

# Attachment 4.3A

## Lower Fitzroy Water Supply Scheme

### Details of conversions to water allocations

Water allocation number	Family name/ Company	Given names	Tenancy type	Tenancy comments	Share of water allocation	Location	Purpose	Nominal volume (ML/water year)	Priority	Converting authorisation
369	ACTON	GRAEME WILLIAM	TC		1/2	Fitzroy A	Any	1	High	51661U
	ACTON	EVAN RUSSELL	TC		1/2					
372	ARCHER	ROBERT CEDRIC MACKENZIE	TC		1/2	Fitzroy A	Any	1	High	51655U
	ARCHER	ALISTER RUSSEL	TC		1/2					
365	ARTHUR	RAYMOND	TC		1/2	Fitzroy A	Any	2	High	51656U
	ARTHUR	JEANETTE RUTH	TC		1/2					
373	CLARK	HEATHER	SP		1	Fitzroy A	Any	1	High	51658U
371	CONNOR	NOEL PETER	TC		1/2	Fitzroy A	Any	1.5	High	51657U
	CONNOR	SANDRA ANSELL	TC		1/2					
375	COOMBS	KEVIN LEONARD	TC		1/2	Fitzroy A	Any	1	High	51659U
	COOMBS	TREVOR LAWTON	TC		1/2					
367	JAMES	JOHN LEONARD	TC		1/2	Fitzroy A	Any	1	High	51662U
	JAMES	JOYCE MARGARET	TC		1/2					
364	LOTH	JOHN BERNARD	TC		1/2	Fitzroy A	Any	2	High	51665U
	LOTH	EILEEN MARGARET	TC		1/2					
370	ROBINSON	RONALD JOHN	TC		1/3	Fitzroy A	Any	1.5	High	102201
	ROBINSON	CAROL THELMA	TC		1/3					
	ROBINSON	BENJAMIN IAN	TC		1/3					
34	STANWELL CORPORATION LIMITED ACN 078848674		SP		1	Fitzroy A	Any	24000	High	103012
374	STANWELL CORPORATION LIMITED ACN 078848674		SP		1	Fitzroy A	Any	2	High	51660U
292	SUNWATER		SP		1	Fitzroy A	Any	223	High	103007
930	SUNWATER		SP		1	Fitzroy A	Distribution Loss	1275	High	103009

*Note that Attachment 4.3A shows details of relevant authorisations supplied through the Lower Fitzroy Water Supply Scheme as at 13 November 2003. Any changes that occur after 13 November 2003, for example, transfers of a listed authorisation to another person, or from amalgamations or subdivisions of listed authorisations, will be dealt with through standard procedures established to register changes to the water allocation register*

Water allocation number	Family name/ Company	Given names	Tenancy type	Tenancy comments	Share of water allocation	Location	Purpose	Nominal volume (ML/water year)	Priority	Converting authorisation
366	TAMBLYN	GRAHAM LEWIS	TC		1/2	Fitzroy A	Any	1.5	High	57562U
	TAMBLYN	KAREANN JOY	TC		1/2					
368	TITMARSH	RAYMOND IAN	TC		1/2	Fitzroy A	Any	1.5	High	102136
	TITMARSH	ALICE LINDA	TC		1/2					
195	HINCHLIFFE	GREGORY JAMES	TC		1/2	Fitzroy B	Agriculture	600	Medium	57407U
	HINCHLIFFE	PRUDENCE JOY	TC		1/2					
192	PETER O'BRIEN PTY LTD ACN 069166874		SP		1	Fitzroy B	Agriculture	600	Medium	57406U
188	PLATANUS PTY LTD ACN 002822773		SP		1	Fitzroy B	Agriculture	1380	Medium	46391U
212	DUNNE	MARY LOUISE	SP		1	Fitzroy C	Agriculture	480	Medium	51604U
209	EDWARDS	ROBERT LINDSAY	TC		1/2	Fitzroy C	Any	5	Medium	46345U
	EDWARDS	GREGORY RONALD	TC		1/2					
199	MYLREA	GERARD STUART	SP		1	Fitzroy C	Agriculture	36	Medium	51682U
290	SUNWATER		SP		1	Fitzroy C	Any	5	High	103006

SP: *Sole Proprietor*

TC: *Tenants in Common*

*Note that Attachment 4.3A shows details of relevant authorisations supplied through the Lower Fitzroy Water Supply Scheme as at 13 November 2003. Any changes that occur after 13 November 2003, for example, transfers of a listed authorisation to another person, or from amalgamations or subdivisions of listed authorisations, will be dealt with through standard procedures established to register changes to the water allocation register*

# Attachment 4.3B

## Lower Fitzroy Water Supply Scheme

### Rules for conversion to water allocations

#### 1 Locations where existing authorisations are being converted to water allocations

Existing authorisations for supplemented water are being converted to water allocations on:

- The Fitzroy River from the upstream limit of Eden Bann Weir to the upstream limit of the Fitzroy Barrage; and
- Sections of tributaries of the Fitzroy River that contain water ponded from natural waterholes or infrastructure within the above section of the Fitzroy River.

#### 2 Rules for conversion of existing authorisations to water allocations

The following rules apply for the conversion of existing authorisations to water allocations to establish the details required for the registration of supplemented water allocations.

##### 2.1 Location

The location from which water may be supplied under a water allocation is specified as a zone according to the position of the existing authorisation. Descriptions of the zones for the Fitzroy River are given in Attachment 2.3.

##### 2.2 Purpose

The purpose for which water may be taken under a water allocation is specified as 'agriculture', 'distribution loss' or 'any'. 'Agriculture' is the nominated purpose for those existing authorisations that are primarily used for agricultural purposes. 'Distribution loss' is the nominated purpose for water allocations for distribution losses associated with the Stanwell Pipeline. 'Any' is the nominated purpose for all other uses of water.

##### 2.3 Volume

For an authorisation that states a volume, the nominal volume for a water allocation is the volume stated on the existing authorisation.

For an authorisation that states an area that may be irrigated, the nominal volume is calculated by multiplying the area (in hectares) stated on the existing authorisation by six (6).

##### 2.4 Priority group

The priority group for a water allocation converted from an existing authorisation to take supplemented water is medium priority, except where a product specification or other undertaking associated with the authorisation identifies the authorisation's water supply as being high priority water allocation.

# Attachment 4.3C

## Lower Fitzroy Water Supply Scheme

### Total volume of supplemented water allocations

Table 1: Total volume of supplemented water allocations at Resource Operations Plan approval

<b>Zone</b>	<b>Medium priority water allocation (ML)</b>	<b>High priority water allocation (ML)</b>
<b>Fitzroy C</b>	521	5
<b>Fitzroy B</b>	2,580	0
<b>Fitzroy A</b>	0	25,515
<b>Total</b>	<b>3,101</b>	<b>25,520</b>

## Attachment 4.3D

### Lower Fitzroy Water Supply Scheme Infrastructure details

#### Storage: Eden Bann Weir – Fitzroy River AMTD 141.2 km

<b>Description of water infrastructure</b>	
Main embankment	Mass concrete gravity weir
Full supply level	EL 14.5 m AHD
Fixed crest level	EL 14.5 m AHD
Saddle dam(s)	Nil
Fabridams	Nil
Gates	Nil
<b>Storage volume and surface area</b>	
Full supply volume	35,900 ML
Dead storage volume	9,650 ML
Surface area/storage volume/elevation relationship	Department of Primary Industries (Water Resources) Drawing No's. A3-110383 and A3-110384
<b>Spillway arrangement</b>	
Description of works	Two level concrete spillway
Spillway level	High level crest EL 14.8 m AHD Low level crest EL 14.5 m AHD
Spillway width	High level crest: 180 metres on right abutment Low level crest: 90 metres on left abutment
Discharge characteristics	Not available
<b>River inlet/outlet works</b>	
Description of works	Inlet structure through 1200 mm by 1200 mm sluice gate to 1500 mm by 1500 mm box culvert.
Multi level inlet	Works can accommodate selective withdrawal
Cease to flow level	EL 7.25 metres AHD
Discharge characteristics	Water Resources Drawing No. A3-101635
<b>Fish transfer system</b>	
Description of works	Fishlock located near the left bank adjacent to the outlet works

# Attachment 4.3E

## Lower Fitzroy Water Supply Scheme Rules for infrastructure operation and environmental management

### 1 Operating levels of storages and waterholes

#### 1.1 Nominal operating level of Fitzroy Barrage

Releases must be made from Eden Bann Weir to maintain the water level in the Fitzroy Barrage at its nominal operating level, unless the water level in Eden Bann Weir is below its local supply level.

Fitzroy Barrage storage levels may vary above and below the nominal operating level due to practical limitations of estimating and making releases and for unforeseen circumstances.

The nominal operating level for the Fitzroy Barrage is EL 3.38 m AHD (75,000 ML).

#### 1.2 Local supply level of Eden Bann Weir

The local supply level and local supply area for Eden Bann Weir are given in Table 1.

**Table 1: Local supply level and local supply area for Eden Bann Weir**

Storage	Local supply level	Local supply area
Eden Bann Weir	EL 9.55 m AHD (11,280 ML)	Eden Bann Weir pond and downstream, but excluding Fitzroy Barrage pond

Releases must not be made from Eden Bann Weir to the Fitzroy Barrage when the water level in Eden Bann Weir is below its local supply level, except:

- If the water level in the Fitzroy Barrage is below EL -0.5 m AHD (27,950 ML), releases should be made from Eden Bann Weir to the Fitzroy Barrage, to the extent that it is practicable; and
- To supply water allocation holders located within Eden Bann Weir's local supply area. The local supply area for Eden Bann Weir at a particular time extends to the pond of the Fitzroy Barrage at that particular time.

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### 1.3 Minimum operating level of Eden Bann Weir and the Fitzroy Barrage

The minimum operating levels for Eden Bann Weir and the Fitzroy Barrage are given in Table 2.

**Table 2: Minimum operating level of storages**

Storage	Minimum operating level
Eden Bann Weir	EL 7.25 m AHD (4,800 ML)
Fitzroy Barrage	EL -1.2 m AHD (21,900 ML)

Water must not be released or supplied from Eden Bann Weir if the water level in Eden Bann Weir is below its minimum operating level, unless otherwise authorised by the chief executive.

### 1.4 Minimum level in waterholes

For a waterhole within the extent of the Lower Fitzroy Water Supply Scheme:

- Supplemented water should not be taken from a waterhole that is more than 0.5 metres below its cease to flow level; and
- The chief executive may authorise supplemented water to be supplied from a waterhole when the level is more than 0.5 metres below its cease to flow level.

## 2 Releases of water from storages

### 2.1 General rules

When determining releases from Eden Bann Weir, the Resource Operations Licence (ROL) holder must have regard to the following:

- Total volume of water ordered, and its distribution;
- The likely contribution of inflows from tributaries that could assist the supply of orders;
- The likely transmission and operating losses;
- The travel time for water delivery;
- The volume of releases required to maintain the nominal operating level in the Fitzroy Barrage and to maintain levels in waterholes;
- The volume of releases required to maintain the minimum operating level in the Fitzroy Barrage;
- The local supply level of Eden Bann Weir;
- The fishway management strategy; and
- The quality of water released from Eden Bann Weir.

The ROL holder may incorporate provisions in supply contracts for circumstances when the release capacity of Eden Bann Weir is insufficient to meet downstream demand.

### 2.2 Release rate rules

Water may be released from Eden Bann Weir at a rate up to the maximum discharge capacity of its outlet works.

Any reduction in the rate of a release must occur incrementally, such that the risk of fish stranding and bank slumping is minimised.

### **3 First post-winter flow management strategy**

#### **3.1 Lower Fitzroy first post-winter flow management strategy**

There is no first post-winter flow management strategy.

### **4 Seasonal base flow management strategy**

There is no seasonal base flow management strategy.

While no specific releases are required to be made by the ROL holder for the Lower Fitzroy Water Supply Scheme for seasonal base flows, seasonal base flows will be passed through Eden Bann Weir as a consequence of:

- The seasonal base flow management rules for the Fitzroy Barrage Water Supply Scheme which require the ROL holder for that scheme to pass seasonal base flows based on inflows to Eden Bann Weir; and
- The release rules for the Lower Fitzroy Water Supply Scheme which require the ROL holder for this scheme to maintain the water level in the Fitzroy Barrage by releases from Eden Bann Weir.

### **5 Fishway management strategy**

The ROL holder is authorised to operate the Eden Bann Weir fishlock when the level of the water in the weir is between EL 12.7 m AHD and EL 16.0 m AHD.

The ROL holder may operate the fishlock at other times provided the releases from the weir are no more than that required to:

- Supply water; and
- Maintain nominal operating levels in the Fitzroy Barrage.

### **6 Quality of water released from Eden Bann Weir**

The ROL holder must draw water from the level that optimises the quality of the water released (for example, dissolved oxygen concentration and the temperature in the release water optimised), to minimise the impact on the downstream water quality. If this level does not provide enough capacity for the required release, other levels must be used to give the required discharge.

### **7 Use of watercourses for distribution of water**

The ROL holder may use the following watercourses for the purposes of distribution of water:

- The Fitzroy River from the upstream limit of Eden Bann Weir to the upstream limit of the Fitzroy Barrage;
- The Fitzroy River from the upstream limit of the Fitzroy Barrage to the Fitzroy Barrage; and
- Sections of tributaries of the Fitzroy River that contain water from natural waterholes and infrastructure within the above sections of the Fitzroy River.

The ROL holder must not divert water to any watercourse other than those given above for distribution of water.

## **8 Riparian stock and domestic use**

Under Section 20(3) of the Water Act, an owner of land adjoining a watercourse, lake or spring may take water for domestic purposes and watering stock that would be normally depastured on the land without a water entitlement. In this section this is referred to as 'riparian entitlement water'.

This means that riparian entitlement water might also be taken through the same metered water facilities as supplemented water and some users might desire appropriate allowances be made for their riparian entitlement water use. The historical arrangements for accounting for individual riparian use taken through metered facilities will not apply following commencement of the ROP.

### **8.1 Rules for adjusting metered use for riparian entitlement water use**

This section provides arrangements to allow adjustments for riparian entitlement water metered use.

The ROL holder must enter into an arrangement with any water user who requests metered use adjustments for riparian entitlement water use taken through a metered facility. The ROL holder must supply details of the arrangements with each individual user to the chief executive within 5 business days of an agreement.

An arrangement must comply with the departmental guidelines for this purpose.

If the ROL holder and a water user are unable to reach agreement on an arrangement, the chief executive will decide the arrangement that will apply in that particular instance.

# Attachment 4.3F

## Lower Fitzroy Water Supply Scheme

### Water sharing rules

This attachment provides water sharing rules for:

- Announced allocations;
- Critical water supply;
- Transfer of water between water years; and
- Seasonal water assignment.

#### **1 Announced allocation**

##### **1.1 General rules**

The water year for the Lower Fitzroy Water Supply Scheme is from 1 July to 30 June in the following year.

##### **1.2 Calculation of announced allocation percentages**

###### **1.2.1 Medium priority water allocations**

The announced allocation percentage for medium priority water allocations must be 100%.

###### **1.2.2 High priority water allocations**

The announced allocation percentage for high priority water allocations must be 100%.

#### **2 Critical water supply water sharing rule**

##### **2.1 Critical water supply water sharing rules during the medium priority restriction period**

For the Lower Fitzroy and the Fitzroy Barrage water supply schemes, the announced allocation must be 100% for both medium and high priority water. This means that at times the total medium priority allocation cannot be supplied without increasing the risk to high priority supply security.

This risk during critical water supply periods is addressed by preventing the supply of medium priority entitlements when the Fitzroy Barrage is below specified levels. In addition, the maximum allowable distribution of supply of high priority entitlement will be constrained during those periods when medium priority supply is restricted.

### 2.1.1 Medium priority restriction rule

Medium priority water allocation supply through the Lower Fitzroy Water Supply Scheme must:

- Cease when the water level in the Fitzroy Barrage falls below EL 0.75 m AHD (40,500 ML); and
- Not recommence unless the water level in the Fitzroy Barrage has risen above EL 0.85 m AHD (41,600 ML).

A period when the water level in the Fitzroy Barrage has fallen below EL 0.75 m AHD and not re-risen to above EL 0.85 m AHD is a ‘medium priority restriction period’.

### 2.1.2 High priority water use during the medium priority restriction period

During a medium priority restriction period referred to in Section 2.1.1, the holder of a high priority water entitlement must not be supplied more than a specified maximum volume during a specified period as defined by the high priority demand pattern assigned to the entitlement. The high priority demand pattern for water allocations is referred to in Section 2.1.3.

An entitlement may also include a seasonal water assignment of a high priority allocation referred to in Section 4.

### 2.1.3 High priority demand pattern

The Resource Operations Licence (ROL) holder must assign to each high priority water allocation a ‘high priority demand pattern’.

The high priority demand pattern has effect only when a medium priority restriction period is in effect.

During a medium priority restriction period, the high priority demand pattern defines the maximum amount of water that may be supplied under a high priority water allocation for specified calendar periods (for example, on a specific date, or a specific week, or a specific month). Any specified period must not be greater than 1 month.

The combined total of the high priority demand patterns for high priority water allocations supplied by the Lower Fitzroy Water Supply Scheme must not exceed the limits in Table 1.

**Table 1: Maximum percentage of total high priority water allocation in Lower Fitzroy Water Supply Scheme that may be assigned to the specified period under the high priority demand pattern**

Period	Percentage of total high priority allocation
July to September	31
October to December	34
January to March	34
April to June	31

#### **2.1.4 Other restrictions**

During the medium priority restriction period, the ROL holder may implement further restrictions on the supply of high priority water, decided by the ROL holder in conjunction with high priority water allocation holders for the purpose of extending the period that water supplies are available, provided the objectives of the Water Resource Plan (WRP) are not compromised.

### **3 Transfer of water between water years**

The ROL holder may develop and apply scheme practices for forward draw of water entitlements in accordance with the principles and rules in this section.

#### **3.1 Principles for transfer of water between water years**

The ROL holder must have regard to the following principles in developing and applying scheme practices for forward draw of water entitlements.

Forward draw practices must not have an adverse impact on the objectives of the WRP.

Entitlements must not be:

- Carried over from the current water year to any future year, other than a minor carry over adjustment under Section 3.3; or
- Brought forward from a future water year to the current water year, other than from the next water year.

The volume of individual water allocation brought forward to the current water year must not exceed the announced allocation volume for the allocation at the start of the next water year.

#### **3.2 Rules for transfer of water between water years**

The following rule applies for the transfer of water between water years.

The total volume permitted to be brought forward to a water year must not exceed 2% of the total nominal volume.

#### **3.3 End of water year minor adjustments**

As an administrative arrangement to account for the timing of the end of water year metered use reading and for the operational convenience of water users, the ROL holder may, in addition to any forward draw permitted under Section 3.1 and Section 3.2, make minor carry over and forward draw adjustments to entitlements. For an individual, the adjustments must not exceed 2% of the individual entitlement at the end of the water year for which the meter reading applies, or 10 ML whichever is the lesser.

### **4 Seasonal water assignment rules**

Under Section 146B of the Water Act, the holder of a water allocation may enter into an arrangement for a seasonal assignment in relation to the allocation. However the allocation holder may enter into the arrangement only with the consent of the ROL holder. The ROL holder may give consent only if the assignment is allowed under the seasonal water assignment rules in the Resource Operations Plan (ROP).

High priority water supply during medium priority restriction periods (Refer to Section 2) must comply with specified high priority demand patterns. A seasonal water assignment of a high priority water allocation also requires an assigned demand pattern for the purposes of Section 2.

The ROL holder is required to report (refer Section 4.1.1 Attachment 4.3G) on trends in seasonal assignment and evaluate whether seasonal assignment practices are impacting on supply for individual water users or groups of water users or impacting on the objectives of the WRP.

Chapter 8 of the ROP allows the chief executive to initiate changes to the seasonal assignment rules if considered necessary to protect the objectives of the WRP.

#### **4.1 Principles for seasonal water assignment**

The ROL holder must have regard to the following principles in developing scheme practices and for making decisions for consent of seasonal water assignment arrangements.

The effects of an individual seasonal assignment and the cumulative effects of successive or repeated seasonal assignments must not:

- Impact adversely on the WRP objectives;
- Impact adversely on the availability of water to other water users in any part of the scheme; or
- Subject waterholes to an increased potential for environmental harm.

Water with a location zone Fitzroy A must continue to be supplied in zone Fitzroy A.

Water with a location of either Fitzroy B or Fitzroy C must continue to be supplied in either zone Fitzroy B or Fitzroy C.

#### **4.2 Rules for seasonal water assignment**

The following rules apply in developing scheme practices and for making decisions for consent of seasonal water assignment arrangements.

Water supplied under a seasonal water assignment may be used for any purpose.

Seasonal assignment of a water allocation with a specified purpose of ‘distribution loss’ is not permitted.

A high priority demand pattern must be assigned to a seasonal water assignment of a high priority water allocation, the ‘original entitlement’, for the purposes of Section 2. An adjusted high priority demand pattern must be assigned for the ‘original allocation’ to account for the seasonal assignment. The combined demand patterns for the resultant entitlements must not exceed the demand pattern for the original entitlement.

# Attachment 4.3G

## Lower Fitzroy Water Supply Scheme Monitoring program

### 1 Water quantity

#### 1.1 Height and stream flow

The Resource Operations Licence (ROL) holder must record height and flow data in accordance with Table 1.

**Table 1: Locations in the Fitzroy River where height and flow data is required**

Location	Height data	Flow data
Eden Bann Weir inflow		✓
Eden Bann Weir storage	✓	
Eden Bann Weir outflow		✓

It is preferred that continuous time series data be collected. However, the chief executive may approve the collection of data in a format and standard other than for continuous time series data.

The methodology for determining height and flow data, including data format and standard, must be approved by the chief executive.

#### 1.1a Operating level of storages

The ROL holder must record under Section 1 of Attachment 4.3E:

- The daily storage height for Eden Bann Weir and the Fitzroy Barrage; and
- The daily storage outflow for Eden Bann Weir.

For the purposes of this section:

- The methodology for determining the daily storage height and daily storage outflow must be approved by the chief executive; and
- The data must be real time information upon which operational decisions were based – not data that has subsequently changed for example through a verification process.

#### 1.2 Releases from storages

The ROL holder must record details of the basis for each release decision for Eden Bann Weir under the rules for releases of water from storages given in Section 2 of Attachment 4.3E, including:

- The general rules for releases;
- The release rate rules;
- The fishway management strategy; and
- The quality of water released from Eden Bann Weir.

The ROL holder must record the time, date and release rate each time a release rate is

changed for Eden Bann Weir. In addition, the ROL holder must record the level from which the release is made and the basis of the decision for determining that level.

The ROL holder must record the daily volume released (through the outlet/s and fishway) from Eden Bann Weir.

### **1.3 Announced allocations**

The ROL holder must record details of announced allocation determinations, referred to in Section 1 of Attachment 4.3F.

### **1.4 Restrictions on the taking of medium priority water during the medium priority restriction period**

The ROL holder must record details of any restrictions on the taking of medium priority water referred to in Section 2.1.1 of Attachment 4.3F, including:

- The date of the restriction;
- The nature of the restriction; and
- The basis for the determination of the restriction.

### **1.5 Restrictions on the taking of high priority water during medium priority restriction period**

The ROL holder must record details of any restrictions on the taking of high priority water referred to in Section 2.1.2 and Section 2.1.3 of Attachment 4.3F, including:

- The date of the restriction;
- The nature of the restriction; and
- The basis for the determination of the restriction.

### **1.6 Transfer of water between water years**

The ROL holder must record details of the transfer of water between water years referred to in Section 3 of Attachment 4.3F, including:

- The basis of each decision to adjust the amount of water an individual may be supplied in a water year and the volume of the adjustment;
- The basis of each decision to approve a forward draw for each individual water user; and
- The volume of water brought forward from the next water year to a water year by priority group.

### **1.7 Seasonal water assignment**

The ROL holder must record details of individual seasonal water assignment arrangements, including assigned high priority demand patterns.

## 1.8 Water taken by water users

The ROL holder must record the volume of water taken by water users as follows:

- For each individual water user specified for each zone:
  - The total volume of supplemented water taken each quarter;
  - The total volume of supplemented water entitled to be taken at any time;
  - The basis for determining the total volume of supplemented water entitled to be taken at any time, including any adjustments for approved seasonal water assignments and transfers into or out of the water years;
  - The total volume of metered water taken as ‘riparian entitlement water’; and
  - The zone.

Note: Water taken under a water allocation with purpose ‘distribution loss’ should be recorded as an individual user.

## 1.9 Water diversions

The ROL holder must record the daily volume of water diverted to Stanwell pipeline.

The methodology for determining the volume must be approved by the chief executive.

## 1.10 Waterholes

The ROL holder must:

- Establish a unique identifier for any waterhole from which supplemented water is taken that is drawn down more than 0.6 metres below cease to flow level; and
- Record the water level in the waterhole each day that supplemented water is taken from the waterhole and the water level is more than 0.6 metres below the cease to flow level.

## 1.11 High priority demand pattern

The ROL holder must record details of individual high priority demand patterns, referred to in Section 2.1.3 of Attachment 4.3F.

## 2 Impact of storage operation on aquatic ecosystems

The ROL holder must undertake the following to establish any impacts on aquatic ecosystems that are potentially related to the operation of storages.

### Section 2.1 Bank condition

The ROL holder must inspect banks for evidence of collapse and/or erosion within the ponded area and downstream of Eden Bann Weir following instances of rapid water level changes or large flows through Eden Bann Weir, or other occasions when collapse and/or erosion of banks may be likely. The distance downstream is the distance of influence of storage operations.

Any instances of bank slumping or erosion observed must be investigated to determine if the instability was associated with the nature or operation of the infrastructure.

## **2.2 Water Quality**

The ROL holder must monitor water quality in relation to relevant infrastructure in accordance with the department's Water Monitoring Data Collection Standard.

## **2.3 This section not required**

## **2.4 Fish stranding**

The ROL holder must investigate instances of fish stranding downstream of storages to determine if the fish stranding is associated with operation of infrastructure. The distance downstream of storages is the distance of influence of storage operations.

## **3 Reporting**

There are four levels of reporting for ROL holders:

- Quarterly report for the previous quarter;
- Annual report for the previous water year;
- Operational reports; and
- Emergency reports.

### **3.1 Quarterly report**

The ROL holder must transfer the following data to the chief executive:

- Water quantity – all records referred to in Section 1.1a;
- Release from storages –where applicable, the level from which releases were made referred to in Section 1.2;
- Waterholes – all records referred to in Section 1.10;
- A summary of bank condition monitoring and incidences of slumping referred to in Section 2.1;
- Water quality – all records referred to in Section 2.2; and
- Seasonal water assignments – all records referred to in section 1.7.

### **3.2 Annual report**

The annual report must include, but not be limited to, discussion and recommendations with regard to the monitoring results for the previous water year.

#### **3.2.1 Water monitoring**

A summary of the implementation of the rules for releases from storages, other than for fishway management and quality of water released from Eden Bann Weir.

A summary of the implementation of the fishway management strategy for Eden Bann Weir, including:

- Overview of strategy implementation;
- Periods of operation of the fishway; and
- Total period of operation of the fishway.

A summary of the implementation of the quality of water released from Eden Bann Weir rule, including:

- Overview of rule implementation;
- Basis of the decisions on the level from which to make releases; and
- Periods of release from each offtake level.

A summary of waterhole management including:

- Overview of waterhole management implementation; and
- Periods when the water level in a waterhole was more than 0.6 metres below its cease to flow level for more than 2 consecutive days and supplemented water was being taken.

A summary of announced allocation determinations, including:

- An evaluation of the announced allocation procedures and outcomes.

A summary of restrictions on the taking of medium priority water, including:

- An evaluation of the restriction arrangements and outcomes; and
- The date and nature of each restriction decision.

A summary of restrictions on the taking of high priority water, including:

- An evaluation of the restriction arrangements and outcomes; and
- The date and nature of each restriction decision.

A summary of the transfer of water between water years including:

- An evaluation of the rules and outcomes;
- The total volume of water brought forward by priority group to the water year from the next water year; and
- The total volume of water brought forward by priority group from the water year to the previous water year.

A summary of the volumes of water taken by water users, specified by zone, including:

- The total volume of supplemented water taken;
- The total volume of supplemented water entitled to be taken;
- The basis for determining the total volume of supplemented water entitled to be taken, including any adjustments for approved seasonal water assignments and transfers into or out of the water years;
- The announced allocation volume at the end of the water year;
- The total volume of supplemented water taken during a medium priority restriction period; and
- The total volume of metered water taken as ‘riparian entitlement water’.

A summary of seasonal water assignment arrangements, including:

- An evaluation of the seasonal water assignment rules and outcomes, including:
  - An evaluation of any circumstances of supply difficulties when the supply difficulties were linked to seasonal assignment practices; and
  - Identification of and reporting on any trends in seasonal water assignment;
- The total number of seasonal water assignment arrangements; and
- The total volume of water seasonally assigned.

Details of changes to Eden Bann Weir or its operation that may have an impact on the

implementation of the ROP.

Details of new monitoring devices such as equipment to measure stream flow.

### **3.2.2 Impact of storage operation on aquatic ecosystems**

#### **Bank condition and fish stranding**

A summary of bank condition and fish stranding monitoring including:

- Results of investigations of bank slumping or erosion identified in the ponded area of and downstream of Eden Bann Weir;
- Results of any investigations of fish stranding downstream of Eden Bann Weir; and
- Changes to operation of storages to reduce instances of bank slumping, erosion or fish stranding.

#### **Water quality**

Discussion and assessment of the following water quality issues:

- Thermal and chemical stratification in Eden Bann Weir;
- Water quality in Eden Bann Weir;
- Contribution of the storage and its management to the quality of water released;
- Cumulative effect of successive storages on water quality; and
- Cyanobacteria population changes in response to stratification in Eden Bann Weir.

### **3.3 Operational reports**

The ROL holder must notify the chief executive within 1 business day of becoming aware of the following operational incidents:

- Noncompliance by the ROL holder with the rules given in the ROP;
- A decision relating to any restrictions on the taking of medium priority water;
- A decision relating to any restrictions on the taking of high priority water; and
- Instances of fish stranding downstream of Eden Bann Weir.

The ROL holder must provide an operational report to the chief executive for the following operational incidents:

- Noncompliance with the rules in the ROP; and
- Instances of fish stranding downstream of Eden Bann Weir.

The report must provide details of the incident, conditions under which the incident occurred and any responses or activities carried out as a result of the incident.

The ROL holder must provide a report to the chief executive within 5 business days of the start of the water year detailing the high priority demand patterns assigned to each high priority water allocation referred to in Section 2.1.3 of Attachment 4.3F. The report should include:

- Water allocation number;
- Holder of water allocation; and
- High priority demand pattern.

The ROL holder must provide a report to the chief executive within 5 business days of a change to the high priority demand pattern associated with a high priority water allocation, or the establishment of a new high priority water allocation. The report should include:

- Water allocation number;
- Holder of water allocation; and
- High priority demand pattern.

### **3.4 Emergency report**

An emergency for the purpose of this ROP includes an occurrence, which by the nature of its severity, extent or timing might be regarded as an emergency (for example, contamination of water supply, structural damage to infrastructure or a danger to human health).

For any emergency, the ROL holder must:

- Notify the chief executive immediately; and
- Provide a report to the chief executive on the emergency including details of the emergency, conditions under which the emergency occurred, any responses or activities carried out as a result of the emergency and any impacts on the ROP.

# Attachment 4.3H

## Lower Fitzroy Water Supply Scheme

### Water allocation change rules

#### 1 Permitted changes

The permitted changes apply only to water allocations with purpose ‘agriculture’ or ‘any’

Application for the following changes to a water allocation will be approved. On approval, a change certificate will be issued by the chief executive, which may be lodged with the registrar of water allocations.

##### 1.1 Location

A change to the location of a water allocation from zone Fitzroy B to Fitzroy C, or from Fitzroy C to Fitzroy B.

For the permitted changes to the location of a water allocation given in this section, conversion factors do not apply to the volume for the water allocation – that is, the volume for the water allocation will be the same before and after the change of location. However, this does not preclude consideration of conversion factors to enable changes under Section 3.

##### 1.2 Priority

A change to the priority of a water allocation from medium to high or from high to medium, provided:

- The conversion rate is 1.5 ML of medium priority water converts to 1 ML of high priority water allocation;
- The maximum volume of high priority water allocation supplied through the scheme is 25,800 ML; and
- The minimum volume of high priority water allocation supplied through the scheme is 25,200 ML.

##### 1.3 Purpose

A change to the purpose of a water allocation from ‘any’ to ‘agriculture’ or from ‘agriculture’ to ‘any’.

##### 1.4 Amalgamation or subdivision

A change to subdivide a water allocation provided:

- The sum of the nominal volumes of the new water allocations is equal to the nominal volume of the water allocation that is being subdivided; and
- The location and priority group of the new water allocations is the same as that of the water allocation that is being subdivided.

A change to amalgamate water allocations provided:

- The nominal volume of the new water allocation is equal to the sum of the nominal volumes of the water allocations that are being amalgamated;
- The location and priority group of the water allocations that are being amalgamated are the same; and
- The location and priority group for the new water allocation is the same as that of the water allocations that are being amalgamated.

## **2 Prohibited changes**

The following changes are prohibited changes:

### **2.1 Location**

A change to a location that is not within the extent of the Dawson Valley, Nogoia Mackenzie, Lower Fitzroy or Fitzroy Barrage water supply schemes.

### **2.2 Priority group**

A change to a priority group that is not medium or high.

### **2.3 Purpose**

A change to a purpose that is not 'agriculture' or 'any'.

### **2.4 Volume**

A change to the volume that is not a consequence of a change to another attribute of a water allocation.

### **2.5 Other**

A change that requires an amendment to this ROP.

## **3 Application for change under Section 130 of the Water Act**

If a water allocation holder wishes to apply for a change to a water allocation that is not permitted under Section 1, and not prohibited under Section 2, an application may be made under Section 130 of the Water Act for the change.

The chief executive will deal with applications made under Section 130 of the Water Act, in accordance with the Water Act. That process is as follows:

- Notice of the application is published in local newspapers. The notice includes information about where the application can be inspected and invites submissions from the public on the application;
- The chief executive determines if the application should be approved having regard to the potential impact on a range of interests including other entitlement holders and aquatic ecosystems;
- If the chief executive approves the application, the chief executive will issue a change certificate that may be lodged with the registrar of water allocations; and
- If the chief executive refuses the application, the Water Act provides for an appeal process.

### **3.1 Purpose**

Any application to change the purpose of a water allocation from 'distribution loss' to 'any' must be supported by information to substantiate to the satisfaction of the chief executive an efficiency gain within the channel system. An application may be made for efficiency gains made since the issue of the interim resource operations licence for the Lower Fitzroy Water Supply Scheme in November 2000.

### **4 Registration of change**

If an application to change a water allocation is approved, the chief executive will issue a change certificate. The water allocation holder may lodge the change certificate with the registrar of water allocations who will change the water allocation on the water allocation register.

However, the registrar will not register the change until a supply contract has been entered into between the water allocation holder and the Resource Operations Licence holder for supply of the changed water allocation.

# Attachment 4.3I

## Lower Fitzroy Water Supply Scheme

### Amending critical water supply management arrangements

#### 1 Critical water supply management arrangements

##### 1.3 Introduction

The Resource Operations Plan (ROP) rules for infrastructure operation and environmental management (refer Attachment 4.3E) and for water sharing (refer Attachment 4.3F) include arrangements for dealing with periods of low water availability. These arrangements are referred to as the critical water supply management arrangements.

The critical water supply management arrangements initially specified in the ROP are based on broad-scale basin-wide hydrologic modelling. These initial arrangements may need to be refined and further developed to ensure the arrangements appropriately deal with local issues and circumstances particular to the Lower Fitzroy Water Supply Scheme.

Over time the arrangements can also be amended to allow adaptation to changing circumstances and refinement through improved knowledge about the operation of the system at times of low water supply.

For example, the critical water supply water sharing rules given in Attachment 4.3F deal with situations when supply to medium priority water allocations must cease to secure high priority water allocations. The initial arrangements for sharing the available supplies may warrant ongoing development to secure supplies for essential water needs.

Variations to the rules associated with the minimum operating levels for storages and to the waterhole drawdown limits given in Attachment 4.3E may also be considered to accommodate local water user and environmental needs under particular circumstances.

##### 1.2 Criteria for critical water supply management arrangements

Critical water supply management arrangements must have regard to the following:

- Provision of water for essential water needs must have first priority;
- The objectives of the Water Resource Plan;
- The effects on water operation security performance;
- The effects on natural ecosystems and the physical integrity of the watercourse; and
- The public interest.

For the purpose of the critical water supply management arrangements, essential water needs must include that part of a town water supply required for essential services including drinking water and sanitation but excluding lawns and gardens. The Resource Operations Licence (ROL) holder in conjunction with water allocation holders may establish additional essential purposes.

### **1.3 Initial review of the critical water supply management arrangements**

The ROL holder must undertake an initial review of the suitability of the critical water supply management arrangements. A report on the initial review must be provided to the chief executive within 12 months of the commencement of the ROP.

The initial review must include recommendations on whether amendments to the arrangements should be considered.

### **1.4 Proposals to amend the critical water supply management arrangements**

The ROL holder may submit a proposal to amend the critical water supply management arrangements at any time.

The chief executive may require the ROL holder to prepare a proposal to amend the critical water supply management arrangements at any time.

If the initial review of the critical water supply management arrangements under Section 1.3 indicates changes to the arrangements should be considered, the chief executive may require the ROL holder to prepare a proposal to amend the critical water supply management arrangements within a timeframe set by the chief executive.

A proposal to amend the critical water supply management arrangements must include:

- Proposed changes to the rules for infrastructure operation and environmental management (refer Attachment 4.3E) and for water sharing (refer Attachment 4.3F);
- An assessment of the effects of the proposal on natural ecosystems and the physical integrity of the watercourse and the proposed environmental monitoring requirements;
- Details of consultation with stakeholders including water users, local communities and environmental interests; and
- Any other information that will assist the chief executive to decide the proposal.

### **1.5 Amending the critical water supply management arrangements**

The chief executive may amend the rules for infrastructure operation and environmental management (refer Attachment 4.3E) and for water sharing (refer Attachment 4.3F) that apply during periods of low water availability. The chief executive will consider the following in deciding to amend the rules:

- Any proposal to amend the critical water supply management arrangements submitted by the ROL holder; and
- The criteria given in Section 1.2.

### **1.6 Evaluation of critical water supply management arrangements**

The ROL holder must annually evaluate the critical water supply management arrangements in regard to their suitability for periods of low water availability.