully erosion, landslips, sediment redistribution, topsoil removal, channel redirection and vegetation removal resulting in massive loads of sediment and other contaminants being flushed through the waterway network into the Moreton Bay coastal hotspot (Ramsar site).

The Caring for our Country investment proposal will provide initial funding to support SEQC's immediate post-flood recovery response including assessing, prioritising and implementing stabilisation and rehabilitation works in the Lockyer Creek, Bremer River, Mid Brisbane and Upper Brisbane catchments to prevent further major sediment loads being exported from the rural catchments into Moreton Bay.

This investment proposal also supports and aligns with a number of concurrent investment proposals being drafted for consideration by the Queensland Reconstruction Authority for disaster recovery funding with a focus not just on recovery, but on securing longer term landscape resilience.

I therefore request that you give favourable consideration to this initiative which certainly aligns with the priorities and interests of both governments at this time.

If any further information is required, please do not hesitate to contact Mr Joshua Cooney, Principal Policy Advisor in my office on telephone 3239 0844.

Yours sincerely

Kate Jones MP
Minister for Environment and Resource Management