

St George Water Supply Scheme Resource Operations Licence Operations Manual

Water Plan (Condamine and Balonne) 2019

APPROVED 3 MAY 2019

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STATEMENT OF CHANGES MADE TO THIS MANUAL

| Version | Version Date | Statement of changes | Approved by |
|---------|---------------|---|---|
| V1-0 | July 2018 | Initial document created and approved by Department of Natural Resource, Mines and Energy | David Wiskar – Executive Director, Water Policy. Department of Natural Resources, Mines and Energy on 19 June 2018 |
| V1-1 | 29 March 2019 | Addition of new section 30 to deal with reduced full supply level of EJ Beardmore Dam | John Ritchie – Acting Executive Director, South Region. Department of Natural Resources, Mines and Energy on 29 March 2019 |
| V1-2 | 03 May 2019 | Addition of new section 31 to allow for diversion into approved offstream storages while the reduced full supply level of EJ Beardmore Dam is in effect | John Ritchie – Acting Executive Director, South Region. Department of Natural Resources, Mines and Energy on 03 May 2019 |

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CHAPTER 1 PRELIMINARY

1 Short title

- (1) This operations manual may be cited as the St George Water Supply Scheme Resource Operations Licence Operations Manual.
- (2) Reference in this document to 'this manual' means the St George Water Supply Scheme Operations Manual for the Resource Operations Licence.

2 Interpretation of words used in this manual

- (1) The dictionary in attachment 1 defines particular words used in this manual.
- (2) References to licence holder in this manual are taken to mean the resource operations licence holder unless the text states a contrary meaning.

3 Water supply scheme

The extent of the St George Water Supply Scheme is defined in the Condamine and Balonne Water Management Protocol.

CHAPTER 2 OPERATING RULES

Part 1 General operating rules

4 Operating levels of storages

- (1) The minimum operating levels for E J Beardmore Dam and Jack Taylor Weir are specified in table 1.
- (2) The licence holder may only release supplemented water from a storage, if the release is necessary to—
 - (a) supply water for a water allocation;
 - (b) maintain a downstream storage at or above its minimum operating level;
 - (c) meet the minimum waterhole level requirements in section 5; and
 - (d) Comply with the environmental management rules on the resource operations licence.
- (3) Despite subsection (2), the licence holder may only release or supply supplemented water from a storage if the water level in that storage is above its minimum operating level, unless authorised by the chief executive.
- (4) If Moolabah Weir is operated above 201.3m AHD, the licence holder must operate Jack Taylor Weir at a level that compensates for the additional volume of water held in Moolabah Weir.

Table 1 Operating levels of storages

| Storage | Minimum operating level (m AHD) |
|-------------------|---------------------------------|
| E J Beardmore Dam | EL 196.15 |
| Jack Taylor Weir | EL 187.24 |

5 Use of waterholes

A waterhole may be drawn down to 0.5m below its natural cease-to-flow level to allow water to be taken under a water allocation if the water released by the licence holder will replace the water drawn down in the waterhole and is released prior to the time of waterhole draw down.

Part 2 Additional operating rules

6 Priority supply of water using the Thuraggi Watercourse

The licence holder must ensure that first priority is given to the delivery of supplemented water allocations using the Thuraggi Watercourse (AMTD 0.0 km – 0.4 km).

7 Limiting take under flow event management arrangements

- (1) This section applies to water that is—
 - (a) passed by the licence holder in accordance with the resource operations licence, attachment 2, section 1(1); or

- (b) released by the licence holder in accordance with the resource operations licence, attachment 2, section 2 or section 3; or
 - (c) not taken due to a reduction notified by the chief executive.
- (2) The licence holder must ensure that the delivery of water orders does not reduce the volume of environmental, stock and domestic water or the volume of water not taken due to implementation of flow event management rules, passing through the system.

CHAPTER 3 WATER SHARING RULES

Part 1 General water sharing rules

8 Management of water allocations

The licence holder must, where a water allocation is managed as—

- (a) an individual continuous share—manage the water allocation in accordance with part 2 only; or
- (b) part of the bulk share—manage the water allocation in accordance with part 2 and part 3.

9 Sharing of inflows

(1) Any portion of inflow into EJ Beardmore Dam less than or equal to 730 ML/day must be either—

- (a) passed in accordance with attachment 2, section 1 of the resource operations licence; or
- (b) stored in accordance with attachment 2, section 1 of the resource operations licence.

(2) Any portion of inflow into EJ Beardmore Dam in excess of 730 megalitres per day must be shared as follows—

- (a) for a water allocation managed as an individual continuous share—a volume of the inflow in proportion to the continuous share percentage determined for the water allocation under section 13;
- (b) for the group of water allocations managed as the bulk share—a volume of the inflow in proportion to the total of the continuous share percentages determined for the water allocations in the group under section 13; and
- (c) any portion of inflows that is in excess of the continuous share volume determined under section 14 for a water allocation or a group of water allocations must be shared amongst the remaining allocations and groups of allocations in accordance with subsections (2)(a) and (2)(b).

10 Determining the annual resource cap

(1) The licence holder must determine the annual resource cap for a water allocation managed as—

- (a) an individual continuous share—using the following formula—

$$ARC = NV + CO + FD + SA_{ARC}$$

- (b) part of the bulk share—using the following formula—

$$ARC = AA \times NV + SA$$

(2) The parameters used in the formulae in this section are defined in table 2.

Table 2 Annual resource cap parameters

| Parameter | Description |
|-----------|---|
| ARC | The annual resource cap for the water allocation. |

| Parameter | Description |
|-------------------------|---|
| NV | The nominal volume of the water allocation. |
| CO | Carry over made available under section 22 to the water allocation. |
| FD | Forward draw made available under section 23 of the water allocation. |
| SA_{ARC} | The sum of all seasonal water assignments of annual resource cap made under section 26 to and from the continuous share water account for the water allocation. |
| SA | The sum of all seasonal water assignments of water made under section 27 to and from the water account for the water allocation. |
| AA | The announced allocation made under section 19 that is applicable to the water allocation. |

11 Taking water under a water allocation

The total volume of water taken under a water allocation in a water year must not exceed the annual resource cap for the water allocation.

Part 2 Continuous sharing rules

12 Application of part 2

This part applies to water allocations managed as individual continuous shares and water allocations managed as part of the bulk share.

13 Determining a continuous share percentage

(1) The licence holder must determine the continuous share percentage for each water allocation using the following formulae-

(a) for a high priority water allocation-

$$CS\% = 100 \times \frac{NV}{\eta S} \times \frac{TCSV_{HP}}{\sum HP_{EQ} \times TCSV}$$

(b) for a medium priority water allocation-

$$CS\% = 100 \times \frac{NV}{\eta S} \times \frac{TCSV_{MP}}{\sum MP_{EQ} \times TCSV}$$

(2) The parameters used in the formulae in this section are defined in Table 3.

14 Determining a continuous share volume

(1) The licence holder must determine the continuous share volume for each water allocation using the following formula—

$$CSV = \frac{TCSV \times CS\%}{100}$$

(2) The parameters for the formula described in section are defined in Table 3.

Table 3 Parameters used to determine a continuous share percentage and a continuous share volume for a water allocation

| Parameter | Description |
|---------------|--|
| CS% | The continuous share percentage of the water allocation. |
| NV | The nominal volume of the water allocation. |
| η_s | The relevant storage factor that applies to the nominal location of the water allocation (refer to table 5). |
| $\Sigma HPEQ$ | The sum of the nominal volumes of all high priority water allocations in the scheme, divided by their applicable storage factor. |
| $\Sigma MPEQ$ | The sum of the nominal volumes of all medium priority water allocations in the scheme, divided by their applicable storage factor. |
| TCSV | The total conceptual storage volume of the scheme. This volume is equal to the sum of the respective full supply volumes for EJ Beardmore Dam, Jack Taylor Weir, Moolabah Weir and Buckinbah Weir minus their respective minimum operating volumes. TCSV = 93 660 ML |
| $TCSV_{HP}$ | Total conceptual storage volume for high priority water allocations. Calculated using the following formula— $TCSV_{HP} = \Sigma HPEQ \times 1.75$ This multiplier reflects the additional security required for high priority water allocations in the scheme. $TCSV_{HP} = 5490$ ML |
| $TCSV_{MP}$ | $TCSV_{MP} = TCSV - TCSV_{HP}$ |
| CSV | The continuous share volume of a water allocation |

15 Establishment and operation of continuous share water accounts for water allocations

- (1) The licence holder must establish a continuous share water account for—
 - (a) each water allocation managed as an individual continuous share;
 - (b) the group of water allocations managed as the bulk share.
- (2) The maximum volume of water that may be held in a continuous share water account for a water allocation managed as—
 - (a) an individual continuous share—is the continuous share volume for the water allocation;

- (b) part of the bulk share—is the continuous share volume for the group of water allocations.
- (3) The minimum volume of water that may be held in a continuous share water account for an individual continuous share or the bulk share is zero megalitres.

16 Continuous share water account estimation process

- (1) The licence holder must estimate the volume of water held in each continuous share water account—
 - (a) a minimum of every five business days; and
 - (b) using the following formula—

$$CSA_{CB} = CSA_{PB} - SL_E - W + D + SI_E$$

- (2) The parameters used in the formula in this section are defined in table 4.

Table 4 Parameters used to estimate the volume of water held in a continuous share account

| Parameter | Description |
|-------------------|---|
| CSA _{CB} | The current balance of the continuous share water account. |
| CSA _{PB} | The previous balance of the continuous share water account immediately prior to the current estimation process. |
| SL _E | <p>The estimated share of storage losses for the continuous share water account in the period since the last estimation process or reconciliation process under section 17.</p> <p>The storage losses for the period are estimated based on applying the daily scheme storage losses listed in table 6 to the number of days in the period.</p> <p>Losses are applied to each continuous share water account in proportion to the volume of water held in each water account.</p> |
| W | <p>The sum of the water withdrawals from a continuous share water account in the period since the last estimation process or reconciliation process under section 17. A withdrawal from a continuous share water account for the period is equal to the sum of—</p> <ul style="list-style-type: none"> (1) the water orders for the period—determined using the following formula— $w = \frac{W_o}{\eta_s}$ (2) the volumes of water— <ul style="list-style-type: none"> (a) for water allocations managed as individual continuous shares—assigned to other continuous share water accounts for the period; or |

| Parameter | Description |
|-----------------|--|
| | <p>(b) for water allocations managed as part of the bulk share—seasonally assigned to other continuous share water accounts for the period.</p> <p>Where—</p> <p>w means water withdrawal from the continuous share water account.</p> <p>W_0 means the volume of water ordered by the water allocation holder at the location of take.</p> <p>η_s means the storage factor that applies at the location of take as defined in table 5.</p> |
| D | <p>The sum of the water deposits to a continuous share water account in the period since the last estimation process or reconciliation process under section 19.</p> <p>A water deposit is the sum of the volumes of water—</p> <ol style="list-style-type: none"> (1) for water allocations managed as individual continuous shares—assigned; or (2) for water allocations managed as part of the bulk share—seasonally assigned; (3) into a continuous share water account for the period since the balance was last estimated or reconciled. |
| SI _E | <p>The estimated share of inflows in the period since the last estimation process or reconciliation process under section 17. Inflows for the period must be estimated using the approved storage inflow derivation technique and shared in accordance with section 9.</p> |

Table 5 Storage factors

| Zone | Storage factor (η_s) |
|--------|-----------------------------|
| LBS-01 | 1.00 |
| LBS-02 | 0.95 |
| LBS-03 | 0.80 |
| LBS-04 | 0.80 |

Table 6 Scheme storage losses

| Month | Monthly (mm) | Daily (mm) |
|--------|--------------|------------|
| July | 95 | 3.06 |
| August | 125 | 4.03 |

| Month | Monthly (mm) | Daily (mm) |
|-----------|--------------|------------|
| September | 180 | 6.00 |
| October | 230 | 7.42 |
| November | 275 | 9.16 |
| December | 320 | 10.32 |
| January | 300 | 9.68 |
| February | 260 | 8.97 |
| March | 245 | 7.90 |
| April | 170 | 5.67 |
| May | 120 | 3.87 |
| June | 90 | 3.00 |

17 Continuous share water account reconciliation process

- (1) The licence holder must apply a continuous share water account reconciliation process at least once every 30 business days.
- (2) The continuous share water account reconciliation process must determine the difference between the sum of the volumes in continuous share water accounts estimated in accordance with section 16 and the volume of water actually available in the total conceptual storage, using the following formula—

$$V_D = V_A - \sum CSA_{CB}$$

- (3) Where the water volume difference calculated under subsection (2) is greater than zero, the water available must be shared amongst continuous share water accounts—
 - (a) for water allocations— in accordance with section 9(2); and
 - (b) for the environmental stock and domestic water account— in proportion to the volume of water held in the account at the time of the reconciliation.
- (4) Where a water volume difference calculated under subsection (2) is less than zero, the deficit must be shared amongst all continuous share water accounts in proportion to the volumes of water held in each continuous share water account.
- (5) The parameters used in the formula in this section are defined in table 7.

Table 7 Scheme storage losses

| Parameter | Description |
|-----------------|---|
| V_D | The difference between the sum of the volumes of water estimated to be available under section 16 and the actual volume available in total conceptual storage volume. |
| V_A | The volume of water held in the total conceptual storage volume. |
| $\sum CSA_{CB}$ | The sum of the current balances of all continuous share water accounts estimated to be available under section 16. |

Part 3 Bulk sharing rules

18 Application of part 3

This part applies to water allocations managed as part of the bulk share.

19 Announced allocations

(1) The licence holder must—

- (a) determine an announced allocation for each priority group using the water sharing rules specified in this operations manual
- (b) calculate and set the announced allocation for each priority group to take effect on the first day of each water year;
- (c) following the commencement of a water year—
 - (i) recalculate the announced allocation whenever the continuous share water account reconciliation under section 17 is undertaken.;
 - (ii) reset the announced allocation if a recalculation indicates it would
 - (A) increase by five or more percentage points; or
 - (B) increase to 100 per cent.
- (d) publish details of the announced allocation, including the parameters used in its determination within five business days of setting or resetting the announced allocation;
- (e) notify the distribution operations licence holder within 5 business days of setting or resetting the announced allocation for the bulk share; and (f) not reduce the announced allocation during the water year.

(2) The announced allocation must be rounded to the nearest per cent.

(3) The announced allocation must not be greater than 100 per cent.

20 Calculation of announced allocations

(1) The announced allocation for high priority water allocations must be—

- (a) 100 per cent when the announced allocation for medium priority water is greater than zero per cent; or
- (b) determined using the following formula when the announced allocation for medium priority water allocations (AAMP) is zero per cent—

$$AA_{HP} = 100 \times \frac{(UV_{BS} - TOA_{BS} + DIV_{BS})}{HPA_{BS}}$$

(2) The announced allocation for medium priority water allocations must be determined using the following formula—

$$AA_{MP} = 100 \times \frac{(UV_{BS} - HPA_{BS} - RE_{BS} - TOA_{BS} + DIV_{BS})}{MPA_{BS}}$$

(3) The parameters used in the formulae in this section are defined in table 8.

Table 8 Announced allocation parameters for the bulk share

| Parameter | Description |
|-------------------------|---|
| AA_{HP} | The high priority announced allocation percentage—the percentage of the nominal volume that may be taken for the water year under a high priority water allocation. |
| AA_{MP} | The medium priority announced allocation percentage—the percentage of the nominal volume that may be taken for the water year under a medium priority water allocation. |
| HPA_{BS} | The total nominal volume of high priority water allocations. |
| MPA_{BS} | The total nominal volume of medium priority water allocations. |
| UV_{BS} | <p>The usable volume in the bulk share—the volume of water available for water allocations minus projected storage losses determined using the following formula—</p> $UV_{BS} = CV - SL$ <p>Where—</p> <p>CV means the current volume in the continuous share water account.</p> <p>SL means the projected storage loss for the remainder of the water year including lake evaporation and seepage. The storage loss volume is applied as a reduction to the total volume held in all water accounts managed as the bulk share in proportion to the volume of water held in the continuous share water accounts.</p> |
| DIV_{BS} | Diverted volume—the volume of water diverted by high and medium priority water allocations since the start of the current water year. |
| RE_{BS} | Reserve—an allowance set aside to provide for the supply of water to high priority water allocations. The reserve must be equal to a volume based on zero month's supply from the end of the current water year, including storage losses and a transmission operational allowance. |
| TOA_{BS} | <p>Transmission operational allowance—an allowance for transmission and operational losses expected to occur in supplying water to the end of the water year to water allocations.</p> <p>TOA_{BS} varies with the amount of water allocation being managed as the bulk share that remains to be delivered to each location.</p> <p>TOA_{BS} is based on application of the storage factors in table 5 for the locations of the water allocations managed as part of the bulk share.</p> |

Part 4 Changing management arrangements

21 Changing to and from management as an individual continuous share

- (1) A water allocation holder may elect to change the management of a water allocation—
 - (a) from the bulk share to an individual continuous share; or
 - (b) from an individual continuous share to the bulk share.
- (2) Where a change is made under subsection (1) the licence holder must—
 - (a) maintain the continuous share percentage established for the water allocation under section 13;
 - (b) maintain the continuous share volume established for the water allocation under section 14; and
 - (c) ensure that the change takes effect from the first day of the next water year.
- (3) Where a water allocation holder elects to change the management arrangements of a water allocation from the bulk share to an individual continuous share the resource operations licence holder must—
 - (a) estimate the total volume of water that would be available in the bulk share on the first day of the water year had the water allocation remained in the bulk share; and
 - (b) allocate a volume of that estimated under subsection (3)(a) to the continuous share water account of the water allocation changing management arrangements, in proportion to its continuous share volume.
- (4) Where a water allocation holder elects to change the management of a water allocation from an individual continuous share to the bulk share, the volume of water held in the continuous share water account for that water allocation at the end of the water year must be added to the continuous share water account for the bulk share prior to determining the announced allocation for the new water year.

Part 5 Carry over and forward draw

22 Carry over

- (1) This section applies to water allocations managed as individual continuous shares.
- (2) The licence holder may only make carry over available to a water allocation holder—
 - (a) at the beginning of a water year; and
 - (b) for that water year.
- (3) The maximum total carry over that the licence holder may make available to water allocation holders in a water year must be the lesser of—
 - (a) 20 per cent of the sum of the nominal volumes of all water allocations managed within the scheme; and
 - (b) the sum of the unused nominal volume for all water allocations managed as individual continuous shares, calculated using the following formula—

$$NV_U = [(NV - FD_P) + CO + FD_C + SA_I - SA_O] - DIV_T$$

(4) The parameters used in the formula in this section are defined in table 9

Table 9 Parameters used for calculating carry over

| Parameter | Description |
|------------------------|--|
| NV_U | The sum of unused nominal volumes for all water allocations managed as individual continuous shares, calculated at the end of that water year. |
| NV | The nominal volume of a water allocation. |
| FD_P | The volume of forward draw taken in the previous water year of the volume of forward draw offered under section 23. |
| DIV_T | Total diversions—the total volume of water taken under the authority of the water allocation in the current water year. For the purposes of this calculation all CO, FD _C , SA _I and SA _O are assumed to have been taken. |
| CO | Volume of water carried over from the previous water year. |
| FD_C | Total forward draw made available in the current water year. |
| SA_I | Total seasonal water assignments of annual resource cap into a continuous share water account. |
| SA_O | Total seasonal water assignments of annual resource cap out of a continuous share water account. |

23 Forward draw

- (1) This section applies to water allocations managed as individual continuous shares.
- (2) The licence holder may make forward draw available for a water allocation at any time during a water year.
- (3) The maximum total forward draw that the licence holder may make available to water allocations in a water year must be no greater than 10 per cent of the total of the nominal volumes of all water allocations in the scheme.
- (4) The licence holder may make forward draw available for a water allocation if—
 - (a) where carry over has been made available for the water allocation under section 22, all of the carry over for the current water year has been taken; and
 - (b) all of the nominal volume for the water allocation has been taken.
- (5) If forward draw is taken in a water year, then until the end of that water year, E J Beardmore Dam must be operated to spill at full supply level minus the volume that is equivalent to the total of the forward draw for that water year.

Part 6 Watercourse as a conduit

24 Relocation of Water

- (1) Water taken under the authority of a water allocation in Zone LBU-01 may be relocated from E J Beardmore Dam to the Thuraggi Watercourse provided—

- (c) the chief executive approves an authority to re-lift the relocated water;
 - (d) the relocation occurs outside an announced period;
 - (e) only the ponded area of EJ Beardmore Dam and the Thuraggi Watercourse are used to relocate the water; and
 - (f) the licence holder and distribution operations licence holder consent to the activity.
- (2) Water taken under the authority of a water allocation in Zone LBU-01 may be relocated from Jack Taylor Weir through the St George Pump Station provided—
- (a) the chief executive approves an authority to re-lift the relocated water;
 - (b) the relocation occurs outside an announced period;
 - (c) only the ponded area of Jack Taylor Weir used to relocate the water; and
 - (d) the licence holder and distribution operations licence holder consent to the activity.

CHAPTER 4 WATER ASSIGNMENT RULES

25 Seasonal water assignment rules—general

- (1) The licence holder may approve a seasonal water assignment of a volume of water if—
 - (a) the volume made available under the assignment is less than or equal to the unused volume that may be taken under the authority of the water allocation being assigned; and
 - (b) the total water use in a water year for each zone is less than or equal to the maximum allowable water use volume detailed in table 10 below.
- (2) Where water to be assigned under the seasonal water assignment would require supply authorised under a distribution operations licence or is a water allocation to which the distributions operations licence applies, the licence holder may only approve the seasonal water assignment if the application is accompanied by consent from the distribution operations licence holder.
- (3) In this section—

total water use, for a zone, means the total volume of water taken under all water allocations within the zone managed as either individual continuous shares or part of the bulk share under the resource operations licence.

Table 10 Maximum water use volumes for the scheme

| Zone | Maximum water use (ML) |
|--------|------------------------|
| LBS-01 | 81 965 |
| LBS-02 | 84 185 |
| LBS-03 | 5619 |
| LBS-04 | 3130 |

26 Seasonal water assignment of annual resource cap

- (1) This section applies to water allocations managed as individual continuous shares.
- (2) The licence holder may approve a seasonal water assignment of annual resource cap if doing so is consistent with the requirements under section 25.
- (3) The maximum volume of annual resource cap that may be seasonally assigned must be determined using the following formula—

$$SA_{ARCmax} = ARC - DIV$$

- (4) The parameters used in the formula in this section are defined in table 11.

Table 11 Parameters used to determine a seasonal water assignment of annual resource cap

| Parameter | Description |
|---------------|--|
| SA_{ARCmax} | The maximum annual resource cap available for seasonal water assignment. |
| ARC | The annual resource cap for the water allocation. |
| DIV | The total volume of water that has been taken under the water allocation during the current water year. Note that for the purpose of identifying the |

| Parameter | Description |
|-----------|--|
| | volume of annual resource cap available to be seasonally assigned any previous seasonal water assignment of annual resource cap out of the water account is considered as water taken by the assignor. |

27 Seasonal water assignment of water under bulk share

- (1) This section applies to water allocations managed as part of the bulk share.
- (2) The licence holder may approve a seasonal water assignment if doing so is consistent with the requirements under section 25.
- (3) The maximum volume of water that may be seasonally assigned must be determined using the following formula—

$$SA_{max} = ARC - DIV$$

- (4) The parameters used in the formula in this section are defined in table 12.

Table 12 Parameters used to determine a seasonal water assignment of bulk share water

| Parameter | Description |
|------------|---|
| SA_{max} | The maximum volume of water available for seasonal water assignment. |
| ARC | The annual resource cap for the water allocation. For the bulk share the annual resource cap reflects the volume of water made available under an announced allocation plus or minus any seasonal water assignment arrangements entered into during the water year. |
| DIV | Total volume of water taken during the current water year. Note that any seasonal water assignment out of a water account is considered as water taken by the assignor. |

28 Water assignment under individual continuous share

- (1) This section applies to water allocations managed as individual continuous shares.
- (2) The licence holder may approve a water assignment provided—
 - (a) doing so is consistent with the requirements under section 25; and
 - (b) the volume of water assigned does not exceed the available capacity in the continuous share water account of the water allocation to which the water is being assigned.

CHAPTER 5 OTHER REQUIREMENTS

29 Establishment and operation of a water account for environmental, stock and domestic water

- (1) The licence holder must establish an environmental, stock and domestic water account for water stored under attachment 2, section 1 of the resource operations licence.
- (2) Water managed under the water account established under subsection (1) must be subject to the estimation and reconciliation processes under sections 16 and 17 of this manual as if a reference in the sections to continuous share water account were a reference to the environmental, stock and domestic water account.
- (3) The maximum volume of water that may be held in the environmental stock and domestic water account is the available airspace in the total conceptual storage volume.
- (4) The minimum volume of water that may be held in the water account for environmental stock and domestic water is zero megalitres.
- (5) Water released under attachment 2, section 2 of the resource operations licence must be deducted from the environmental, stock and domestic water account.
- (6) If the water level in EJ Beardmore Dam is less than or equal to its minimum operating level, the environmental, stock and domestic water account must be reset to zero megalitres.
- (7) Spills from EJ Beardmore Dam must be deducted from the environmental stock and domestic water account until the balance in the environmental stock and domestic water account is zero.

Section approved by Department of Natural Resource, Mines and Energy on 29 March 2019 — Attachment 2

30 Rules if a reduced full supply level is declared under the *Water Supply (Safety and Reliability) Act 2008*

- (1) This section applies if the full supply level of EJ Beardmore Dam has been reduced (**the reduced full supply level**) under the *Water Supply (Safety and Reliability) Act 2008* and an emergency report has been submitted by the licence holder under Section 24 of the resource operations licence.
- (2) The provisions of this section will cease to apply at 11:59pm on 10 September 2019.
- (3) Despite section 4 (operating levels of storages), the licence holder—
 - (a) may release water from EJ Beardmore Dam as necessary to reach the reduced full supply level.
 - (b) may operate Moolabah Weir, Jack Taylor Weir and Buckinbah Weir to their respective full supply levels.
- (4) Despite section 9 (sharing of inflows), the licence holder—
 - (a) must pass the first 730 megalitres per day of inflow through EJ Beardmore Dam and the associated infrastructure system.
 - (b) must only share inflows which have been adjusted to account for the fact that EJ Beardmore is to be operated at the reduced full supply level.

- (c) if an inflow event occurs where EJ Beardmore Dam is at or below the fixed crest level of EL 201.03 m AHD (approximately 11,300 ML), then the licence holder must—
 - (i) account for the first 730 megalitres per day of inflow which must be passed through in accordance with attachment 2, section 1 of the resource operations licence.
 - (ii) maintain a daily record of inflows and passed inflows for environmental, stock and domestic purposes.
 - (iii) credit individual continuous sharing water accounts with available water which is above the reduced full supply level and below the fixed crest level of EJ Beardmore Dam.
 - (iv) review and estimate water accounts at a minimum of every 5 business days as water is released from EJ Beardmore Dam.
 - (v) deduct the volume of water taken during an inflow event from the annual resource cap and the individual continuous share account.
 - (vi) ensure that the take of water associated with an inflow event is limited to the lesser of the water available in the individual continuous share account or the annual resource cap for the allocation.
 - (vii) ensure no additional take of water occurs beyond the volume that would normally be able to be taken if EJ Beardmore Dam was at the normal full supply level.
- (5) Despite section 19 (announced allocations), the licence holder may reduce the announced allocation applying to the water allocations managed as part of the bulk share if it is determined that the licence holder cannot supply the volume announced.
- (6) Despite section 23 (forward draw), if forward draw has been taken in the water year, EJ Beardmore Dam must only be operated to the *reduced full supply level*.
- (7) To the extent that this section 30 is inconsistent with any other section of the St George Water Supply Scheme Resource Operations Licence Operations Manual, this section 30 prevails.

Section approved by Department of Natural Resource, Mines and Energy on 03 May 2019 — Attachment 3

31 Diversions to offstream storages

- (1) Water that would have been stored in EJ Beardmore Dam for use by water allocation holders may be diverted to Offstream Storages subject to the following conditions—
 - (a) the full supply level of EJ Beardmore Dam is reduced (***the reduced full supply level***) under the *Water Supply (Safety and Reliability) Act 2008*; and
 - (b) the diversion is authorised by a separate water authority under the *Water Act 2000*.
- (2) If the total volume of water stored in EJ Beardmore Dam, Jack Taylor Weir, Moolabah Weir, Buckinbah Weir and the Offstream Storages exceeds 93 660 ML, the ROL holder must take steps to reduce the volume to 93 660 ML or less in a reasonable period of time.

- (3) Water stored under this section will not be accounted for in the total conceptual storage volume of the scheme until it is returned to EJ Beardmore Dam, Jack Taylor Weir, Moolabah Weir or Buckinbah Weir.
- (4) The ROL holder will prepare a summary report of all water taken into offstream storage and all water returned from offstream storage including a comparison with water that would have been taken into storage for use by water allocation holders if EJ Beardmore Dam were operated at full supply level.
- (5) The summary report required at subsection (4) is required to be provided to the Department of Natural Resources, Mines and Energy by 10 October 2019 or once all water taken into offstream storages has been returned to EJ Beardmore Dam, Jack Taylor Weir, Moolabah Weir or Buckinbah Weir after 10 October 2019.
- (6) The ROL holder must ensure that no increase in overall take is permitted in the St George Water Supply Scheme compared to the case where EJ Beardmore Dam was operating to its normal full supply volume of 81,700 ML.
- (7) To the extent that these sections are inconsistent with any other section of the St George Water Supply Scheme Resource Operations Licence Operations Manual, this sections 31 prevails.

ATTACHMENT 1 DICTIONARY

| Term | Definition |
|--|---|
| AHD | Australian Height Datum, which references a level or height to a standard base level. |
| AMTD | Adopted Middle Thread Distance, is the distance in kilometres, measured along the middle of a watercourse, from a specific point in the watercourse to the watercourse's mouth, the watercourse's junction with the main watercourse or the border between the State and New South Wales. |
| Announced allocation | For a water allocation managed under a resource operations licence, means a number, expressed as a percentage, which is used to determine the maximum volume of water that may be taken in a water year under the authority of a water allocation. |
| Carry over | The volume of water permitted to be carried over from the unused portion of the entitlement at the end of the previous water year. |
| Cease to flow level | For a waterhole, the level at which water stops flowing from a waterhole over its downstream control. |
| Distribution operations licence holder | The distribution operations licence holder for the St George channel scheme. |
| Licence holder | The resource operations licence holder for the St George Water Supply Scheme. |
| Megalitre (ML) | One million litres. |
| Minimum operating volume | For a dam or weir, the specified minimum volume of water within the ponded area of the storage that cannot be released or used from the storage under normal operating conditions. |
| Nominal volume | Nominal volume means the volume of water, in megalitres, that represents the share of the water available to be taken by holders of water allocations in a priority group or a water allocation group. |
| Ponded area | Area of inundation at full supply level of a storage. |
| Priority group | A grouping of water allocations for taking supplemented water from a water supply scheme with the same water allocation security objective (WASO). |
| Release | Water from a dam or weir that passes downstream from the dam or weir either through the dam or weir outlet works or over the dam spillway. |
| Water use | Refers to actual take of water. |

ATTACHMENT 2

APPROVAL LETTER RECEIVED ON 29 MARCH 2019

Ref CTS 8437/19

29 March 2019



Mr Colin Bendall
Executive General Manager, Operations and Services
Sunwater

Dear Colin

Thank you for your letter dated 29 March 2019 regarding a proposed amendment to the St George Water Supply Scheme Resource Operations Licence (St George ROL) Operations Manual.

I would firstly like to acknowledge receipt of correspondence on 22 March 2019, provided to David Wiskar, Executive Director, Water Policy. The correspondence included an emergency notification under section 24 of the St George ROL triggered by the requirement to reduce the full supply level at EJ Beardmore Dam to address safety issues outlined in a notification under section 399B of the *Water Supply (Safety and Reliability) Act 2008*.

In considering your application for an amendment to the St George ROL Operations Manual, the following matters were considered:

- The extent to which the proposed amendments are consistent with the *Water Plan (Condamine and Balonne) 2019* (water plan) outcomes and measures; and
- Alignment with objectives stated in the water plan, including the water allocation security objectives and the environmental flow objectives;
- That adequate consultation with persons affected by the proposed amendments to the operations manual has been conducted as it relates to the resource operations licence or distribution operations licence.

After consideration of relevant matters under section 200 and section 198 of the *Water Act 2000* (the Act) and the supporting material provided by SunWater, I can advise that the application for an amendment to the St George ROL Operations Manual is approved commencing 5:00 pm Friday 29 March 2019.

I am an authorised officer under the Act and I am delegated under section 198 of the Act to make this decision as prescribed by the Instrument of Delegation signed by the Director-General of the Department of Natural Resources, Mines and Energy.

I draw your attention to requirement under section 200(c) of the Act, where the holder must publish a statement of changes made to the manual, and request SunWater ensure the amended St George ROL Operations Manual is made publicly available on their website (section 198 (3) of the Act) as soon as is practically achievable.

Should you have any further enquiries, please contact Mr Jim Weller, Manager Water Services of the department on 0429 700 750.

Yours sincerely



John Ritchie
Acting Executive Director
South Region

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ATTACHMENT 3

APPROVAL LETTER RECEIVED ON 03 MAY 2019



Department of
Natural Resources
Mines and Energy

Mr Colin Bendall
Executive General Manager
Operations and Services
Sunwater
Colin.bendall@sunwater.com.au

Dear Colin

Thank you for letter dated 3 May 2019 withdrawing your application of 30 April 2019 and making a further application for a proposed further amendment to the St George Water Supply Scheme Resource Operations Licence (St George ROL) Operations Manual as a result of the ongoing requirement to operate EJ Beardmore Dam at a Reduced Full Supply Level.

I acknowledge SunWater's efforts to mitigate the impact of the Reduced Full Supply Level on customers of the St George Water Supply Scheme.

The following matters have been considered in assessing your application for an amendment to the St George ROL Operations Manual:

- The extent to which the proposed amendments are consistent with the water plan outcomes and measures; and
- Alignment with objectives stated in the water plan, including the water allocation security objectives and the environmental flow objectives;
- That adequate consultation with persons affected by the proposed amendments to the operations manual as it relates to the resource operations licence or distribution operations licence.

After consideration of relevant matters under s200 and s198 of the *Water Act 2000* (the Act) and the supporting material provided by SunWater, I can advise that the application for an amendment to the St George ROL Operations Manual is approved as per your application commencing 5:00 pm on Friday 3 May 2019.

I am an authorised officer under the Act and I am delegated under section 198 of the Act to make this decision as prescribed by the Instrument of Delegation signed by the Director-General of the Department of Natural Resources, Mines and Energy.

I draw your attention to requirement under s200(c) of the Act, where the holder must publish a statement of changes made to the manual, and request SunWater ensure the amended St George ROL Operations Manual is made publicly available on their website (section 198 (3) of the Act) as soon as is practically achievable.

Please note that although the amendment authorises SunWater to use off-stream storage to temporarily store water that could have been stored in EJ Beardmore dam if operated to Full Supply Level, a separate authorisation is required to authorise the take of water from the Balonne River. I acknowledge receipt of SunWater's application to the department for a Water Permit to provide this authority. A decision on this application will be made separately.

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Please also be aware that the return of any water into the watercourse is subject to the provisions of the *Environmental Protection Act 1994* and subordinate legislation and may require further authorisation.

Should you have any further enquiries, please contact Mr Jim Weller, Manager Water Services of the department on 0429 700 750.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'John Ritchie', with a stylized flourish at the end.

John Ritchie
A/Executive Director, South Region

Cc Mr Gordon Delaney
SunWater, Manager Environment