



## **WATER SUPPLY EMERGENCY PROJECTS**

*Part 8, Water Regulation 2002*

Monthly Progress Reports

November 2011

Queensland Water Commission

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## 1 Background

In response to the water supply emergency in South East Queensland (SEQ), the then Minister for Water announced the making of a Regulation in 2006 to secure the water supply of the region.

The *Water Regulation 2002* (Regulation) under the *Water Act 2000* provides for a coordinated set of actions to be undertaken by State and Local Government entities.

This Regulation requires local governments and other service providers to undertake specified Measures and achieve Outcomes. Timelines for completion of the actions and target water volumes to be achieved were outlined in the Regulation.

Section 87(1)(b) and Section 88(1)(b) of the Regulation set out a requirement for all service providers to submit a progress report by the 5th working day of each month, with the reports to be published on the internet.

This report provides an overview of the performance of the regulated projects, and outlines the impact of the current progress on the overall drought strategy.

## 2 Program Overview and Drought Strategy Impacts

### Project Status

All nominated service providers submitted project reports in accordance with the Regulation.

There has been little variance against previously reported project schedules this month with most projects reporting progress in accordance with the Regulation targets.

Projects that have been previously completed:

- Brisbane Aquifer Project;
- Gold Coast to Logan transfer project;
- Cedar Grove Weir;
- Bromelton Off-Stream Storage;
- Brisbane City Council – substitute recycled water to industrial customers;
- Domestic Retrofit;
- Moreton Bay Regional Council – substitute recycled water to industrial customers;
- Southern Regional Water Pipeline;
- Eastern Pipeline Interconnector;
- Northern Pipeline Interconnector Stage 1, Ewen Maddock Water Treatment Plant;
- Enoggera Dam Water Treatment Plant Upgrade;
- Gold Coast City Council - substitute recycled water to industrial customers;
- Water Saving Initiatives – Business Water Efficiency Program;
- Pressure and Leakage Management Project;
- South East Queensland (Gold Coast) Desalination Project; and
- Construction of Wyaralong Dam.

Furthermore, construction has been completed on the Western Corridor Recycled Water Project and the Bribie Island Groundwater Project and both projects are now in the commissioning or proving period phase.

Hinze Dam Stage 3 was officially opened by the Honourable Stephen Robertson, Minister for Energy and Utilities on the 19 December 2011.

With the cancellation of the Traveston Crossing Dam, monthly reports are no longer required for the project. The Community Futures Taskforce ceased operation on 30 June 2010. The Coordinator-General has now taken over responsibility for the land management and disposal of properties previously acquired by Queensland Water Infrastructure Pty Ltd for the Traveston Crossing Dam.

The *South East Queensland Water Strategy* (Strategy), released on 15 July 2010, states that additional supplies beyond existing projects will not be required until at least 2021/2022 based on demand growth. The Strategy states that, if residents can maintain an average consumption of 200 L/p/day, construction of a new source of supply may be deferred from 2021 to around 2027. The Strategy also identifies potential bulk water supply options for detailed investigation.

Issues associated with several projects are detailed in Section 3 of this Summary.

### Water Balance Impacts

During November 2011, the combined storage level of Wivenhoe, Somerset and North Pine Dams was 82.6%. Inflows to these storages during November 2011 totalled 16 798 ML. The combined Grid 12 volume was 78.4% and this now includes the total storage volume of Hinze Dam Stage 3 in the calculation. The overall reduction in storage volume has occurred since the total storage volume of Hinze Dam Stage 3 has increased from 165,470 ML to 310,730 ML and is currently at 48.8% capacity.

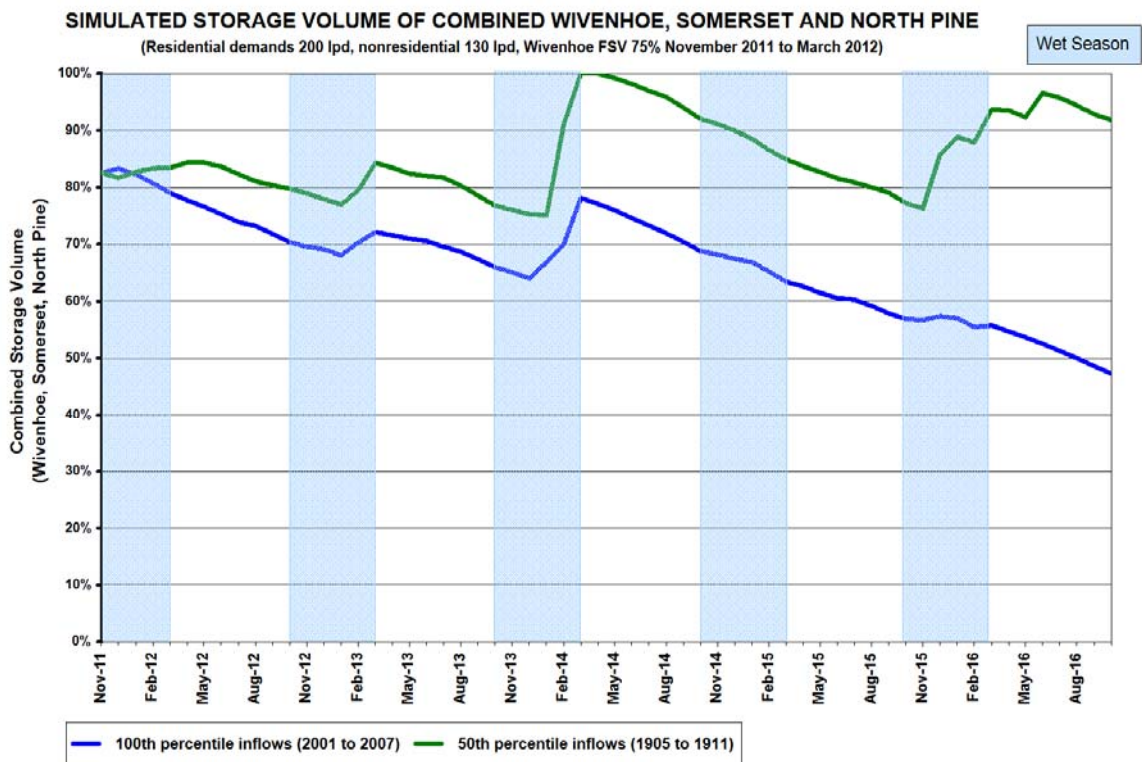


Figure 1: Forecast Wivenhoe, Somerset and North Pine Dam storage levels

Permanent Water Conservation Measures were introduced across SEQ on 1 December 2009, allowing people to use water efficient equipment in their gardens.

Figure 1 is modelled on the basis of an average residential consumption 200 L/p/day and non-residential consumption of 130 L/p/day and the medium series population growth. On this basis, the Wivenhoe, Somerset and North Pine Dams did not fall below 40% of the

combined storage capacity within the modelling period which extended out to October 2016. The modelling is based on the current instructions issued by the SEQ Water Grid Manager.

Figure 1 depicts the impact on the Wivenhoe, Somerset and North Pine Dam storage levels, considering the forecast delivery of the Regulation projects. This provides for two different dam inflow scenarios each of six years duration including the 2001 to 2007 inflows (worst year on record, ie 100<sup>th</sup> percentile inflow in which all (100%) inflows are above this value) and the 1905 to 1911 inflows which is the 50<sup>th</sup> percentile inflow (average). Considering that there is an expectation of at least average inflows, the previous assumptions of repeat annual inflows is considered overly conservative and the modelling is now based on a six year period.

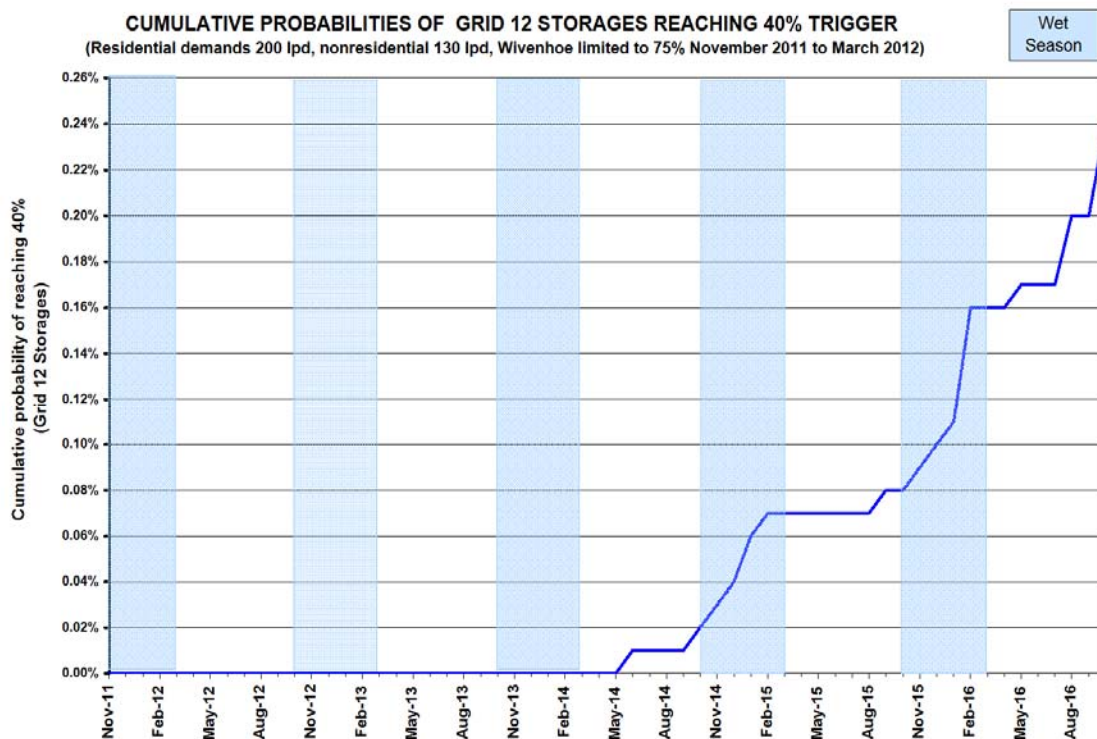


Figure 2: Forecast cumulative probability of Grid 12 storages reaching 40%

Figure 2 shows the cumulative probability of Grid Twelve storages reaching the 40% trigger at any time up to and including a particular date. For example, the probability of the Grid Twelve storages reaching 40% at any time up to and including February 2016 is 0.16%. The probabilities quoted are based on 100,000 years of stochastic climatic and hydrologic data generated from 117 years of historical data within the SEQ region. Modelling is based on average residential consumption across SEQ of 200 L/p/day and non-residential consumption of 130 L/p/day, and includes an allowance for forecast medium series population growth.

Both figures assume the SEQ Water Grid will be operated in accordance with the existing System Operating Plan. The System Operating Plan requires the SEQ Water Grid Manager minimise operating costs while maintaining regional water security.

Both models provide for the temporary draw down of Wivenhoe Dam level to 75% from November 2011 to March 2012 and no control is provided for any subsequent, wet season.

### 3 Projects Requiring Attention

Projects with challenges meeting timeframes or outcomes are discussed below:

#### Measure 1 - Bribie Island Groundwater project

*Issue:*

This Measure requires the capability to supply up to an extra 5 ML/day of water sourced from Bribie Island by 13 June 2008.

*Status:*

The Southern borefields, have supplied up to an additional 0.9 ML/day of water from November 2007. Supply from the Northern bores originally was delayed due to final approval under the *Environmental Protection and Biodiversity Conservation Act 1999* not being received from the Federal Government until 7 April 2008.

Commissioning of the northern borefields and Banksia Beach Water Treatment Plant was completed in August 2008 and this new source has the current capacity to supply up to 3.5 ML/day into the network. Extensive groundwater monitoring systems and a management plan are in place to ensure the aquifer is not compromised by saltwater intrusion.

Construction of the clarifier to improve operation of the plant is complete.

The process proving and optimisation is in progress for a maximum flowrate of 58 L/s (5ML/d) before plant handover to Seqwater takes place. As constructed drawings have been submitted to Seqwater and operation manuals are being updated before final hand over takes place.

#### Measure 06/07/08 – Western Corridor Recycled Water Scheme

*Issue:*

This Measure requires the construction and commissioning of Stages 1A and 2A of the Western Corridor Recycled Water Scheme to achieve 20 ML/day by 31 August 2007, an additional 46 ML/day by 30 June 2008 respectively, and Stages 2A and 2B to achieve 116 ML/day by 31 October 2008 and another 50 ML/day by 31 December 2008.

*Status:*

##### Luggage Point Advanced Water Treatment Plant

Practical Completion was achieved on 26 July 2010. The Handover Testing Period was completed in late May 2011 with handover of the asset to Veolia in mid June 2011.

Minor works continue as required under the remaining PAA Defects Liability Period, due to run out by June 2012 or earlier if advantageous to the project.

##### Gibson Island Advanced Water Treatment Plant

Outstanding issues are now being finalised in order to proceed to Practical Completion and then Final Completion which is expected within the next few months.

## 4 Service Provider Reports

Attached to this report are the individual monthly reports for each project, provided by the service providers responsible for delivery of the project.

It is noted the following projects are complete and no further monthly reports are required from the service providers in relation to these projects:

### Schedule 10B Projects:

Measure 2 - Brisbane Aquifer Project

Measure 3 – South East Queensland (Gold Coast) Desalination Project

Measure 4 - Southern Regional Water Pipeline

Measure 5 – Enoggera Dam Water Treatment Plan Upgrade

Measure 9 - Eastern Pipeline Inter-connector

Measure 10(a) - Northern Pipeline Inter-connector Stage 1

Measure 12 – Traveston Crossing Dam Stage 1

With the cancellation of the dam, monthly progress reports are no longer required for the project.

Measure 13 – Wyaralong Dam

Measure 14 - Minimise taking of Water

- SEQWater and SunWater
- CG01 - Cedar Grove Weir
- CG02 - Bromelton Off-stream Storage

### Schedule 10C Projects:

Outcome 1 - Substitute Recycled water

- Brisbane City Council

Outcome 2 - Substitute Recycled Water

- Ipswich City Council
- Lockyer Valley Regional Council
- Logan City Council
- Redland City Council
- Scenic Rim Regional Council
- Somerset Regional Council
- Sunshine Coast Regional Council
- Moreton Bay Regional Council
- Gold Coast City Council

Outcome 6 - Alternate Supply – Logan to Gold Coast

- Logan City Council

Outcome 7 – Pressure and Leakage Management Project

Outcome 8 - Home Retrofit

Outcome 09 - Water Saving Initiatives, Business Water Efficiency Program (BWEP)