

# **South East Queensland System Operating Plan**

**Revision 4.0**

**Effective Date—11 November 2011**

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# 1 Authority to make the South East Queensland System Operating Plan

This South East Queensland System Operating Plan (SOP) is made under the *Water Act 2000*, Chapter 2A, Part 5, Division 2 to facilitate the achievement of the desired level of service objectives for the South East Queensland region (SEQ region). This SOP Revision 4.0 replaces the South East Queensland System Operating Plan Release 3.2 (March 2011).

This SOP commences on 11 November 2011 and will continue in force until such time as it is amended or replaced.

## 2 SOP area

The SOP applies to the area where the 'Regional water security program for south-east Queensland Revision 1' applies, shown in Schedule 1. SOP areas encompass the local government areas of Brisbane, Gold Coast, Ipswich, Lockyer Valley, Logan, Moreton Bay, Redland, Scenic Rim, Somerset and Sunshine Coast.

## 3 Definitions

Schedule 6 defines particular words used in this SOP.

## 4 Application of the SOP

### 4.1 Entities to which this SOP applies

This SOP applies to the SEQ Water Grid Manager (SEQWGM) and all Grid Participants.

The entities to which this SOP applies must comply with their obligations under this SOP.

### 4.2 Water supply works and sewerage for the SOP

The water supply works for the SOP area are those water supply works which supply a declared water service for the SEQ region, as declared under the *Water Act 2000*, regardless of whether or not those works are in the SOP area.

The sewerage to which the SOP applies is the sewerage associated with western corridor recycled water scheme feedwater.

## 5 Maximum volume of water to be managed

### 5.1 Maximum volume

The maximum volume of water the SEQWGM may enter into contracts to sell is 450 000 megalitres per annum, which is the total volume that can be supplied by water supply works for the SOP area, calculated using the SEQ regional water balance model.

### 5.2 Relationship to commission water restrictions

Notwithstanding the maximum volume of water, the QWC may impose a Commission water restriction on water users in accordance with the *Water Act 2000*.

Commission water restrictions do not alter the maximum volume of water. However, by directly impacting on end-user demand they are intended to directly impact on the monthly volume of water which Grid Customers order from the SEQWGM to meet their demands.

## 6 Desired level of service (LOS) objectives for the SEQ region

The desired level of service (LOS) objectives are described in the 'Regional water security program for south-east Queensland Revision 1', made in March 2010 by the Minister for Natural Resources, Mines and Energy, and Minister for Trade.

These are the desired LOS objectives adopted by the government for the supply of water from the water supply works for the program area:

- (1) During normal operations sufficient water will be available to meet an average total urban demand of 375 litres per person per day (including residential, non-residential and system losses), of which 230 litres per person per day is attributed to residential demand.
- (2) Sufficient investment will occur in the water supply system with the objective of ensuring that;
  - medium level restrictions will not occur more than once every 25 years on average;
  - medium level restrictions need only achieve a targeted reduction in consumption of 15 per cent below the total consumption volume in normal operations;
  - the frequency of triggering drought response infrastructure will be not more than once every 100 years on average;
  - the frequency that the total volume of water stored by all key water grid storages will not decline to 10 per cent of their combined water storage capacity more than once every 1000 years on average;
  - the total volume of water stored by all key water grid storages must not be permitted to reach 5 per cent of the combined total water storage capacity of these storages;
  - Wivenhoe, Hinze and Baroon Pocket Dams must not be permitted to reach minimum operating levels; and
  - it is expected that medium level restrictions will last longer than six months no more than once every 50 years on average.

## 7 Principles for undertaking responsibilities

All entities to which this SOP applies must have regard to the following principles in performing their respective functions in accordance with this SOP:

- (1) The general principle is that water in the region is to be managed on a sustainable and integrated basis to provide secure and reliable supplies of water of acceptable quality for all uses.
- (2) The specific principles are:
  - for water sharing—the principle that water is a scarce resource that is to be shared across the region; and
  - for water sources—the principle that water quality should be managed from its source to its end users in a way that ensures the health of catchments and aquifers and their ecosystems, and delivers water of a quality desired by the end users at the lowest overall cost; and
  - for water supply operations—the principle that water supply arrangements should maximise efficient and cost-effective service delivery and the efficient use of water as defined under section 10(3) of the *Water Act 2000*, including, for example, appropriate connectivity between supply sources, and in accordance with desired levels of service objectives for the water; and
  - for cost sharing and pricing, the principles that—the cost of water sources should be shared among users who benefit from them and, pricing should be consistent with commitments of the State under intergovernmental agreements to which it is a party; and
  - for planning—the principle that assessments of regional water supply should consider environmental, social and economic factors, and include the application of 'least cost planning' to ensure proper economic comparison of all supply-side and demand-side options; and
  - for flood mitigation and dam safety—the principle that these issues should be considered in the preparation of assessments of regional water security.

## 8 Risk Criteria

The table below details the Risk Criteria, which indicates the probability of reaching specified storage volumes over a five year period of SEQ regional water balance model simulation, where specified storage volumes pertain to the total volume of water stored by all key water grid storages, also known as the Grid Twelve.

Volume of water stored by all key water grid storages	Probability of reaching volume of water stored		
	within 1 year	within 3 years	within 5 years
40%	less than 0.2%	not specified	less than 5%
30%	not specified	less than 0.5%	less than 1%

## 9 Operating rules

The operating rules set out in this section are subject to the requirements of any applicable Water Resource Plan, Resource Operations Plan, or water entitlement.

### 9.1 Water security rule

When the total volume of water stored by key water grid storages falls below 40 per cent of the total water storage capacity of these storages:

- (1) The supply of manufactured water from the South East Queensland (Gold Coast) Desalination Plant shall be maximised, subject to operational constraints.
- (2) The supply of manufactured water to Wivenhoe Dam from the Western Corridor Recycled Water Scheme shall be maximised, subject to appropriate approvals from the Office of the Water Supply Regulator and operational constraints.

### 9.2 Rule for the supply of water to power stations

Subject to operational constraints, water may only be supplied to Stanwell Corporation Limited Grid Customer Supply Points in accordance with the following rules:

- (1) For the Swanbank Power Station, water must be sourced in accordance with the following priorities:
  - water is to be supplied from the Western Corridor Recycled Water Scheme, before
  - water is to be supplied from the Warrill Valley Water Supply Scheme, in accordance with section 9.5 of this SOP, before
  - water is to be supplied from Wivenhoe Dam.
- (2) For the Tarong and Tarong North Power Stations water must be sourced in accordance with the following priorities:
  - water is to be supplied from the Western Corridor Recycled Water Scheme, before
  - water is to be supplied from Wivenhoe Dam.

### 9.3 Rule for the supply of water via the Northern Pipeline Interconnector Stage 1

Subject to operational constraints, the supply of water via the Northern Pipeline Interconnector Stage 1 from water supply works within the local government area of the Sunshine Coast Regional Council to other areas within the SOP area shall be:

- (1) Zero, when the total volume of water stored by Baroon Pocket Dam, Ewen Maddock Dam, Cooloolabin Dam, Poona Dam and Wappa Dam, as a proportion of the total water storage capacity of these dams, is less than or equal to the total volume of water stored by Wivenhoe Dam, Somerset Dam and North Pine Dam, as a proportion of the total water storage capacity of Wivenhoe Dam, Somerset Dam and North Pine Dam.
- (2) Zero, when the total volume of water stored by Baroon Pocket Dam, Ewen Maddock Dam, Cooloolabin Dam, Poona Dam and Wappa Dam is less than 70 per cent of the total water storage capacity of these dams.
- (3) Up to 65 megalitres per day, when the total volume of water stored by Baroon Pocket Dam, Ewen Maddock Dam, Cooloolabin Dam, Poona Dam and Wappa Dam is between 70 per cent and 100 per cent of the total water storage capacity of these dams.

The monthly Grid Instruction provided by the SEQWGM in respect to the supply of water via the Northern Pipeline Interconnector Stage 1 shall nominate a volume in megalitres no greater than the number of days in the month multiplied by 65.

### 9.4 Rule for the supply of water from Lake Macdonald and the Upper Mary Water Supply Scheme

The supply of water from Lake Macdonald and the Upper Mary Water Supply Scheme shall, subject to operational constraints, be in accordance with the following priorities:

- (1) Water is to be supplied from Lake Macdonald while the dam is overflowing and may continue to be supplied until the total volume of water stored by Lake Macdonald falls below 95 per cent of capacity after an overflowing event, before
- (2) Water is to be supplied from the Upper Mary Water Supply Scheme, before
- (3) Water is to be supplied from Lake Macdonald.

### 9.5 Rule for supply of water within the Warrill Valley Water Supply Scheme

The supply of water under water entitlement numbers 103187, 103184 and 103203 shall be in accordance with the following conditions or any varied conditions approved by the QWC, from time to time, in accordance with this section:

- (1) Water take is sourced from run of river flow; and
- (2) Berry's Lagoon weir is overflowing.

At least 30 business days prior to the commencement of a water year for the Warrill Valley Water Supply Scheme, the SEQWGM may seek the approval of the QWC to vary these conditions. If the QWC approves the variation, the conditions as varied and approved by the QWC will take effect from the commencement of that water year.

The SEQWGM must notify Seqwater in writing of any QWC approval to vary these conditions prior to the commencement of that water year.

### 9.6 Rule for supply of water within the Logan River Water Supply Scheme

Water shall not be supplied under water entitlements held by the SEQWGM, located within the Logan River Water Supply Scheme, to meet demands other than those of the towns of Beaudesert, Kooralbyn, Rathdowney, South Maclean and Jimboomba, when Maroon Dam is at or below elevation 193.23 meters Australian Height Datum (equivalent to 10 000 megalitres of water storage in Maroon Dam), subject to operational constraints or without approval of the QWC being given to the SEQWGM.

## 9.7 Western corridor recycled water scheme feedwater rule

The purpose of this section is to provide a process for securing the availability of western corridor recycled water scheme feedwater to ensure the ongoing operation of the Western Corridor Recycled Water Scheme, which is integral to achieving water supply security for the SEQ region.

- (1) In relation to the use and/or supply of western corridor recycled water scheme feedwater, the distributor-retailer entity must make available western corridor recycled water scheme feedwater (treated) to Seqwater in accordance with any feedwater notification issued by Seqwater. The process for issuing and complying with a feedwater notification is set out in Schedule 2.
- (2) The distributor-retailer entity must report the following information quarterly to the QWC, within 20 business days from the end of a quarter:
  - daily volume of western corridor recycled water scheme feedwater (untreated) received at each of the following wastewater treatment plants—Bundamba, Gibson Island, Goodna, Luggage Point, Oxley and Wacol; and
  - daily volume of western corridor recycled water scheme feedwater (treated) made available to each of the following advanced water treatment plants—Bundamba, Gibson Island, and Luggage Point; and
  - for each of the wastewater treatment plants at Bundamba, Gibson Island, Goodna, Luggage Point, Oxley and Wacol, the quality of the western corridor recycled water scheme feedwater (treated), as measured by the distributor-retailer entity (in accordance with the distributor-retailer entity's applicable development permit for the environmentally relevant activity and any approved Recycled Water Management Plan together with copies of any such conditions and any such plan, to the extent it has not been previously provided).
- (3) Subject to Sections 9.7(4), the distributor-retailer entity must not enter into, change, extend, renew, assign, novate or otherwise deal with any agreement with a third party in relation to the use and/or supply of western corridor recycled water scheme feedwater unless the terms of the agreement, change, extension, renewal, assignment, novation or other dealing have been approved by the QWC, or otherwise comply with any standing approval issued by the QWC to the former relevant Council after 1 July 2008. The QWC may from time to time publish a procedure for the distributor-retailer entity to apply to the QWC for an approval or a standing approval under this section.
- (4) Nothing in this section affects:
  - a contract between a former relevant Council and a third party, in force at 30 June 2008, for use and or supply of western corridor recycled water scheme feedwater (existing contract), provided the volume or duration of the contract is not altered;
  - the ability of a party to an existing contract to assign or novate the contract to another party during the term of the existing contract; or
  - the ability of the distributor-retailer entity to undertake maintenance works on the sewerage for the western corridor recycled water scheme feedwater.

For the purpose of this section, 'third party' does not include Seqwater.

## 10 Annual Operations Plan

The purpose of this section is:

- (1) For the SEQWGM to demonstrate how it intends to meet the forecast water demands of its customers for the next 12 month period having regard to an appropriate balance between security and cost efficiency outcomes; and
- (2) Provide a framework (Schedule 3 of this SOP) to facilitate the development of an Annual Operations Plan that achieves the above objective.

The entities to which Schedule 3 of this SOP applies must comply with their obligations under Schedule 3.

## 11 Manufactured Water Readiness Plan

The purpose of this section is to:

- (1) Ensure manufactured water is available and able to be used as and when required to facilitate the achievement of the desired LOS objectives for the SEQ region; and
- (2) Provide a framework (Schedule 4 of this SOP) to promote such other principles and outcomes as are considered appropriate by Seqwater in relation to manufactured water readiness, provided that those principles and outcomes are not inconsistent with the achievement of the desired LOS objectives for the SEQ region.

The entities to which Schedule 4 of this SOP applies must comply with their obligations under Schedule 4.

## 12 Planning to achieve water security

The purpose of this section is to:

- (1) Provide for planning activities that will inform and enable the QWC to perform its functions to assess and recommend options to achieve water security in the SEQ region including facilitating the achievement of the desired LOS objectives (Section 5 of this SOP); and
- (2) Prescribe a process (Schedule 5 of this SOP) to facilitate planning arrangements to support the achievement of the above objective.

The entities to which Schedule 5 of this SOP applies must comply with their obligations under Schedule 5.

## 13 Monitoring, reporting and review

All entities to which this SOP applies must conduct monitoring, reporting and review activities to enable demonstration of compliance with this SOP.

### 13.1 Monitoring

- (1) The SEQWGM must record the details for the Grid Instructions each month including:
  - (a) Monthly Customer Forecast Notices;
  - (b) Monthly Grid Service Provider Forecast Notices;
  - (c) the Grid Instructions;
  - (d) the basis and methodologies for calculating the Grid Instructions;
  - (e) the details of operational constraints as exercised for any applicable rule in Section 9 of this SOP; and
  - (f) any amendments and relevant correspondence to the above.

- (2) The SEQWGM must monitor and record the following information each month:
- (a) the volume of surface water and ground water taken from each location and available to be taken;
  - (b) the volume of water supplied to each customer;
  - (c) the volume of water supplied from each water treatment plant;
  - (d) the volume of water transported by LinkWater;
  - (e) the volume of water stored in surface water storages; and
  - (f) an assessment of the outcomes of the Grid Instructions.

Details of the accuracy of the data, and if applicable, the way in which the data was estimated must also be recorded.

## 13.2 Monthly data provision

The SEQWGM must provide a copy of the Grid Instructions under Section 13.1(1)(c), including details under Section 13.1(1)(d) and (e), to the QWC, at the time of issue or amendment by the SEQWGM.

## 13.3 Reporting

The SEQWGM must provide the following reports to the QWC:

- quarterly report;
- annual report; and
- non-compliance report.

This section does not limit any other reporting requirements that must be undertaken in accordance with the Market Rules.

### (1) Quarterly report

The SEQWGM must submit to the QWC within 20 business days from the end of each quarter a report on compliance with the relevant provisions of the SOP including, but not limited to, the following matters:

- (a) the desired LOS objectives and Risk Criteria;
- (b) the supply of water under contractual arrangements and the maximum volume of water that may be supplied;
- (c) the Grid Instructions;
- (d) an overview of the basis for Grid Instructions and compliance of the Grid Instructions and outcomes with the SOP;
- (e) a list of circumstances where the SOP was not complied with;
- (f) monitoring and reporting; and
- (g) a discussion of any matters that may warrant review of the SOP.

The SEQWGM must also report on the estimated time to supply depletion for the following rural towns and villages that have reticulated supply based on a single supply source: Aratula, Boonah, Kalbar, Mount Alford, Beaudesert, Kooralbyn, Rathdowney, Canungra, Amity Point, Dunwich, Point Lookout, Dayboro, Jimna, Kenilworth, Kilcoy, and Linville. Details of the basis of estimations must also be provided.

The SEQWGM must include information in accordance with Section 13.1, for the quarter, in the format specified by the QWC.

The SEQWGM may include information for the quarterly report, for the quarter ending 30 June, as part of the annual report submitted in accordance with Section 13.3(2). The SEQWGM must advise the QWC, in writing, of its intent to follow this process within 20 business days from the end of the financial year.

**(2) Annual report**

The SEQWGM must submit to the QWC within 60 business days after the end of the financial year a report on compliance against the relevant provisions of the SOP including, but not limited to:

- (a) the desired LOS objectives and Risk Criteria;
- (b) the supply of water under contractual arrangements and the maximum volume of water that may be supplied;
- (c) a list of circumstances where the SOP was not complied with; and
- (d) a discussion of any matters that may warrant review of the SOP.

The SEQWGM must include information in accordance with Section 13.1, for the financial year, in the format specified by the QWC.

**(3) Non-compliance report**

The SEQWGM must:

- (a) notify the QWC within two business days of becoming aware of a non-compliance by the SEQWGM against the SOP; and
- (b) provide to the QWC, within five business days of becoming aware of a non-compliance by the SEQWGM, a report on the matter including any actions taken by the SEQWGM and recommendations on the matter.

**(4) Additional information**

The SEQWGM must also provide to the QWC additional information requested by the QWC as necessary in order for the QWC to:

- (a) check whether the SOP remains appropriate for conditions in the SEQ region;
- (b) undertake ongoing review of the regional water balance for the SEQ region; and
- (c) monitor compliance with the SOP.

# Schedule 1: SOP Area



## Schedule 2: Feedwater notification

### (1) Requirements for a feedwater notification

A feedwater notification issued by Seqwater must be consistent with:

- Grid Instructions issued by the SEQWGM; and
- any agreement between Seqwater and the distributor-retailer entity in relation to the use and/or supply of western corridor recycled water scheme feedwater that is approved or deemed to be approved by the SEQWGM in accordance with Section 7 of this Schedule 2.

A feedwater notification that is inconsistent with either of the above is invalid to the extent of the inconsistency.

### (2) Preparing and issuing feedwater notification

#### **Draft feedwater notifications**

If the SEQWGM issues Seqwater with a draft Grid Instruction, requesting Seqwater to supply water to the SEQWGM, Seqwater must, within one business day of receipt of the draft Grid Instruction, issue a draft feedwater notification to the distributor-retailer entity.

The distributor-retailer entity may submit written comments to Seqwater on the draft feedwater notification within three business days of receipt of the draft feedwater notification.

#### **Feedwater notifications**

If the SEQWGM issues Seqwater with a Grid Instruction, requesting Seqwater to supply water to the SEQWGM, Seqwater must, within one business day of receipt of the Grid Instruction, issue a feedwater notification to the distributor-retailer entity.

If the SEQWGM amends a Grid Instruction issued to Seqwater and the relevant feedwater notification is inconsistent with the amended Grid Instruction, Seqwater must, within one business day of receipt of the amended Grid Instruction, issue a revised feedwater notification to the distributor-retailer entity.

### (3) Contents of feedwater notification

The feedwater notification issued by Seqwater must be in writing and specify:

- the relevant Grid Instruction to which it relates;
- the time at which it was issued;
- for Bundamba, Gibson Island and Luggage Point advanced water treatment plants;
- the volume, flow rate and quality of western corridor recycled water scheme feedwater to be made available to each plant; and
- if applicable, the time at which the western corridor recycled water scheme feedwater is to be made available to each of the plants.

#### (4) Quality of western corridor recycled water scheme feedwater

For each of the wastewater treatment plants at Bundamba, Gibson Island, Goodna, Luggage Point, Oxley and Wacol, the distributor-retailer entity must:

- (a) make the western corridor recycled water scheme feedwater available in accordance with any approved Recycled Water Management Plan applicable to the wastewater treatment plant;
- (b) if an approved Recycled Water Management Plan is not in place, make the western corridor recycled water scheme feedwater available in accordance with the conditions of the applicable development permit for the environmentally relevant activity;
- (c) without limiting 4(a) and 4(b) above, use its best endeavours to make the western corridor recycled water scheme feedwater available in accordance with the quality specifications of the feedwater notification and consistent with the historical performance of the plant over the past three years; and
- (d) without limiting 4(a), 4(b) and 4(c) above, use its best endeavours to make the western corridor recycled water scheme feedwater available at a quality that is consistent with the quality of the western corridor recycled water scheme feedwater that was produced by the relevant former Council from the relevant wastewater treatment plant over the three year period ending on 30 June 2008.

#### (5) Inability to make available western corridor recycled water scheme feedwater in accordance with feedwater notification

Where the distributor-retailer entity is unable to make available western corridor recycled water scheme feedwater in accordance with a feedwater notification or a revised feedwater notification, the distributor-retailer entity must notify the SEQWGM and Seqwater in writing as soon as possible. The notice must:

- (a) identify the relevant feedwater notification;
- (b) identify the extent to which the feedwater notification cannot be complied with;
- (c) identify the length of time the distributor-retailer entity expects to be unable to comply with the feedwater notification; and
- (d) set out the reasons for the distributor-retailer entity's inability to comply, including relevant facts and supporting material.

On receipt of a notice under this section of Schedule 2, the SEQWGM must, no later than two business days after the receipt of the notice, notify the QWC of the non-compliance with the feedwater notification.

#### (6) Amending feedwater notification

Seqwater may amend a feedwater notification at any time, subject to Section 1 of this Schedule, including where:

- (a) a feedwater notification is inconsistent with the relevant Grid Instruction; or
- (b) there is an error in the feedwater notification.

## (7) Approval of agreements relating to western corridor recycled water scheme feedwater

The distributor-retailer entity and Seqwater must not enter into, change, extend, renew or otherwise deal with (including, without limitation, assign or novate) any agreement in relation to the use and/or supply of western corridor recycled water scheme feedwater unless the terms of the agreement, change, extension, renewal or other dealing have been approved by the QWC.

An agreement between a former relevant Council, and Seqwater in relation to the use and/or supply of western corridor recycled water scheme feedwater that is in force at 30 June 2008, excluding any change, extension, renewal or other dealing in relation to that agreement, is deemed to be approved by the QWC.

## Schedule 3: Annual Operations Plan

### (1) Requirement for an Annual Operations Plan

The SEQWGM must:

- (a) prepare a plan (Annual Operations Plan) to achieve the purpose as stated in Section 10 of the SOP;
- (b) demonstrate that all reasonable actions have been integrated in to the proposed Annual Operations Plan to achieve the desired LOS objectives (Section 6 of this SOP) and Risk Criteria (Section 8 of this SOP);
- (c) use the SEQ regional water balance model as the principal tool for demonstrating compliance with the desired LOS objectives and Risk Criteria;
- (d) clearly describe the basis of the forecast water demands that underpin the Annual Operations Plan;
- (e) take consideration of any decision made by the Queensland Government in relation to the alteration of the full supply level of any of the key water grid storages and incorporate these decisions into the preparation of the Annual Operations Plan;
- (f) make reasonable endeavours to consult Seqwater, LinkWater and Grid Customers including the distributor-retailer entities in preparing the Annual Operations Plan and provide evidence on how it has addressed the matters raised during consultation;
- (g) submit the proposed Annual Operations Plan to the QWC by 30 November and 31 May each year for approval;
- (h) only issue Grid Instructions based on an approved Annual Operations Plan, unless otherwise directed in writing by the QWC;
- (i) revise and submit the Annual Operations Plan to the QWC if it does not meet the purpose stated in Section 10 of this SOP. This must include clearly documented reasons for the revisions and evidence of consultation in accordance with Section (1)(f) of this Schedule 3; and
- (j) provide a copy of the approved Annual Operations Plan to Seqwater and LinkWater.

### (2) Contents of the Annual Operations Plan

The proposed Annual Operations Plan must include:

- (a) the sources of supply and bulk water transfer arrangements intended to meet the forecast demands of each of its customers;
- (b) how the sources of supply and the transfer arrangements were determined and the process applied in arriving at the best outcome;
- (c) assumptions adopted to support the proposed Annual Operations Plan;
- (d) relevant information to demonstrate that the objective to balance water security and cost has been achieved.

### (3) Requirement for provision of information

Seqwater and LinkWater, each must comply with any reasonable written request from the SEQWGM to supply information which may assist the SEQWGM to fulfil its obligations under Section 10 and Schedule 3 of this SOP.

The distributor-retailer entities must comply with any reasonable written request from the SEQWGM to supply information which may assist the SEQWGM to fulfil its obligations under Section 10 and Schedule 3 of this SOP.

#### (4) Approval of the Annual Operations Plan

The QWC:

- (a) may request further information from the SEQWGM to assist its assessment of the proposed Annual Operations Plan; or
- (b) may require the SEQWGM to submit a revised Annual Operations Plan if the Annual Operations Plan does not appropriately address the required content as specified in Section 2 of this Schedule 3 or achieve the purpose as stated in Section 10 of this SOP;
- (c) will approve the proposed Annual Operations Plan with or without conditions as deemed appropriate; and
- (d) will notify the SEQWGM of any decision within five business days of making a decision or approval under this section.

## Schedule 4: Manufactured Water Readiness Plan

The Manufactured Water Readiness Plan has the abbreviated name Readiness Plan.

### (1) Requirement for Readiness Plan

Seqwater must:

- (a) develop and maintain a Readiness Plan to achieve the purpose as stated in Section 11 of the SOP for each manufactured water facility;
- (b) consult with the QWC, the SEQWGM, and any other entity affected by the Readiness Plan, and provide evidence of consultation and how it has addressed the matters raised during consultation;
- (c) provide the Readiness Plan to the the QWC no later than 30 September 2012 together with an explanatory statement on how the Readiness Plan has been developed to meet the requirements of the SOP and, at the same time, provide a copy of the Readiness Plan to the SEQWGM;
- (d) review the Readiness Plan at least annually commencing 2013 or more frequently if circumstances change that mean the Readiness Plan no longer meets the purpose as stated in Section 11 of the SOP;
- (e) provide the QWC a copy of any revision of the Readiness Plan no later than five business days after revising its Readiness Plan including a statement explaining any material revision, and at the same time provide a copy of the revised Readiness Plan to the SEQWGM.

### (2) Contents of Readiness Plan

For each manufactured water facility the Readiness Plan must include:

- (a) a summary of relevant compliance obligations under legislation;
- (b) expected requirements for utilisation of each manufactured water facility (for example in accordance with the Annual Operations Plan, Grid Instructions etc);
- (c) key performance indicators (which must, to the extent practicable, facilitate the objective assessment of Seqwater's performance against the Readiness Plan);
- (d) a summary of the policies and procedures of Seqwater, including risk management policies and/or strategies to address relevant technical, capability and regulatory risks that are relevant to the Readiness Plan to ensure manufactured water readiness.

### (3) Requirement for provision of information

LinkWater and the SEQWGM must each comply with any reasonable written request from Seqwater to supply information and must provide reasonable cooperation and assistance which may assist Seqwater in fulfilling its obligations under Section 11 and Schedule 4 of this SOP.

Seqwater must comply with any reasonable written request from the QWC to supply additional information in relation to the Readiness Plan or the annual report on the Readiness Plan which is described below in Section 5 of this Schedule 4.

### (4) Obligation to publish information

Seqwater must use reasonable endeavours to publish relevant factual data and/or other technical information about manufactured water from both the South East Queensland (Gold Coast) Desalination Plant and the Western Corridor Recycled Water Scheme, as a minimum on Seqwater's website.

## (5) Reporting on Readiness Plan

Seqwater must:

- (a) provide a report on its Readiness Plan to the QWC for the period 1 July to 30 June each year, within three months of the end of that period, with the exception of the first report, which will be for a nine month period from 1 October to 30 June instead of a twelve month period. Reporting must commence from 2013;
- (b) in respect of each manufactured water facility, report on:
  - key performance indicator results;
  - outcomes of the previous year's risk management activities, in summary; and
  - Seqwater's publication activities related to production of manufactured water in accordance with Section 4 of this Schedule 4.
- (c) any significant events or circumstances or emerging risks or actions that may prevent or hinder the achievement of the purpose of the Readiness Plan (as set out in Section 11 of this SOP).

## (6) Interim arrangements

Seqwater must:

- (a) provide an interim report to the QWC by 9 December 2011 demonstrating the processes and procedures in place to ensure that Seqwater can meet the requirements under section 6(b) below;
- (b) provide a draft of its first Readiness Plan to the QWC by no later than 1 April 2012; and
- (c) consult with the QWC, the SEQWGM, and any other entity affected by the Readiness Plan during the preparation of the draft Readiness Plan and provide evidence of consultation including how it has addressed the matters raised during consultation.

## Schedule 5: Planning to achieve water security

### (1) Requirement for water demand forecasts

Each distributor-retailer entity must:

- (a) prepare a forecast of its annual water demands to be supplied by the SEQWGM for the 20 years commencing 1 July (Water Demand Forecast);
- (b) as a minimum, specify the volume required for each of its Demand Zones<sup>1</sup>, or where Demand Zones have not been notified for each Grid Customer Supply Point<sup>2</sup> and any preferred future Grid Customer Supply Point by providing base case, upper and lower forecast demand series, including definitions for each series and assumptions that underpin each series. If additional specification is necessary at particular Grid Customer Supply Points (for example, reliability, pressure, quality or other defining parameters), these may be separately identified as part of its Water Demand Forecast;
- (c) consult with the SEQWGM, Seqwater and LinkWater with regard to the location of the future preferred Grid Customer Supply Points, and provide evidence of consultations;
- (d) demonstrate how the demand series forecasts align with their respective Water Netserv Plans; and
- (e) provide a Board approved copy of the Water Demand Forecasts to the SEQWGM and the QWC no later than 28 February each calendar year commencing 2012.

### (2) Requirement for a Consolidated SEQ Water Demand Forecast

The SEQWGM must:

- (a) prepare a consolidated forecast of the annual water demands to be supplied by the SEQWGM for the 20 years commencing 1 July (Consolidated SEQ Water Demand Forecast);
- (b) as a minimum, consolidate the Water Demand Forecasts of the distributor-retailer entities together with the demands of all other Grid Customers<sup>3</sup> to specify a base case, upper and lower forecast demand series for each Demand Zone, or where Demand Zones have not been notified for each Grid Customer Supply Point including future Grid Customer Supply Points, as proposed by the distributor-retailer entities in their Water Demand Forecasts, or proposed by other Grid Customers. Where Grid Customers have made additional specifications for particular Demand Zones or Grid Customer Supply Points (for example, reliability, pressure, quality or other defining parameters), these should be provided as part of the Consolidated SEQ Water Demand Forecast;
- (c) consult with Seqwater, LinkWater and any other relevant Grid Participants during the development of the Consolidated SEQ Water Demand Forecast and provide evidence of consultation; and
- (d) provide a Board approved copy of the Consolidated SEQ Water Demand Forecast to Seqwater, LinkWater and the QWC no later than 60 business days after receipt of the Water Demand Forecast from the distributor-retailer entities each calendar year commencing 2012.

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<sup>1</sup> Demand Zones are those zones with aggregated bulk supply points, that have been notified in accordance with Section 4.3 of the Market Rules SEQ Water Market.

<sup>2</sup> As specified in the Grid Contract Document between the SEQWGM and the Grid Customer.

<sup>3</sup> It is expected that the SEQWGM will liaise with all other Grid Customers to secure the information required to prepare the Consolidated SEQ Water Demand Forecast.

### (3) Requirements for a Water Supply Asset Plan

Seqwater and LinkWater each must:

- (a) prepare a plan (Water Supply Asset Plan) demonstrating the plans, programs of work and associated budgets, processes and procedures in place to ensure the Consolidated SEQ Water Demand Forecast provided by the SEQWGM can be met;
- (b) describe the current capability of their assets to deliver services to the SEQWGM under a range of operating conditions, describe how existing assets will be maintained and renewed, how decisions will be made to retire assets,; and how new assets will be identified and delivered;
- (c) identify any linkages between each others Water Supply Asset Plans so that it is evident how all the requirements of the Consolidated SEQ Water Demnd Forecast will be achieved. Where appropriate, LinkWater should also demonstrate any linkages with the distributor-retailer entities' Water Netserv Plans;
- (d) provide copies of any referenced documents in electronic form to accompany their respective Water Supply Asset Plans, for example, Drinking Water Quality Management Plans, System Leakage Management Plans, Strategic Asset Management Plans, Manufactured Water Readiness Plan and/or other Risk Management Plans;
- (e) provide sufficient detail to enable the QWC to provide the endorsement described in Section (4) of this Schedule 5;
- (f) consult with the SEQWGM and all relevant SEQ Water Grid Participants in preparing their Water Supply Asset Plan and provide evidence of consultation to ensure all reasonable options have been appropriately investigated and considered prior to identification of specific capital solutions to meet the SEQWGM Consolidated SEQ Water Demand Forecast;
- (g) provide a Board approved copy of the respective Water Supply Asset Plan to the QWC no later than 80 business days after receipt of the Consolidated SEQ Water Demand Forecast from the SEQWGM each calendar year commencing 2012; and
- (h) provide a copy to the SEQWGM, the other entity, and the distributor-retailer entities once endorsed by the QWC.

### (4) Endorsement

The QWC will endorse the Water Supply Asset Plan if:

- (a) it has been produced in accordance with the processes described in this schedule; and
- (b) it informs and enables QWC to perform its planning functions to assess and recommend options to achieve water security in the SEQ region, including facilitating the achievement of the desired LOS objectives for SEQ.

QWC will provide endorsement or otherwise within 30 business days of receipt of each Water Supply Asset Plan, each calendar year.

## (5) Interim arrangements

- (a) each distributor-retailer entity must within 20 business days of the making of this SOP, prepare an interim statement that identifies and describes any matters that may have a material impact on the need for new or upgraded bulk water supply works to be considered in the 2012–13 financial year. The interim statement must be provided to Seqwater, LinkWater, the SEQWGM and the QWC
- (b) the SEQWGM must within 25 business days of receipt of the distributor–retailers interim statements, prepare an interim statement that identifies and describes any matters that may have a material impact on the need for new or upgraded bulk water supply works to be considered in the 2012–13 financial year. The interim statement must be consistent with the distributor-retailers' interim statements. The interim statement must be provided to Seqwater, LinkWater, any other relevant Grid Participants and the QWC
- (c) Seqwater and LinkWater must each, within 30 business days of receipt of the SEQWGM's interim statement, prepare an interim statement that addresses the matters raised in the SEQWGM's interim statement. The interim statement must be provided to the QWC, the other Grid Service Provider, the SEQWGM and the distributor-retailer entities.

## Schedule 6: Definitions

**Annual Operations Plan** is an annual plan produced by the SEQWGM under Schedule 3 of the SOP.

**approved Recycled Water Management Plan** has the meaning given in the *Water Supply (Safety and Reliability) Act 2008*.

**business day** means a day that is not a Saturday, Sunday, public holiday or bank holiday in Brisbane, Australia.

**commission water restrictions** has the meaning given in section 360ZD of the *Water Act 2000*.

**Consolidated SEQ Water Demand Forecast** is a consolidated annual water demand forecast produced by the SEQWGM under Schedule 5 of the SOP.

**desired LOS objectives** has the meaning given in Section 6 of the SOP. The principal tool for demonstrating compliance with the desired LOS objectives is the SEQ regional water balance model.

**distributor-retailer entity** has the meaning given in the *South East Queensland Water (Distribution and Retail Restructuring) Act 2009*.

**drought response infrastructure** means planned infrastructure to respond to a severe drought, triggered when all key water grid storages reach 30 per cent of the combined total water storage capacity of these storages.

**feedwater notification** is a notification about western corridor recycled water scheme feedwater issued under Section 9.7 by Seqwater to the distributor-retailer entity.

**Grid Contract Documents** means a document made by the Minister under section 360ZDD of the *Water Act 2000*.

**Grid Customer** has the meaning given in the *Water Act 2000*.

**Grid Instruction** is an instruction issued by the SEQWGM to a Grid Participant in accordance with the Market Rules.

**Grid Participant** has the meaning given in the Market Rules.

**Grid Service Provider** has the meaning given in the Market Rules.

**Interim Resource Operations Licence** means a licence that was granted under section 175 of the *Water Act 2000*.

**key water grid storages** are all of Baroon Pocket Dam, Ewen Maddock Dam, Cooloolabin Dam, Wappa Dam, Lake Macdonald, Somerset Dam, Wivenhoe Dam, North Pine Dam, Lake Kurwongbah, Leslie Harrison Dam, Hinze Dam and Little Nerang Dam. Collectively these are also known as the Grid Twelve.

**LinkWater** means the Queensland Bulk Water Transport Authority established under the *South East Queensland Water (Restructuring) Act 2007* trading as LinkWater.

**manufactured water** is water produced by the Western Corridor Recycled Water Scheme or the South East Queensland (Gold Coast) Desalination Plant.

**Manufactured Water Readiness Plan** is a plan (Readiness Plan) produced by Seqwater under Schedule 4 of the SOP.

**maximum volume of water** has the meaning given in Section 5.1 of the SOP.

**Market Rules** are the rules about the operation of the market that may be made by the Minister pursuant to section 360ZCX of the *Water Act 2000*, known as The Market Rules SEQ Water Market.

**medium level restrictions** means commission water restrictions that achieve a targeted reduction in consumption of 15 per cent below the total consumption volume in normal operations, triggered when all key water grid storages reach 40 per cent of the combined total water storage capacity of these storages.

**minimum operating levels** means the storage levels for:

- Wivenhoe Dam when the volume of stored water in Wivenhoe Dam is 4,886 ML;
- Hinze Dam when the volume of stored water in Hinze Dam is 2,180 ML; and
- Baroon Pocket Dam when the volume of stored water in Baroon Pocket Dam is 4,500 ML.

**Monthly Customer Forecast Notice** has the meaning given in the Market Rules.

**Monthly Grid Service Provider Forecast Notice** has the meaning given in the Market Rules.

**ML/a** is megalitres per annum.

**normal operations** means the mode of SEQ Water Grid operation when the total volume of water stored by all key water grid storages is greater than 40 per cent of the combined total capacity of these storages.

**QWC** means the Queensland Water commission.

**quarter** means each three month period ending on 31 March, 30 June, 30 September and 31 December.

**Resource Operations Plan** means a plan approved under section 103(5) of the *Water Act 2000*.

**Risk Criteria** has the meaning given in Section 8 of the SOP. The principal tool for demonstrating compliance with the risk criteria is the SEQ regional water balance model.

**run of river flow** means water in a watercourse, not supplemented by storage releases.

**SEQ region** has the meaning given in the *Water Act 2000*.

**SEQ regional water balance model** is the Queensland Water Commission's model developed using the Water Headworks Network (WATHNET) computer program, used to determine the system yield based on existing infrastructure being operated in a specified arrangement. The model is based on stochastically generated inflow sequences derived from historical data. The relevant model version will be provided to the SEQWGM, or other entities, by the QWC as appropriate.

**Seqwater** means the Queensland Bulk Water Supply Authority established under the *South East Queensland Water (Restructuring) Act 2007* trading as Seqwater.

**SEQWGM** means the South East Queensland Water Grid Manager.

**sewerage** has the meaning given in the *Water Act 2000*.

**total water storage capacity** is the volume of water stored at full supply level (FSL).

**Water Demand Forecast** is a forecast produced by the distributor-retailer entities under Schedule 5 of the SOP.

**Water Supply Asset Plan** is a plan produced under Schedule 5 of the SOP.

**Water Resource Plan** means a plan prepared under Division 2, Chapter 2 of the *Water Act 2000*.

**water supply works** has the meaning given in the *Water Act 2000*.

**western corridor recycled water scheme feedwater** means:

- sewage entering a sewerage network that provides source water for the following wastewater treatment plants—Bundamba, Gibson Island, Goodna, Luggage Point, Oxley, Wacol (western corridor recycled water scheme feedwater (untreated)); and
- treated wastewater exiting the following wastewater treatment plants—Bundamba, Gibson Island, Goodna, Luggage Point, Oxley and Wacol (western corridor recycled water scheme feedwater (treated)).