



New South Wales

Water Sharing Plan for the Hunter Regulated River Water Source 2016

under the

Water Management Act 2000

I, the Minister for Lands and Water, in pursuance of section 50 of the *Water Management Act 2000*, do, by this Order, make the following Minister's Plan for the Hunter Regulated River Water Source.

Dated this 29th day of June 2016.

NIALL BLAIR, MLC

Minister for Lands and Water

Explanatory note

This Order is made under section 50 of the *Water Management Act 2000*.

The object of this Order is to make the *Water Sharing Plan for the Hunter Regulated River Water Source 2016*. The concurrence of the Minister for the Environment was obtained prior to the making of this Order.

Contents

Part 1	Introduction	4
Part 2	Vision, objectives, strategies and performance indicators	7
Part 3	Bulk access regime.....	12
Part 4	Planned environmental water provisions	14
Part 5	Requirements for water	16
	Division 1 General	16
	Division 2 Requirements for water for basic landholder rights	16
	Division 3 Requirements for water for extraction under access licences	17
Part 6	System operation rules	20
Part 7	Limits to the availability of water	28
	Division 1 Long-term average annual extraction limit	28
	Division 2 Available water determinations	30
Part 8	Rules for granting of access licences	36
Part 9	Rules for managing access licences	38
	Division 1 Water allocation account management rules	38
	Division 2 Daily access rules	44
Part 10	Access licence dealing rules.....	52
Part 11	Mandatory conditions.....	57
	Division 1 General	57
	Division 2 Access licences	57
	Division 3 Water supply work approvals	59
Part 12	Amendment of this Plan.....	63
Dictionary	66
Schedule 1	Management zones, flow reference points and trading zones	67
Appendix 1	Rivers and lakes in the Hunter Regulated River Water Source.....	69
Appendix 2	Overview map of the Hunter Regulated River	71

Appendix 3 Overview map of the management zones in the Hunter Regulated River..... 1

Appendix 4 Overview map of the trading zones in the Hunter Regulated River..... 2

Appendix 5 Office..... 3

Water Sharing Plan for the Hunter Regulated River Water Source 2016

Part 1 Introduction

Note. Part 12 allows for amendments to be made to this Part.

1 Name of Plan

This Plan is the *Water Sharing Plan for the Hunter Regulated River Water Source 2016 (this Plan)*.

2 Nature and status of Plan

- (1) This Plan is made under section 50 of the *Water Management Act 2000 (the Act)*.
- (2) This Plan is a plan for water sharing and generally deals with the matters set out in sections 20 and 21 of the Act, as well as other sections of the Act.
- (3) This Plan replaces the *Water Sharing Plan for the Hunter Regulated River Water Source 2003*.

Note. Where a provision of this Plan is made under another section of the Act, the section is referred to in the notes to this Plan.

3 Commencement

This Plan commences on 1 July 2016.

Notes.

- 1 In accordance with section 43 of the Act, this Plan will have effect for 10 years from 1 July 2016.
- 2 The Minister may extend this Plan for a further period of 10 years after it is due to expire, in accordance with section 43A of the Act.

4 Application of Plan

- (1) This Plan applies to the water source known as the Hunter Regulated River Water Source (*this water source*) within the Hunter Water Management Area.

Note. The Hunter Water Management Area was constituted by Ministerial Order made under section 11 of the Act and published in the NSW Government Gazette No 180 on 23 November 2001 at page 9389.

- (2) Subject to subclause (3), this water source includes:
 - (a) all water between the bed and banks of all rivers, from Glenbawn Dam water storage (*Glenbawn Dam*) at a water level that is equivalent to 276.25 metres Australian Height Datum downstream to the estuary of the Hunter River, and from Glennies Creek Dam water storage (*Glennies Creek Dam*) at a water level that is

equivalent to 186 metres Australian Height Datum downstream to the junction with the Hunter River, which have been declared by the Minister to be regulated rivers, and

Note. *Water storage* is defined in the Dictionary.

- (b) all water contained within the unconsolidated alluvial sediments underlying the waterfront land of all rivers referred to in paragraph (a).

Note. *Alluvial sediments* is defined in the Dictionary.

Notes.

- 1 A regulated river is a river that has been declared by the Minister, by order published in the New South Wales Government Gazette, to be a regulated river.
 - 2 Rivers declared to be regulated rivers by the regulated river order as at the commencement of this Plan are listed in Appendix 1.
 - 3 An overview map of the Hunter Regulated River is shown in Appendix 2.
- (3) This water source does not include water contained in the unconsolidated alluvial sediments within one metre of water supply works taking water pursuant to access licences that have arisen as a result of the conversion of Part 5 *Water Act 1912* entitlements.

5 Management zones

- (1) For the purposes of this Plan, this water source is divided into the following management zones:

- (a) Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction),
- (b) Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction),
- (c) Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction),
- (d) Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River),
- (e) Management Zone 3A (Glennies Creek).

Note. The term *Management zone* is defined in the Dictionary.

- (2) The extent of management zones specified in subclause (1) is defined in clause 1 of Schedule 1.

Note. An overview map of the Hunter Regulated River showing the management zones is shown in Appendix 3.

6 Understanding the rules in this Plan

This Plan contains various rules. Where appropriate, the rules specified in this Plan are given effect by the mandatory conditions for access licences and water supply work approvals contained in Part 11 of this Plan.

7 Interpretation

- (1) Words and expressions that are defined in the Dictionary to this Plan have the meaning set out in the Dictionary.
- (2) Unless otherwise defined in this Plan, words and expressions that are defined in the Act or in the regulations made under the Act have the same meaning in this Plan.
- (3) Unless otherwise specified in this Plan, a clause that applies to a category of access licence also applies to any subcategories of that category of access licence.
- (4) The Dictionary and Schedules to this Plan form part of this Plan.
- (5) Notes in the text of this Plan do not form part of this Plan.
- (6) Appendices to this Plan do not form part of this Plan.
- (7) A reference to a major utility access licence in this Plan does not include a major utility (Barnard) access licence.

Part 2 Vision, objectives, strategies and performance indicators

Note. This Part is made in accordance with section 35 (1) of the Act.

8 Vision statement

The vision for this Plan is to provide for:

- (a) the health and enhancement of this water source and its water-dependent ecosystems, and
- (b) the productive and economically efficient use of water resources, and
- (c) the social and cultural benefits to urban and rural communities that result from the sustainable and efficient use of water.

9 Acknowledgment

Respect is paid to the traditional owners of this country, who are acknowledged as the first natural resource managers within this water source.

10 Environmental objectives, strategies and performance indicators

(1) The environmental objectives of this Plan are to:

- (a) maintain and enhance the ecological condition of this water source and its dependent ecosystems (instream, riparian, alluvial and floodplain ecosystems) over the long term, and

Note. The ecological condition of this water source includes high ecological value aquatic ecosystems and key ecosystem functions.

- (b) contribute to the maintenance and enhancement of downstream processes and habitats (including in downstream water sources), and
- (c) contribute to the maintenance and enhancement of the water quality of this water source and downstream water sources.

(2) The environmental strategies of this Plan are to:

- (a) manage extraction within the long-term average annual extraction limit thereby maintaining all water in excess of the long-term average annual extraction limit for the environment, and

Note. The application of the long-term average annual extraction limit and the assessment and compliance rules in Division 1 of Part 7 of this Plan reserve all water remaining above the long-term average annual extraction limit for the environment.

- (b) mitigate alterations to natural flow regimes in this water source, and
-

Notes.

- 1 The rules in clause 28 of this Plan mitigate alterations to natural flow regimes in this water source by ensuring that a seasonally adjusted minimum flow is maintained at the most downstream gauge to this water source.
- 2 The rules in clauses 56 and 57 of this Plan mitigate alterations to natural flow regimes in this water source by ensuring daily extraction of water from uncontrolled flows is limited to approximately 50% and annual extraction of water from uncontrolled flows is limited to 30%.

- (c) maintain hydrological connectivity between this water source and the alluvial sediments and estuary connected to this water source, and

Note. The rules in this Plan maintain the hydrological connectivity between this water source and the alluvial sediments and estuary connected to this water source by:

- (a) ensuring a seasonally adjusted minimum flow is maintained in clause 28 of this Plan, and
- (b) ensuring the daily extraction of water from uncontrolled flows is limited to 50% in clause 56 and 57, and
- (c) limiting the annual extraction of water from uncontrolled flows to 30% in clauses 56 and 57 of this Plan.

- (d) contribute to the management of critical environmental events, such as algal blooms and chemical spills, support environmental processes such as fish migration and support ecosystem functions such as stony bed scouring, and

Note. The rules in clause 29 of this Plan ensure that an environmental water allowance is maintained and list the purposes, including assisting in the management of critical environmental events, for which water can be released. The rules in clauses 56 and 57 of this Plan also support ecosystem functioning by protecting uncontrolled flows from supplementary water access for the environment for the first 12 hours of that event.

- (e) minimise the impact of water delivery rules on the environment.

Note. The rules in clauses 31 and 34 of this Plan ensure that the impact on the environment from the releases from Glenbawn Dam and Glennies Creek Dam and the delivery of water orders are minimised.

- (3) The environmental performance indicator for this Plan is the extent to which the rules and strategies in this Plan have contributed to meeting the environmental objectives in subclause (1) over its term.

- (4) The performance indicator in subclause (3) will be assessed by:

- (a) comparing the ecological condition of this water source at the commencement of this Plan and at the expiration of this Plan by measuring the change in factors including:

- (i) condition indicators in this water source, which may include changes in:

- (A) the diversity of ecological communities, reproductive success of key species and the habitat or recorded range of fish, macroinvertebrates or vegetation, or

- (B) geomorphology, including evidence of fine sediment scour and increased instream habitat diversity, or
 - (C) the river condition index of key river reaches, and
- (ii) the hydrological regime for this water source, including low, moderate and high flows, and
- (b) considering the extent to which changes in the ecological condition of this water source can be attributed to the rules and strategies in this Plan.

11 Economic objectives, strategies and performance indicators

- (1) The economic objectives of this Plan are to:
 - (a) support viable and sustainable water-dependent industries over the long term, and
 - (b) encourage economic efficiency in the management and use of water.
- (2) The economic strategies of this Plan are to:
 - (a) provide a stable and predictable framework for sharing water among individual licence holders and different categories of access licences, and

Note. The individual account management rules in Division 1 of Part 9 of this Plan provide certainty in how water will be shared between individual access licence holders and different categories of access licences.
 - (b) provide flexibility for licence holders to use water in a way that reflects the reliability characteristics of their access licence category, and

Note. The individual account management rules in Division 1 of Part 9 of this Plan provide flexibility that reflects the characteristics of the licence category.
 - (c) establish a long-term average annual extraction limit and rules for managing extractions within that extraction limit that recognises different climatic conditions in different years, and

Note. The application of the long-term average annual extraction limit and the assessment and compliance rules in Part 7 of this Plan manage extractions to different climatic conditions in different years.
 - (d) provide opportunities for market-based trading of water within environmental and system constraints.

Note. The rules in Part 10 of this Plan permit a variety of dealings within environmental and system constraints, including permanent trade of water access licences, trade of water allocations and ability to move a water access licence from one location to another.
- (3) The economic performance indicator for this Plan is the extent to which the rules and strategies in this Plan have contributed to meeting the economic objectives in subclause (1) over its term.

- (4) The performance indicator in subclause (3) will be assessed by:
- (a) comparing economic benefits of water extraction and use at the commencement of this Plan and at the expiration of this Plan by measuring factors including:
 - (i) the change in regional gross margins versus annual total extractions based on benchmarks established at the commencement of this Plan, and
 - (ii) the movement of water to higher value uses, and
 - (iii) the change in unit price of water that is subject to a dealing, and
 - (iv) the annual total volume of access licence share component that is subject to a dealing, and
 - (b) considering the extent to which changes in the economic benefits of water extraction and use specified in paragraph (a) can be attributed to the rules and strategies in this Plan.

12 Social and cultural objectives, strategies and performance indicators

- (1) The social and cultural objectives of this Plan are to:
- (a) foster the social and cultural benefits of the sustainable and efficient use of water, and
 - (b) recognise spiritual, social, customary and economic values of water to Aboriginal people.
- (2) The social and cultural strategies of this Plan are to:
- (a) provide water for basic human needs including domestic and stock purposes, and
Note. The rules for the maintenance of water supply in Part 6 of this Plan ensure that water is available for basic human needs including domestic and stock purposes.
 - (b) provide opportunities for Aboriginal people to access water, and
Note. The rules in Part 8 of this Plan provide opportunities for Aboriginal people to access water by allowing for the granting of an access licence of the subcategory “Aboriginal cultural”.
 - (c) support water-dependent Aboriginal cultural values within this water source and in downstream water sources, and
Note. The rules in clause 29 of this Plan ensure that an environmental water allowance is maintained and lists supporting environmental assets or functions that have been identified as water-dependent Aboriginal cultural values as a purpose for which this water can be released.
 - (d) minimise the impact of water delivery on the community.
Note. The rules for water delivery and channel capacity constraints, priority of extractions
-

for access licences, rates of change to storage releases, supply of orders when remaining allocations are low and dam operation during floods and spills in Part 6 of this Plan minimise the impact of water delivery on the community.

- (3) The social and cultural performance indicator for this Plan is the extent to which the rules and strategies in this Plan have contributed to meeting the social and cultural objectives in subclause (1) over its term.
- (4) The performance indicator in subclause (3) will be assessed by:
 - (a) comparing the social and cultural uses of water at the commencement of this Plan and at the expiration of this Plan by measuring factors including:
 - (i) the extent to which domestic and stock rights have been met, and
 - (ii) the extent to which native title rights have been met, and
 - (iii) the extent of recognition of spiritual, social and customary values of water to Aboriginal people, and
 - (iv) the extent to which major utility and local utility access licence requirements have been met, and
 - (b) considering the extent to which changes in the social and cultural use of water can be attributed to the rules and strategies in this Plan.

Part 3 Bulk access regime

13 Bulk access regime

- (1) This Plan establishes a bulk access regime for the extraction of water under access licences in this water source, having regard to:
 - (a) the environmental water rules established under Part 4 of this Plan, and
 - (b) the requirements for water for basic landholder rights identified in Division 2 of Part 5 of this Plan, and
 - (c) the requirements for water for extraction under access licences identified in Division 3 of Part 5 of this Plan, and
 - (d) the access licence dealing rules established under Part 10 of this Plan.
- (2) The bulk access regime for this water source:
 - (a) recognises and is consistent with the limits to the availability of water set in relation to this water source contained in Division 1 of Part 7 of this Plan, and
 - (b) establishes rules, according to which access licences are to be granted and managed, contained in Parts 8 and 9 of this Plan and available water determinations to be made contained in Division 2 of Part 7 of this Plan, and
 - (c) recognises the effect of climatic variability on the availability of water as described in clause 14, and
 - (d) establishes rules with respect to the priorities according to which water allocations are to be adjusted as a consequence of any reduction in the availability of water due to an increase in average annual extraction against the long-term average annual extraction limit contained in Division 1 of Part 7 of this Plan, and
 - (e) contains provisions with respect to the conditions that must be imposed as mandatory conditions on access licences contained in Division 2 of Part 11 of this Plan, and
 - (f) recognises and is consistent with the water management principles set out in section 5 of the Act.

14 Climatic variability

This Plan recognises the effects of climatic variability on river flow and groundwater levels in this water source by provisions that:

- (a) manage the sharing of water in this water source within the limits of water availability on a long-term average annual basis and the priorities according to which water allocations are to be adjusted as a consequence of any reduction in the availability of water due to an increase in the average annual extraction against the long-term average annual extraction limit, contained in Division 1 of Part 7 of this Plan, and
- (b) manage the sharing of water between categories of access licences on an annual basis in this water source, through the available water determination rules as specified in Division 2 of Part 7 of this Plan.

Note. Other statutory tools are available to manage for climatic variability within a water source, for example, temporary water restrictions under section 324 of the Act.

Part 4 Planned environmental water provisions

Note. This Part is made in accordance with sections 8, 8A and 20 of the Act.

15 General

This Part contains environmental water rules for the commitment, identification, establishment and maintenance of planned environmental water in this water source.

Note. In accordance with the Act, *planned environmental water* is water that is committed by management plans for fundamental ecosystem health or other specified environmental purposes, either generally or at specified times or in specified circumstances and that cannot, to the extent committed, be taken or used for any other purpose.

16 Commitment and identification of planned environmental water

Water is committed and identified as planned environmental water in this water source in the following ways:

- (a) by reference to the commitment of the physical presence of water in this water source,
- (b) by reference to the long-term average annual commitment of water as planned environmental water,
- (c) by reference to the water that is not committed after the commitments to basic landholder rights and for sharing and extraction under any other rights have been met.

17 Establishment and maintenance of planned environmental water

(1) Planned environmental water is established in this water source as follows:

- (a) it is the physical presence of water in this water source that results from:
 - (i) the environmental flow rules for Glenbawn Dam and Glennies Creek Dam as specified in clause 28, and
 - (ii) the environmental water allowance and release rules for environmental purposes downstream of Glenbawn Dam and Glennies Creek Dam, as specified in clause 29, and
 - (iii) the limitations on access to uncontrolled flows for regulated river (high security) access licences and regulated river (general security) access licences as specified in clause 56, and

Note. *Uncontrolled flows* is defined in the Dictionary.

- (iv) the limitations on access to uncontrolled flows for supplementary water access licences as specified in clause 57,
 - (b) it is the long-term average annual commitment of water as planned environmental water in this water source that results from compliance with the long-term average annual extraction limit as specified in clause 42,
Note. By limiting long-term average annual extractions to 217,000 ML/year this Plan ensures that approximately 80% of long-term average annual flow in this water source (estimated to be 1,040,000 ML/year) will be preserved and will contribute to the maintenance of basic ecosystem health.
 - (c) it is the water remaining in this water source after water has been taken pursuant to basic landholder rights and access licences, in accordance with the rules specified in Parts 7 and 9 of this Plan.
- (2) The planned environmental water established under subclause (1) (a) is maintained in this water source by the:
- (a) environmental flow rules from Glenbawn Dam and Glennies Creek Dam as specified in clause 28, and
 - (b) environmental water allowance and release rules in clause 29, and
 - (c) limitations on access to uncontrolled flows for regulated river (high security) access licences and regulated river (general security) access licences as specified in clause 56, and
 - (d) limitations on access to uncontrolled flows for supplementary water access licences as specified in clause 57.
- (3) The planned environmental water established under subclause (1) (b) is maintained in this water source by the rules specified in Division 1 of Part 7 of this Plan.
- (4) The planned environmental water established under subclause (1) (c) is maintained in this water source by the rules specified in Division 1 of Parts 7 and 9 of this Plan.

Note. The rules in Part 7 of this Plan ensure that there will be water remaining in this water source over the long term by maintaining compliance with the long-term average annual extraction limit. The rules in Part 7 of this Plan provide for a reduction in available water determinations when the long-term average annual extraction limit has been assessed to have been exceeded.

Part 5 Requirements for water

Division 1 General

18 Application

- (1) This Part identifies the requirements for water from this water source for basic landholder rights (Division 2) and for extraction under access licences (Division 3).
- (2) The volumes of water specified in this Part represent the estimated water requirements of persons entitled to basic landholder rights in this water source and the total volumes or unit shares specified in the share components of all access licences in this water source. The actual volumes of water available for extraction in this water source at any time will depend on factors such as climatic variability, access licence priority and the rules in this Plan.
- (3) This Plan recognises that basic landholder rights in this water source and the total share components of all access licences authorised to extract water from this water source may change during the term of this Plan. This Plan manages such changes by having provisions that manage the sharing of water within the limits of water availability, as provided for in Division 1 of Part 7 of this Plan.

Note. The total share components of access licences in this water source may change during the term of this Plan as a result of:

- (a) the grant, surrender or cancellation of access licences in this water source, or
- (b) the variation of local water utility licences under section 66 of the Act.

Division 2 Requirements for water for basic landholder rights

19 Domestic and stock rights

At the commencement of this Plan, the water requirements of persons entitled to domestic and stock rights in this water source are estimated to total 5,515 megalitres per year (*ML/year*), distributed as follows:

- (a) 1,628 ML/year in Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction),
- (b) 964 ML/year in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction),
- (c) 141 ML/year in Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction),

- (d) 2,234 ML/year in Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River),
- (e) 548 ML/year in Management Zone 3A (Glennies Creek).

Notes.

- 1 Domestic and stock rights are set out in Division 1 of Part 1 of Chapter 3 of the Act and must be exercised in accordance with any mandatory guidelines established under the Act with respect to the taking and use of water for domestic consumption or stock watering. The figures for these rights in this clause are separate from any licensed volume.
- 2 Inherent water quality and land use activities may make the water in some areas unsuitable for human consumption. Water from this water source should not be consumed without first being tested and, if necessary, appropriately treated. Such testing and treatment is the responsibility of the water user.

20 Native title rights

At the commencement of this Plan, there are no native title rights in this water source. Therefore the water requirements for native title rights are 0 ML/year.

Note. A change in native title rights may occur pursuant to the provisions of the *Native Title Act 1993* of the Commonwealth.

Division 3 Requirements for water for extraction under access licences

21 Share components of domestic and stock access licences

It is estimated that at the time of commencement of this Plan the share components of domestic and stock access licences authorised to take water from this water source total 1,836 ML/year, distributed as follows:

- (a) 672 ML/year in Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction),
- (b) 101 ML/year in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction),
- (c) 27 ML/year in Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction),
- (d) 855 ML/year in Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River),
- (e) 181 ML/year in Management Zone 3A (Glennies Creek).

22 Share components of major utility (Barnard) access licences

It is estimated that at the time of commencement of this Plan the share components of major utility (Barnard) access licences authorised to take water from this water source

total 0 ML/year in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction).

Note. Clause 51 permits the granting of major utility (Barnard) access licences with a total share component of up to 60,000 ML/year.

23 Share components of major utility access licences

It is estimated that at the time of commencement of this Plan the share components of major utility access licences authorised to take water from this water source total 36,000 ML/year in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction).

24 Share components of local water utility access licences

It is estimated that at the time of commencement of this Plan the share components of local water utility access licences authorised to take water from this water source total 10,832 ML/year, distributed as follows:

- (a) 5,800 ML/year in Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction),
- (b) 32 ML/year in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction),
- (c) 0 ML/year in Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction),
- (d) 0 ML/year in Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River),
- (e) 5,000 ML/year in Management Zone 3A (Glennies Creek).

25 Share components of regulated river (high security) access licences

It is estimated that at the time of commencement of this Plan the share components of regulated river (high security) access licences authorised to take water from this water source total 21,740 unit shares, distributed as follows:

- (a) 5,182 unit shares in Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction),
 - (b) 5,128 unit shares in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction),
 - (c) 2,809 unit shares in Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction),
-

- (d) 6,971 unit shares in Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River),
- (e) 1,650 unit shares in Management Zone 3A (Glennies Creek).

26 Share components of regulated river (general security) access licences

It is estimated at the time of commencement of this Plan the share components of regulated river (general security) access licences authorised to take water from this water source total 128,544 unit shares, distributed as follows:

- (a) 46,925 unit shares in Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction),
- (b) 29,475 unit shares in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction),
- (c) 3,053 unit shares in Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction),
- (d) 43,298 unit shares in Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River),
- (e) 5,793 unit shares in Management Zone 3A (Glennies Creek).

27 Share components of supplementary water access licences

It is estimated at the time of commencement of this Plan the share components of supplementary water access licences authorised to access water from this water source total 48,518 unit shares distributed as follows:

- (a) 4,441 unit shares in Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction),
- (b) 40,166 unit shares in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction),
- (c) 505 unit shares in Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction),
- (d) 3,289 unit shares in Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River),
- (e) 117 unit shares in Management Zone 3A (Glennies Creek).

Part 6 System operation rules

28 Environmental flow rules for Glenbawn Dam and Glennies Creek Dam

- (1) Subject to subclause (2), the water supply system in this water source will be managed to ensure that target environmental flows exceed those specified in Column 2 of Table A at both flow reference points specified in Column 3 of Table A for the dates specified in Column 1 of Table A. These targets will take into account the monthly variations and measures listed in subclause (6).

Note. *Water supply system* is defined in the Dictionary.

Table A — Normal conditions daily flow targets

Column 1 Dates for which flow target applies	Column 2 Target environmental flow (ML/day)	Column 3 Flow reference point
1 December to 28/29 February	17 ML/day	Hunter River at Liddell gauge (210083)
	36 ML/day	Hunter River at Greta gauge (210064)
1 March to 31 May	18 ML/day	Hunter River at Liddell gauge (210083)
	40 ML/day	Hunter River at Greta gauge (210064)
1 June to 31 August	56 ML/day	Hunter River at Liddell gauge (210083)
	73 ML/day	Hunter River at Greta gauge (210064)
1 September to 30 November	38 ML/day	Hunter River at Liddell gauge (210083)
	61 ML/day	Hunter River at Greta gauge

		(210064)
--	--	----------

- (2) The targets specified in subclause (1) do not apply when the flow at the Hunter River at Belltrees gauge (210039) is less than the flow specified in Column 2 of Table B for more than 14 consecutive days within the date ranges specified in Column 1 of Table B.

Table B — Dry flow conditions rule triggers

Column 1 Dates for which dry flow condition trigger applies	Column 2 Flow (ML/day) at Hunter River at Belltrees gauge (210039)
1 December to 28/29 February	10 ML/day
1 March to 31 May	17 ML/day
1 June to 31 August	50 ML/day
1 September to 30 November	37 ML/day

- (3) When flow conditions as specified in subclause (2) occur, the water supply system in this water source will be managed to ensure that target environmental flows exceed those specified in Column 2 of Table C at both the flow reference points specified in Column 3 of Table C for the dates specified in Column 1 of Table C. These targets will take into account the monthly variations and measures listed in subclause (6).

Table C — Dry conditions daily flow targets

Column 1 Dates for which flow target applies	Column 2 Target environmental flow (ML/day)	Column 3 Flow reference point
1 December to 28/29 February	10 ML/day	Hunter River at Liddell gauge (210083)
	21 ML/day	Hunter River at Greta gauge (210064)
1 March to 31 May	10 ML/day	Hunter River at Liddell gauge (210083)

	27 ML/day	Hunter River at Greta gauge (210064)
1 June to 31 August	34 ML/day	Hunter River at Liddell gauge (210083)
	45 ML/day	Hunter River at Greta gauge (210064)
1 September to 30 November	30 ML/day	Hunter River at Liddell gauge (210083)
	39 ML/day	Hunter River at Greta gauge (210064)

- (4) Following a period of flows specified in subclause (2), if supplementary water access is announced under clause 57, then the water supply system must resume to be managed to ensure that the targets in subclause (1) are met.
- (5) The flows specified at the Hunter River at Belltrees gauge (210039) for the purposes of subclauses (2) and (4) will not include flows that are a result of any transfer of water made from the Lower Barnard River Water Source in the *Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources 2009*, as amended or replaced from time to time, to Glenbawn Dam.
- (6) For any month, the target environmental flow specified in subclause (1) or (3) will be considered to be met if the average daily flow as measured at Hunter River at Liddell gauge (210083) and the Hunter River at Greta gauge (210064) is within 25% of the target environmental flow for that day for a period of no more than 7 consecutive days or no more than 10 days in total per month, provided that any deficit resulting from this subclause is made up by ensuring target environmental flows are met in the next month in which it is possible to do so.
- (7) For the purposes of subclause (6), any exceedance of the target environmental flow that results from tributary inflows, reduced demand or operator error cannot be taken into account.
- (8) Any actual daily flow that exceeds the target environmental flow for that day by more than 25% cannot be counted as paid back water under subclause (6).

29 Environmental water allowance rules for this water source

- (1) An environmental water allowance (**EWA**) must be maintained in this water source.
- (2) At the commencement of each water year, 20,000 megalitres (**ML**) must be credited to the EWA.
- (3) Releases from the EWA may only be made for the following purposes:
 - (a) to assist in the management of critical environmental events, including algal blooms and chemical spills,
 - (b) to provide flows to maintain ecosystem health, including for facilitating fish migration or stony bed scouring,
 - (c) to support environmental assets or environmental functions within this water source that have been identified as water-dependent Aboriginal cultural values.
- (4) The EWA must be debited with a volume of water equal to the amount released from Glenbawn Dam or Glennies Creek Dam under subclause (3).
- (5) Any unused water remaining in the EWA at the end of the water year cannot be carried over to the following water year.
- (6) The Minister may seek the advice of an Environmental Water Advisory Group (**EWAG**) in making releases from the EWA under subclause (3).

Note. The values referred to in paragraph (c) will be identified by the Aboriginal Water Initiative and stored on the Aboriginal Water Initiative System database.

Note. At the commencement of this Plan, the lead role in managing environmental water allowances established under water sharing plans has been administratively delegated to the NSW Office of Environment and Heritage (**OEH**). OEH also administers and supports EWAGs to inform the management of environmental water allowances and licensed environmental water. For more information on EWAGs, see *Cooperative Management of Environmental Water to Improve River and Wetland Health in NSW (2014)*, available from OEH's website at www.environment.nsw.gov.au.

30 Maintenance of water supply

- (1) The water supply system must be managed so that:
 - (a) it would be capable of maintaining supply on an annual basis to those exercising domestic and stock rights and native title rights through a repeat of the worst period of low inflows into this water source, as represented in flow information held by the Department when the first water sharing plan for this water source made under the Act came into force, and
 - (b) available water determinations for domestic and stock access licences, local water utility access licences and major utility access licences of 100% of share

components can be maintained through a repeat of the worst period of low inflows to this water source, as represented in flow information held by the Department when the first water sharing plan for this water source made under the Act came into force.

Note. The water supply system is not required to maintain water supply for a major utility (Barnard) access licence through a repeat of the worst period of inflows, as an available water determination for these access licences is not made until water is transferred from the Lower Barnard River Water Source.

- (2) To achieve subclause (1), sufficient volumes of water must be set aside from inflows into this water source and in reserves held in Glenbawn Dam and Glennies Creek Dam.

Note. Reserves is defined in the Dictionary.

- (3) Subclause (2) must not be achieved using water held in access licence water allocation accounts and the EWA.
- (4) Sufficient volumes must be set aside from inflows into this water source and reserves held in Glenbawn Dam and Glennies Creek Dam to provide for the environmental flow rules in clause 28 and the EWA rules in clause 29, through a repeat of the worst period of low inflows to this water source, as represented in flow information held by the Department when the first water sharing plan for this water source made under the Act came into force.
- (5) Subclause (4) must not be achieved using water held in access licence water allocation accounts.

31 Water delivery and channel capacity constraints

- (1) Water ordered under a major utility (Barnard) access licence must be delivered from Glenbawn Dam.
- (2) Where necessary for determining numerical extraction components, managing water releases or providing water under access licences, the maximum water delivery or operating channel capacity in this water source will be determined by the Minister from time to time, taking into account the following:
- (a) inundation of private land or interference with access,
 - (b) the effects of inundation on the floodplain and associated wetlands,
 - (c) the transmission losses expected to occur,
Note. Transmission losses is defined in the Dictionary.
 - (d) capacities of water management structures controlled by the Minister.
- (3) The water supply system must be managed taking into account any water delivery or
-

channel capacity constraints specified by the Minister under subclause (2).

Note. Operation of the system at the commencement of this Plan has the following constraints on maximum flows:

- (a) Glenbawn Dam – 7,500 ML/day,
- (b) Glennies Creek Dam – 5,000 ML/day.

32 Priority of extractions for access licences

- (1) This clause does not apply to supplementary water access licences.
- (2) Where the extraction component of an access licence in this water source does not specify a rate of extraction as a share of supply capability or a volume per unit time, the following priority of extraction will apply whenever supply capability is insufficient to satisfy all water requirements in any section of this water source:
 - (a) water will be supplied to domestic and stock access licences, local water utility access licences, major utility (Barnard) access licences, major utility access licences and regulated river (high security) access licences that have placed orders for water, in that order,
 - (b) any remaining supply capability will be shared among regulated river (general security) access licences that have placed an order for water, in accordance with a method approved by the Minister.

Note. *Supply capability* is defined in the Dictionary.
- (3) Advice from water user representatives should be sought prior to the method in subclause (2) (b) being approved.

Notes.

- 1 During periods of water supply or channel capacity constraint, the implementation of the above provisions may result in ordering delays and an inability to supply water requirements from regulated water deliveries on a daily basis.
- 2 The Department will use meetings with the Customer Service Committee as a means to consult with water user representatives.

33 Numerical specification of extraction components

- (1) The extraction components of any access licences in this water source that are affected by a physical supply constraint may be amended under section 68A of the Act to specify a volume per unit of time or share of supply capability in order to share the impacts of any physical supply constraint among these access licences.
- (2) The rates of shares specified in the amended extraction component under subclause (1) for:

- (a) domestic and stock access licences, local water utility access licences, major utility (Barnard) access licences, major utility access licences and regulated river (high security) access licences, should, where possible, be the amount which, in the Minister's opinion, is sufficient to satisfy the maximum daily water requirements of the access licences in that order, and
 - (b) regulated river (general security) access licences should be in proportion to the share component of each access licence.
- (3) When action under subclause (1) is undertaken, the Minister may also amend the extraction components of access licences in other sections of the water source that are not affected by the physical supply constraint to exclude extraction components in sections of the water source affected by the action under subclause (1).

34 Rates of change to storage releases

- (1) Change in release rates from Glenbawn Dam and Glennies Creek Dam will be made in accordance with rules established by the Minister.
- (2) The rules established by the Minister will take into account the following:
 - (a) relevant environmental considerations,
 - (b) damage to river banks,
 - (c) public safety,
 - (d) any other matters considered relevant by the Minister.

35 Supply of orders when remaining allocations are low

- (1) If, in the Minister's opinion, the total remaining volume of water in access licence water allocation accounts has been reduced to a level where the continuous delivery of water orders compromises the delivery of remaining water allocations in water accounts and critical water supplies for the next water year, then water orders may be grouped and released periodically.
- (2) The Minister should consult with water user representatives regarding the circumstances under which action under subclause (1) should be taken and the manner of management.

Note. The Department will use meetings with the Customer Service Committee as a means to consult with water user representatives.

Note. During the course of an extended drought, the implementation of the above provisions may result in short term ordering delays.

36 Dam operation during floods and spills

- (1) The operation of Glenbawn Dam and Glennies Creek Dam during times of flood and
-

spilling of water is to be undertaken in a manner that maintains the safety of dam infrastructure and limits damage to downstream communities.

- (2) Provided it is consistent with subclause (1), operation should leave the storage as full as possible at the completion of the flood event.

37 Flood mitigation zone rules

- (1) When the water level of Glenbawn Dam is within the flood mitigation zone, water is to be released from Glenbawn Dam to bring the water level below the flood mitigation zone.
- (2) The release of water under subclause (1) is to occur as rapidly as possible providing that the release pattern simulates the rate of natural flood recession and takes into consideration any downstream channel capacity constraints.

Note. *Flood mitigation zone* is defined in the Dictionary.

Part 7 Limits to the availability of water

Division 1 Long-term average annual extraction limit

38 General

The availability of water for extraction in this water source on a long-term basis is to be managed in accordance with this Part.

39 Volume of the long-term average annual extraction limit

- (1) This clause establishes the long-term average annual extraction limit for this water source.
- (2) The long-term average annual extraction limit is 217,000 ML/year.

Note. By limiting long-term average annual extractions to 217,000 ML/year, this Plan ensures that approximately 80% of long-term average flow in this water source (estimated to be 1,040,000 ML/year) will be preserved and will contribute to the maintenance of basic ecosystem health.

40 Calculation of long-term average annual extraction limit

- (1) Subject to subclause (2), for the purposes of calculating the long-term average annual extraction limit and current average annual extractions, the following must be included:
 - (a) all water extractions under all categories of access licences excluding major utility (Barnard) access licences,
 - (b) all water extractions pursuant to domestic and stock rights and native title rights,
 - (c) all water extractions from the floodplain, except those under a water access licence that specifies another water source, that are used in conjunction with extractions under a water access licence in this water source.
- (2) For the purposes of calculating the long-term average annual extraction limit and current average annual extractions, the use of water pursuant to the environmental flow rules and EWA rules in Part 6 of this Plan will not be included.

Note. Under section 8F of the Act the long-term average annual extraction limit is taken to be varied by the amount of any change to the amount of water committed as licensed environmental water, excluding water committed under section 8C of the Act. The variation in the long-term average annual extraction limit is to be determined in accordance with a methodology approved by the Minister and published in the Gazette.

41 Assessment of the average annual extractions against the long-term average annual extraction limit

- (1) An assessment of current average annual extractions against the long-term average annual extraction limit is to be conducted as set out in this clause.

- (2) The assessment referred to in subclause (1) is to be undertaken after the end of each water year, using the hydrologic computer model that, at the time, is approved by the Minister for assessing long-term water extractions from this water source.
- (3) To assess the current long-term average annual extraction limit, the model referred to in subclause (2) will be set to represent as closely as possible all water use development, water supply system management and other factors affecting the quantity of long-term average annual extraction from this water source at the time of the assessment.

Note. *Water use development* is defined in the Dictionary.

42 Compliance with the long-term average annual extraction limit

- (1) The long-term average annual extraction from this water source may not be permitted to exceed the long-term average annual extraction limit specified in clause 39.
 - (2) If it has been assessed that the current long-term average annual extraction from this water source exceeds the volume specified in clause 39 (2) by 3% or more, then the maximum volume that may be taken under or assigned from a supplementary water access licence under clause 53 (7) (b) will be reduced.
 - (3) Once the maximum volumes that may be taken or assigned from a supplementary water access licence has been reduced to zero under subclause (2), then the maximum available water determinations that can be made for regulated river (general security) access licences under clause 49 will be reduced.
 - (4) Any reduction under subclauses (2) and (3) is to be of an amount that is, in the Minister's opinion, necessary to return long-term average annual extractions in this water source to the long-term average annual extraction limit under clause 39.
 - (5) If action has been taken under subclause (2) or (3), and a subsequent assessment under clause 41 indicates that current long-term average annual extractions are below the long-term average annual extraction limit by more than 3%, previous reductions under subclause (2) or (3) may be reversed to the degree that is, in the Minister's opinion, necessary to return the long-term average annual extractions to the long-term average annual extraction limit.
 - (6) Any reversal of previous reductions under subclause (5):
 - (a) must not exceed previous reductions made under subclauses (2) and (3), and
 - (b) must first reverse any previous reductions relating to regulated river (general security) access licences.
 - (7) The assessment of the degree of any reduction required under subclause (2) or (3) or
-

degree of any reversal under subclause (5) must be made using the same computer model used to carry out assessments under clause 41.

(8) Before taking action under subclause (2), (3) or (5), the Minister should consult with water user representatives on:

(a) the data used in the computer model referred to in clause 41, and

(b) the proposed actions taken in accordance with subclause (2), (3) or (5).

Note. The Department will use meetings with the Customer Service Committee as a means to consult with water user representatives.

Division 2 Available water determinations

43 General

Available water determinations for access licences with share components that specify this water source are to be expressed as either:

(a) a percentage of the share component for access licences where share components are specified as ML/year, or

(b) megalitres per unit share for access licences where share components are specified as a number of unit shares.

44 Available water determinations for domestic and stock access licences

(1) In making available water determinations for domestic and stock access licences, the Minister should consider the rules in this clause.

(2) At the commencement of each water year, an available water determination of 100% of the access licence share component should be made for domestic and stock access licences if water is available.

(3) If the available water determination made at the commencement of the water year under subclause (2) is less than 100%, further available water determinations may be made for domestic and stock access licences when water becomes available.

(4) The sum of available water determinations made for domestic and stock access licences must not, in any water year, exceed 100% of the access licence share component.

45 Available water determinations for major utility (Barnard) access licences

(1) In making available water determinations for major utility (Barnard) access licences, the Minister should consider the rules in this clause.

(2) Whenever water is transferred from the Lower Barnard River Water Source in the *Water*

Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources 2009, as amended or replaced from time to time, to Glenbawn Dam, an available water determination should be made for major utility (Barnard) access licences with a share component that specifies this water source.

- (3) The available water determination made in subclause (2) should be equal to the volume that is transferred to this water source from the Lower Barnard River Water Source minus losses associated with the transfer of that water expressed as a percentage of the sum of major utility (Barnard) access licence share components.

Notes.

- 1 The rules in clause 53 (4) (b) of this Plan ensure that evaporation losses associated with storing water allocations in the water allocation account of a major utility (Barnard) access licence and transmission losses associated with the delivery of water ordered under a major utility (Barnard) access licence will be calculated when water is assessed as being taken from the water allocation account.
- 2 The frequency of available water determinations will match the frequency of transfers of water from the Lower Barnard River Water Source to Glenbawn Dam.

46 Available water determinations for major utility access licences

- (1) In making available water determinations for major utility access licences, the Minister should consider the rules in this clause.
- (2) At the commencement of each water year, an available water determination of 100% of the access licence share component should be made for major utility access licences if water is available.
- (3) If the available water determination made at the commencement of the water year under subclause (2) is less than 100%, further available water determinations may be made for major water utility access licences when water becomes available.
- (4) The sum of available water determinations made for major utility access licences must not, in any water year, exceed 100% of the access licence share component.

47 Available water determinations for local water utility access licences

- (1) In making available water determinations for local water utility access licences, the Minister should consider the rules in this clause.
- (2) At the commencement of each water year, an available water determination of 100% of the access licence share component should be made for local water utility access licences if water is available.
- (3) If the available water determination made at the commencement of the water year under subclause (2) is less than 100%, further available water determinations may be made for

local water utility access licences when water becomes available.

- (4) The sum of available water determinations made for local water utility access licences must not, in any water year, exceed 100% of the access licence share component.

48 Available water determinations for regulated river (high security) access licences

- (1) In making available water determinations for regulated river (high security) access licences, the Minister should consider the rules in this clause.
- (2) Subject to subclause (3), an available water determination should be made at the commencement of each water year for regulated river (high security) access licences if there is water available after making provisions for the following:
- (a) sufficient water has been set aside to meet the planned environmental water rules established in clause 17 (1) (a) (i) and (ii),
 - (b) sufficient water has been set aside to meet the requirements for domestic and stock rights,
 - (c) sufficient water has been set aside to meet the requirements for native title rights,
 - (d) the sum of available water determinations in that water year for domestic and stock access licences is equal to 100% of the access licence share component,
 - (e) the sum of available water determinations in that water year for local water utility access licences is equal to 100% of the access licence share component,
 - (f) the sum of available water determinations in that water year for major utility access licences is equal to 100% of the access licence share component,
 - (g) sufficient water has been set aside to meet the water allocations already in major utility access licence, major utility (Barnard) access licence, regulated river (high security) access licence and regulated river (general security) access licence water allocation accounts,
 - (h) sufficient water has been set aside to meet water losses associated with the holding and delivery of water to meet the requirements specified in paragraphs (a) – (g),
 - (i) sufficient water has been set aside to meet water losses associated with the holding and delivery of water resulting from the available water determination for regulated river (high security) access licences.
- (3) An available water determination made at the commencement of the water year under

subclause (2) for regulated river (high security) access licences should not be greater than or equal to 0.75 megalitres per unit of share component, unless for every 0.01 megalitres per unit of share component increase in the sum of available water determinations for regulated river (high security) access licences above 0.75 megalitres per unit of share component there is sufficient water to provide an increase of 0.02 megalitres per unit of share component in the sum of available water determinations for regulated river (general security) access licences.

- (4) Subject to subclause (5), if the available water determination made at the commencement of the water year under subclause (2) is less than 1 megalitre per unit of share component, then further available water determinations may be made for regulated river (high security) access licences.
- (5) Further available water determinations under subclause (4) that result in the sum of available water determinations for regulated river (high security) access licences exceeding 0.75 megalitres per unit of share component cannot be made unless for every 0.01 megalitres per unit of share component increase in the sum of available water determinations for regulated river (high security) access licences above 0.75 megalitres per unit of share component there is also sufficient water available for a 0.02 megalitres per unit of share component increase in the sum of available water determinations for regulated river (general security) access licences.
- (6) The sum of available water determinations made for regulated river (high security) access licences must not, in any water year exceed 1 megalitre per unit of share component.

49 Available water determinations for regulated river (general security) access licences

- (1) In making available water determinations for regulated river (general security) access licences, the Minister should consider the rules in this clause.
- (2) Any available water determinations made under subclause (3) should not be made until water becomes available after making provision for the following:
 - (a) sufficient water has been set aside to meet planned environmental water rules established in clause 17 (1) (a) (i) and (ii),
 - (b) sufficient water has been set aside to meet the requirements for domestic and stock rights,
 - (c) sufficient water has been set aside to meet the requirements for native title rights,
 - (d) the sum of available water determinations in that water year for domestic and stock

- access licences is equal to 100% of the access licence share component,
- (e) the sum of available water determinations in that water year for local water utility access licences is equal to 100% of the access licence share component,
 - (f) the sum of available water determinations in that water year for major utility access licences is equal to 100% of the access licence share component,
 - (g) sufficient water has been set aside to guarantee an available water determination for regulated river (high security) access licences in the following water year of at least 0.75 megalitres per unit of share component,
 - (h) the sum of available water determinations for regulated river (high security) access licences is equal to 0.75 megalitres per unit of share component,
 - (i) sufficient water has been set aside to meet water allocations already in major utility access licences, major utility (Barnard) access licence, regulated river (high security) access licence and regulated river (general security) access licence water allocation accounts,
 - (j) sufficient water has been set aside to meet water losses associated with holding and delivery of water to meet the requirements specified in subclauses (a) – (i),
 - (k) sufficient water has been set aside to meet water losses associated with the holding and delivery of water resulting from the available water determination for regulated river (general security) access licences.
- (3) If an assessment of available water indicates that there is more than sufficient water to satisfy subclause (2), available water determinations should be made for regulated river (general security) access licences such that for each 0.01 megalitres per unit of share component by which the sum of available determinations for regulated river (high security) access licences exceeds 0.75 megalitres per unit of share component there is a 0.02 megalitres per unit of share component increase in the sum of available determinations for regulated river (general security) access licences, until the sum of available water determinations for regulated river (high security) access licences is 1 megalitre per unit of share component.
- (4) Subject to subclause (5), once the sum of available water determinations for regulated river (high security) access licences is 1 megalitre per unit of share component, any additional available water should be made available to regulated river (general security) access licences.
- (5) The sum of available water determinations made for regulated river (general security)
-

access licences must not, in any water year exceed 1 megalitre per unit of share component, or such lower amount that results from the rules in clause 42.

50 Available water determinations for supplementary water access licences

- (1) In making available water determinations for supplementary water access licences, the Minister should consider the rules in this clause.
- (2) At the commencement of each water year an available water determination of 1 megalitre per unit of share component should be made for supplementary water access licences.
- (3) Further available water determinations may be made for supplementary water access licences in increments of up to 1 megalitre per unit of share component when the annual high flow tally, as calculated in clause 55, is equal to or greater than the sum of the available water determinations made in that water year for supplementary water access licences multiplied by 0.75 multiplied by 48,519.

Note. The formula in subclause (3) is an indicator of likely wet conditions. The intent of this clause is that additional available water determinations can be made when wet conditions prevail.

- (4) Available water determinations should not be made for supplementary water access licences other than as provided for under subclauses (2) and (3).

Part 8 Rules for granting of access licences

Notes.

- 1 This Part is made in accordance with sections 20, 61 and 63 of the Act.
- 2 Access licences granted in this water source will be subject to mandatory conditions and may be subject to discretionary conditions.

51 Specific purpose access licences

Note. Section 61 of the Act provides that a person may apply for an access licence if the regulations or the relevant water sharing plan provides that the application may be made. Clause 10 of the *Water Management (General) Regulation 2011* lists a number of categories and subcategories of specific purpose access licence for which applications may be made. This clause also provides that applications for certain licences may be made.

- (1) A specific purpose access licence must not be granted in this water source unless the Minister is satisfied that the share and extraction component of the access licence is the minimum required to meet the circumstances in which the access licence is proposed to be used.
- (2) Applications may be made for a major utility (Barnard) access licence in Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction) in this water source.
- (3) A major utility (Barnard) access licence must not be granted if:
 - (a) the share component of the proposed access licence is more than 60,000 ML/year, or
 - (b) it would cause the total share components of all major utility (Barnard) access licences to exceed 60,000 ML/year.
- (4) A major utility (Barnard) access licence may only be granted for the taking of water:
 - (a) by a major utility power generation company, and
 - (b) that been transferred from the Lower Barnard River Water Source in the *Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources 2009* as amended or replaced from time to time, and
 - (c) for the purpose of power generation.
- (5) Applications may not be made for an access licence of the subcategory “Aboriginal cultural” if the share component of the proposed access licence is more than 10 ML/year.
- (6) An access licence of the subcategory “Aboriginal cultural” may only be granted for the taking of water by an Aboriginal person or Aboriginal community for any personal,

domestic or communal purpose, including drinking, food preparation, washing, manufacturing traditional artefacts, watering domestic gardens, cultural teaching, hunting, fishing, gathering and for recreational, cultural and ceremonial purposes.

Note. *Aboriginal person* is defined in the Dictionary.

52 Granting of access licences as a result of controlled allocation

The Minister may grant an access licence where the right to apply for the licence has been acquired in a manner prescribed by an order made under section 65 of the Act.

Part 9 Rules for managing access licences

Note. Part 12 allows for amendments to be made to this Part.

Division 1 Water allocation account management rules

Note. The Act provides for the keeping of water allocation accounts for access licences. The rules in this Part impose further restrictions on the volume of water that may be taken under an access licence over a specified period of time. These restrictions are in addition to any other limits on access licences for the taking of water. It is an offence under the Act to take water under an access licence for which there is no or insufficient water allocation.

53 Individual access licence account management rules

- (1) The rules in this clause apply to the taking of water under an access licence with a share component that specifies this water source.
- (2) The following rules apply to the management of water allocation in the water allocation accounts of domestic and stock access licences and local water utility access licences:
 - (a) the maximum volume that may be held in the account of a domestic and stock access licences or a local water utility access licences at any time is equal to 100% of the access licence share component,
 - (b) subject to subclause (8), the water allocation taken must be assessed as the volume of water extracted by the approved water supply works nominated by the access licence,
 - (c) water allocations remaining in water allocation accounts cannot be carried over from one water year to the next.
- (3) The following rules apply to the management of water allocation in the water allocation accounts of major utility access licences:
 - (a) subject to subclause (8), the water allocation taken must be assessed as the volume of water extracted by the approved water supply works nominated by the access licence,
 - (b) water allocation remaining in a water allocation account of a major utility access licence may be carried over into the next water year subject to:
 - (i) the volume carried over not exceeding 32,400 megalitres, and
Note. 32,400 megalitres is equal to approximately 90% of the major utility access licence share component.
 - (ii) the volume of water in Glenbawn Dam exceeding 25% of the conservation storage volume at the end of the water year minus any allowance for dead

storage.

Note. *Conservation storage volume* and *dead storage* are defined in the Dictionary.

- (4) The following rules apply to the management of water allocation in the water allocation accounts of major utility (Barnard) access licences:
- (a) the maximum volume that may be held in the account of a major utility (Barnard) access licence at any time is equal to 100% of the access licence share component,
 - (b) the water allocation taken must be assessed as:
 - (i) the water ordered for extraction by the approved water supply works nominated by the access licence, plus an estimate of losses as determined by the Minister, associated with the delivery from Glenbawn Dam of the water ordered for extraction by the approved water supply work nominated by the access licence, and
 - (ii) an estimate of evaporative losses from Glenbawn Dam that would occur as a result of the storage of water allocations in the account, as determined by the Minister,
- Note.** Losses as a result of evaporation losses from the surface water area of Glenbawn Dam can be assessed as being taken from a major utility (Barnard) access licence at any time.
- (c) the maximum water allocation that can be carried over from one water year to the next is equal to the water remaining in the account from the previous water year.
- (5) The following rules apply to the management of water allocation in the water allocation accounts of regulated river (high security) access licences:
- (a) the maximum volume that may be held in the account of a regulated river (high security) access licences at any time is equal to 1 megalitre per unit of share component,
 - (b) subject to subclause (8), the water allocation taken must be assessed as the volume of water extracted by the approved water supply works nominated by the access licence,
 - (c) the maximum water allocation that can be carried over from one water year to the next is equal to 0.25 ML per unit share component.
- (6) The following rules apply to the management of water allocation in the water allocation accounts of regulated river (general security) access licences:

- (a) subject to subclause (8), the water allocation taken must be assessed as the volume of water extracted by the approved water supply works nominated by the access licence,
 - (b) water allocation remaining in a water allocation account of a regulated river (general security) access licence may be carried over into the next water year subject to the volume carried over not exceeding 0.25 ML per unit of access licence share component.
- (7) The following rules apply to the management of water allocation in the water allocation accounts of supplementary water access licences:
- (a) the water allocation taken must be assessed as the volume of water extracted, in accordance with announcements made under clause 57, by the approved water supply works nominated by the access licence,
 - (b) the maximum volume that may be taken under or assigned from a supplementary water access licence in this water source:
 - (i) in any water year, must be equal to five times the share component of the access licence at the commencement of each water year multiplied by 1ML/unit share, or such lower amount that may result from clause 42, plus the net amount of any water allocations assigned to or from the water allocation account for the access licence under section 71T of the Act in the water year, and
 - (ii) in any 5 consecutive water years, must be equal to five times the share component of the access licence at the commencement of each water year multiplied by 1 ML/unit share, or such lower amount that may result from clause 42, plus the net amount of any water allocations assigned to or from the water allocation account for the access licence under section 71T of the Act during the 5 water years,
 - (c) for the purposes of paragraph (b) (ii), during the first four water years of this Plan the maximum volume that may be taken under or assigned from a supplementary water access licence will include water taken or assigned up to four years prior to the commencement of this Plan,
 - (d) water allocations remaining in water allocation accounts cannot be carried over from one water year to the next.
- (8) Upon written notice from the Minister to the licence holder, the water allocation taken

under domestic and stock access licences, local water utility access licences, major utility access licences, regulated river (high security) access licences and regulated river (general security) access licences will be assessed as the greater of:

- (a) the volume of water extracted by the approved water supply works nominated by the access licence, and
- (b) the volume of water ordered for extraction by the approved water supply works nominated by the access licence,

for the term specified by the Minister.

- (9) The Minister should only take action under subclause (8) in accordance with the procedures specified in a water order debiting protocol approved by the Minister.

Note. It is intended that the Minister may take action under subclause (8) where water orders have been exceeding the volume of water being taken under an access licence and this cannot be explained by rainfall or other unavoidable factors.

- (10) Subject to subclause (13), when water is permitted to be taken under clause 56 for regulated river (high security) access licences and regulated river (general security) access licences then water may be extracted without debit to these access licences subject to the limits specified in clause 56.
- (11) If at any time during the water year the available water for regulated river (high security) access licences increases to 1 megalitre per unit share, then a volume of water equal to the volume that has been taken pursuant to clause 56 will be withdrawn from the regulated river (high security) access licence water allocation account.
- (12) If at any time during the water year the available water for regulated river (general security) access licences increases to 1 megalitre per unit share component, then a volume of water equal to the volume that has been taken pursuant to clause 56 will be withdrawn from the regulated river (general security) access licence water allocation account.
- (13) The sum of extractions taken under clause 56 by a regulated river (high security) access licence or a regulated river (general security) access licence in a water year and the water allocations accrued to that access licence from available water determinations in that water year is limited to 1 megalitre per unit of share component.
- (14) If water is spilled from Glenbawn Dam, either over its spillway, or as a release of water from the dam for the purpose of maintaining airspace in the flood mitigation zone or for the safety of the dam, then allocation must be withdrawn in the following order:

- (a) firstly from each major utility (Barnard) access licence water allocation account in proportion to the water allocation remaining in each water allocation account at the time of the spill,
 - (b) secondly from each regulated river (general security) access licence water allocation account in proportion to the carryover remaining in each water allocation account at the time of spill,
 - (c) thirdly from each regulated river (high security) access licence water allocation account in proportion to the carryover remaining in each water allocation account at the time of spill,
 - (d) fourthly from each major utility access licence water allocation account in proportion to the carryover remaining in each water allocation account at the time of spill.
- (15) The total volume of water withdrawn from major utility (Barnard) access licence water allocation accounts under subclause (14) must be the lesser of:
- (a) the volume of spill, and
 - (b) the total volume remaining in the major utility (Barnard) access licence water allocation accounts minus an estimate of evaporative losses from Glenbawn Dam that would occur as a result of the storage of that volume, as determined by the Minister.
- (16) The volume of water withdrawn from regulated river (general security) access licence water allocation accounts under subclause (14) must be the lesser of:
- (a) the volume of spill minus the volume of allocation withdrawn from major utility (Barnard) access licence water allocation accounts under subclause (15), or
 - (b) the total of the carryover remaining in the regulated river (general security) access licence water allocation accounts.
- (17) The volume of water withdrawn from the regulated river (high security) access licence water allocation account under subclause (14) must be the lesser of:
- (a) the volume of spill minus:
 - (i) the volume of allocation withdrawn from major utility (Barnard) access licence water allocation accounts under subclause (15), and
 - (ii) the volume of allocation withdrawn from regulated river (general security) access licence water allocation accounts under subclause (16), or
-

- (b) the total of the carryover remaining in the regulated river (high security) access licence water allocation account.
- (18) The volume of water withdrawn from the major utility access licence water allocation account under subclause (14) must be the lesser of:
 - (a) the volume of spill minus:
 - (i) the volume of allocation withdrawn from major utility (Barnard) access licence water allocation accounts under subclause (15), and
 - (ii) the volume of allocation withdrawn from regulated river (general security) access licence water allocation accounts under subclause (16), and
 - (iii) the volume of allocation withdrawn from regulated river (high security) access licence water allocation accounts under subclause (17), or
 - (b) the total of the carryover remaining in the major utility access licence water allocation account.
- (19) If water is spilled from Glennies Creek Dam, either over its spillway, or as a release of water for the safety of the dam, then allocation must be withdrawn in the following order:
 - (a) firstly from each regulated river (general security) access licence water allocation account in proportion to the carryover remaining in each water allocation account at the time of spill,
 - (b) secondly from each regulated river (high security) access licence water allocation account in proportion to the carryover remaining in each water allocation account at the time of spill.
- (20) The volume of water withdrawn from regulated river (general security) access licence water allocation accounts under subclause (19) must be the lesser of:
 - (a) the volume of spill, or
 - (b) the total of the carryover remaining in the regulated river (general security) access licence water allocation accounts.
- (21) The volume of water withdrawn from the regulated river (high security) access licence water allocation account under subclause (19) must be the lesser of:
 - (a) the volume of spill minus the volume of allocation withdrawn from regulated river (general security) access licence water allocation accounts under subclause (20), or

- (b) the total of the carryover remaining in the regulated river (high security) access licence water allocation account.
- (22) For the purposes of subclauses (15) – (18) and (20) – (21), the carryover remaining in each access licence water allocation account must be the greater of:
- (a) the volume of water in the water allocation account carried over from the previous water year under subclauses (3) (b), (4) (c), (5) (c) or (6) (b), minus any water already taken from the water allocation account during the current water year, or
 - (b) zero.

Division 2 Daily access rules

54 Flow reference points and flow thresholds for access to uncontrolled flows

- (1) For the purposes of this Division and managing access to uncontrolled flows by regulated river (high security) access licences, regulated river (general security) access licences and supplementary water access licences, this water source is divided into the management zones specified in clause 5 and shown in clause 1 of Schedule 1.
- (2) Access to uncontrolled flows for regulated river (high security) access licences, regulated river (general security) access licences and supplementary water access licences within each management zone, will be determined using the flow thresholds in Table D.

Table D — Uncontrolled flow access thresholds

Column 1 Flow reference point number	Column 2 Flow reference point	Column 3 Dates for which flow target applies	Column 4 Flow threshold (ML/day)
1	Hunter River at Liddell gauge (210083)	1 May to 30 September	100
		1 October to 30 April	150
2	Hunter River at Singleton gauge (210001)	1 May to 30 September	120
		1 October to 30 April	300
3	Hunter River at Greta gauge (210064)	1 March to 31 May	80
		1 June to 31 August	146
		1 September to 30 November	122
		1 December to the 28/29 February	72

55 Annual high flow tally

- (1) An annual high flow tally must be kept for the purpose of determining the total volume of flow that may be extracted under regulated river (high security) access licences and regulated river (general security) access licences in accordance with clause 56, and supplementary water access licences in this water source.
- (2) At the start of each water year the annual high flow tally must be set to zero.
- (3) For each day during the water year when flows at the 3 flow reference points specified in Column 2 of Table D are forecast to exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D, a volume calculated according to the following formula must be added to the annual high flow tally:

the volume to be added shall be the lesser of:

- (a) 7,200 ML, or
- (b) $A + B + C$

where

A is the forecast daily flow at the Hunter River at Greta gauge (210064),

B is the volume of water extracted by supplementary water access licences on that day,

C is the volume of water extracted by regulated river (general security) access licences and regulated river (high security) access licences on that day, pursuant to clause 56.

- (4) If forecast flows are not met under subclause (3), the high flow tally will be adjusted to reflect actual flows at the flow reference points after the event has finished.

56 Access to uncontrolled flows by regulated river (high security) access licences and regulated river (general security) access licences

- (1) The taking of water from uncontrolled flows under regulated river (high security) access licences and regulated river (general security) access licences will only be permitted in accordance with announcements made by the Minister.
- (2) Announcements under subclause (1) must only be made when uncontrolled flows are in excess of those necessary to satisfy:
 - (a) the environmental flow rules in clause 28 (1), and
 - (b) the volume required to supply domestic and stock rights, native title rights and

higher priority access licences, and

- (c) any losses expected to be involved in meeting the requirements under paragraphs (a) and (b).
- (3) The maximum volume of uncontrolled flows permitted to be taken from time to time under this clause will be expressed as a percentage of each access licence share component.
- (4) The taking of water from uncontrolled flows under a regulated river (high security) access licence will only be permitted when the sum of available water determinations for regulated river (high security) access licences in any water year is less than 1 megalitre per unit share, and:
- (a) if the sum of available water determinations for regulated river (general security) access licences in any water year is less than 0.75 megalitres per unit share, when flows are either sufficient or insufficient to permit water to be taken under supplementary access licences, or
 - (b) if the sum of available water determinations for regulated river (general security) access licences in any water year is greater than or equal to 0.75 megalitres per unit share and less than 1 megalitre per unit share, when flows are sufficient to permit water to be taken under supplementary access licences.
- (5) The taking of water from uncontrolled flows under a regulated river (general security) access licence will only be permitted:
- (a) if the sum of available water determinations for regulated river (general security) access licences in any water year is less than 0.75 megalitres per unit share, when flows are either sufficient or insufficient to permit water to be taken under supplementary access licences, or
 - (b) if the sum of available water determinations for regulated river (general security) access licences in any water year is greater than or equal to 0.75 megalitres per unit share and less than 1 megalitre per unit share, when flows are sufficient to permit water to be taken under supplementary access licences.
- (6) At any point in the water year the total volume of uncontrolled flows taken under regulated river (high security) access licences and regulated river (general security) access licences, when water is permitted to be taken under supplementary water access licences, must not exceed 11% of the annual high flow tally calculated under clause 55.

Note. The limit of 11% of the annual high flow tally for regulated river (high security) access licences and regulated river (general security) access licences limits the total maximum annual

volume of uncontrolled flow that can be taken by regulated river (high security) access licences, regulated river (general security) access licences and supplementary water access licences to approximately 30%.

- (7) The taking of water from uncontrolled flows in each management zone will be managed to ensure that the total volume of water taken on any day under all access licences, domestic and stock rights and native title rights does not exceed 50% of the total inflows to that management zone.

57 Access to uncontrolled flows under supplementary water access licences

- (1) Subject to subclause (10), the taking of water from uncontrolled flows under supplementary water access licences will only be permitted in accordance with announcements made by the Minister.
- (2) In Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction):
- (a) an announcement under subclause (1) should only be made if uncontrolled flows at the Hunter River at Muswellbrook gauge (210002) in the immediately preceding period have been sufficient to ensure that:
- (i) flows at the 1, 2 and 3 flow reference points specified in Column 2 of Table D will exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D for at least 12 consecutive hours,, and
- (ii) flows are in excess of those necessary to satisfy the environmental flow rules in clause 28 (1), and the volume required to supply domestic and stock rights, native title rights and higher priority access licences, and any losses expected to be involved in meeting these requirements, and
- (b) an announcement can only allow continued take under supplementary water access licences while uncontrolled flows at the Hunter River at Muswellbrook gauge (210002) are sufficient to ensure that flows at the 1, 2 and 3 flow reference points specified in Column 2 of Table D continue to exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D.
- (3) In Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction):
- (a) an announcement under subclause (1) should only be made if uncontrolled flows at the Hunter River at Liddell gauge (210083) in the immediately preceding period have been sufficient to ensure that:

- (i) flows at the 1, 2 and 3 flow reference points specified in Column 2 of Table D will exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D for at least 12 consecutive hours, and
 - (ii) flows are in excess of those necessary to satisfy the environmental flow rules in clause 28 (1), and the volume required to supply domestic and stock rights, native title rights and higher priority access licences, and any losses expected to be involved in meeting these requirements, and
 - (b) an announcement can only allow continued take under supplementary water access licences while uncontrolled flows at the Hunter River at Liddell gauge (210083) are sufficient to ensure that flows at the 1, 2 and 3 flow reference points specified in Column 2 of Table D continue to exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D.
- (4) In Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction):
- (a) an announcement under subclause (1) should only be made if uncontrolled flows at the Hunter River at Liddell gauge (210083) and the Glennies Creek at Middle Falbrook gauge (210044) in the immediately preceding period have been sufficient to ensure that:
 - (i) flows at the 2 and 3 flow reference points specified in Column 2 of Table D will exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 for Table D for at least 12 consecutive hours, and
 - (ii) flows are in excess of those necessary to satisfy the environmental flow rules in clause 28 (1), and the volume required to supply domestic and stock rights, native title rights and higher priority access licences, and any losses expected to be involved in meeting these requirements, and
 - (b) an announcement can only allow continued take under supplementary water access licences while uncontrolled flows at the Hunter River at Liddell gauge (210083) and the Glennies Creek at Middle Falbrook gauge (210044) are sufficient to ensure that flows at the 2 and 3 flow reference points specified in Column 2 of Table D continue to exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D.

- (5) In Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River):
- (a) an announcement under subclause (1) should only be made if uncontrolled flows at the Hunter River at Singleton gauge (210001) in the immediately preceding period have been sufficient to ensure that:
 - (i) flows at the 2 and 3 flow reference points specified in Column 2 of Table D will exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 for Table D for at least 12 consecutive hours, and
 - (ii) flows are in excess of those necessary to satisfy the environmental flow rules in clause 28 (1), and the volume required to supply domestic and stock rights, native title rights and higher priority access licences, and any losses expected to be involved in meeting these requirements, and
 - (b) an announcement can only allow continued take under supplementary water access licences while uncontrolled flows at the Hunter River at Singleton gauge (210001) are sufficient to ensure that flows at the 2 and 3 flow reference points specified in Column 2 of Table D continue to exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D.
- (6) In Management Zone 3A (Glennies Creek):
- (a) an announcement under subclause (1) should only be made if uncontrolled flows at the Glennies Creek at Middle Falbrook gauge (210044) in the immediately preceding period have been sufficient to ensure that:
 - (i) flows at the 2 and 3 flow reference points specified in Column 2 of Table D will exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 for Table D for at least 12 consecutive hours, and
 - (ii) flows are in excess of those necessary to satisfy the environmental flow rules in clause 28 (1), and the volume required to supply domestic and stock rights, native title rights and higher priority access licences, and any losses expected to be involved in meeting these requirements, and
 - (b) an announcement can only allow continued take under supplementary water access licences while uncontrolled flows at the Glennies Creek at Middle Falbrook gauge (210044) are sufficient to ensure that flows at the 2 and 3 flow reference points

specified in Column 2 of Table D continue to exceed the flow thresholds specified in Column 4 of Table D for the dates specified in Column 3 of Table D.

- (7) The taking of water from uncontrolled flows in each management zone will be managed to ensure that the total volume of water taken on any day under all access licences, domestic and stock rights and native title rights does not exceed 50% of the total inflows to that management zone.
- (8) The sharing of water between supplementary water access licences in each management zone to achieve subclause (7) must take into account the share components held by each supplementary water access licence taking water from a management zone.
- (9) At any point in the water year the total volume of uncontrolled flows taken by supplementary water access licences must not exceed 19% of the annual high flow tally calculated under clause 55.

Note. The limit of 19% of the annual high flow tally for supplementary water access licences limits the total maximum annual volume of uncontrolled flow that can be taken by regulated river (high security) access licences, regulated river (general security) access licences and supplementary water access licences to approximately 30%.

- (10) AGL Macquarie Pty Ltd may take water under a supplementary water access licence in the absence of an announcement made by the Minister under subclause (1) if:
 - (a) customer service advice is not available from Water NSW, and
 - (b) no order for water has been made under a different category of access licence held by AGL Macquarie Pty Ltd, and
 - (c) flows at the 1, 2 and 3 flow reference points specified in Column 2 of Table E have exceeded the flow thresholds specified in Column 4 of Table E for the dates specified in Column 3 of Table E for at least 12 consecutive hours, and
 - (d) flows are in excess of those necessary to satisfy the environmental flow rules in clause 28 (1), and the volume required to supply domestic and stock rights, native title rights and higher priority access licences, and any losses expected to be involved in meeting these requirements.

Table E — Uncontrolled flow access thresholds for supplementary water access licences held by AGL Macquarie Pty Ltd in the absence of announcements

Column 1	Column 2	Column 3	Column 4
Flow reference point number	Flow reference point	Dates for which flow target applies	Flow (ML/day)

1	Hunter River at Liddell gauge (210083)	1 May to 30 September	200
		1 October to 30 April	500
2	Hunter River upstream at Singleton gauge (210129)	1 May to 30 September	120
		1 October to 30 April	300
3	Hunter River at Greta gauge (210064)	1 March to 31 May	80
		1 June to 31 August	146
		1 September to 30 November	122
		1 December to the 28/29 February	72

- (11) Water must not be taken under a supplementary water access licence held by AGL Macquarie Pty Ltd under subclause (10), unless an average daily flow is maintained at the Hunter River at Liddell gauge (210083) that is equal to or greater than 50% of the flow immediately upstream of the water supply work nominated by the licence.
- (12) Where water is being taken by AGL Macquarie Pty Ltd under subclause (10), the take of water must cease when:
- (a) uncontrolled flows at flow reference point number 1 in Table E are less than the flow threshold specified in Column 4 of Table E for the dates specified in Column 3 of Table E, or
 - (b) Water NSW has notified AGL Macquarie Pty Ltd to do so, by a process determined by the Minister.

Part 10 Access licence dealing rules

Note. Part 12 allows for amendments to be made to this Part.

58 General

- (1) The access licence dealing rules established in this Part apply to all access licence dealings in this water source.
- (2) This Plan establishes the following trading zones located in this water source:
 - (a) Trading Zone 1,
 - (b) Trading Zone 2,
 - (c) Trading Zone 3.

Note. *Trading zone* is defined in the Dictionary.

- (3) The trading zones in subclause (2) are defined in clause 2 of Schedule 1.

Notes.

- 1 Access licence dealings in this water source are subject to the provisions of the Act, the regulations, the access licence dealing principles and the access licence dealing rules established under this Part.
- 2 The access licence dealing principles prevail over the access licence dealing rules in this Plan to the extent of any inconsistency, as provided under section 71Z (3) of the Act.
- 3 An overview map of the Hunter Regulated River showing the trading zones is shown in Appendix 4.

59 Conversion of access licence to new category

- (1) Dealings under section 71O of the Act are prohibited unless the conversion is from:
 - (a) a regulated river (general security) access licence to a regulated river (high security) access licence, or
 - (b) a regulated river (high security) access licence to a regulated river (general security) access licence.
- (2) A dealing under subclause (1) is subject to the application of a conversion factor and a limit on the amount of access licence share component that can be converted, established by the Minister and published in an Order made under section 71Z of the Act.

60 Assignment of rights dealings

- (1) Dealings under section 71Q of the Act within this water source are prohibited if the dealing involves an assignment of rights:
 - (a) to an access licence that nominates a water supply work located in Trading Zone 1 in this water source, if it would cause:

- (i) the sum of the share components of domestic and stock access licences, major utility access licences, local water utility access licences and regulated river (high security) access licences in that trading zone, plus,
- (ii) the sum of the share components of regulated river (general security) access licences in that trading zone divided by 3,

to exceed 78,408, or

Note. The limit in paragraph (a) assumes that a conversion factor of 3:1 has been applied to the share components of all regulated river (general security) access licences in Trading Zone 1 and that domestic and stock rights and native title rights will equal 2,592 ML/year.

- (b) to an access licence that nominates a water supply work located in Trading Zone 3 in this water source, if it would cause:
 - (i) the sum of the share components of domestic and stock access licences, major utility access licences, local water utility access licences and regulated river (high security) access licences in that trading zone, plus,
 - (ii) the sum of the share components of regulated river (general security) access licences in that trading zone divided by 3,

to exceed 20,000.

Note. The limit in paragraph (b) assumes that a conversion factor of 3:1 has been applied to the share components of all regulated river (general security) access licences in Trading Zone 3.

- (2) Dealings under section 71Q of the Act between this water source and other water sources are prohibited.

61 Amendment of share components dealings (change of water source)

Dealings under section 71R of the Act are prohibited in this water source.

62 Assignment of water allocations dealings

- (1) Dealings under section 71T of the Act within the same water source are prohibited in this water source if the dealing involves an assignment of water allocation:
 - (a) to an access licence that nominates a water supply work located in Trading Zone 1 in this water source, if it would cause:
 - (i) the sum of water allocations credited to the water allocations accounts of all domestic and stock access licences, local water utility access licences, major utility access licences and regulated river (high security) access licences in that trading zone, from available water determinations or dealings under section 71T of the Act in that water year, plus

- (ii) the sum of water allocations credited to the water allocations accounts of all regulated river (general security) access licences in that trading zone, from available water determinations or dealings under section 71T of the Act in that water year, divided by 3,

to exceed 78,408, or

Note. The limit in subclause (1) (a) assumes that a conversion factor of 3:1 has been applied to the share components of all regulated river (general security) access licences in Trading Zone 1 and that domestic and stock rights and native title rights will equal 2,592 ML/year.

- (b) to an access licence that nominates a water supply work located in Trading Zone 3 in this water source, if it would cause:

- (i) the sum of water allocations credited to the water allocation accounts of all domestic and stock access licences, local water utility access licences, major utility access licences and regulated river (high security) access licences in Trading Zone 3, from available water determinations or dealings under section 71T of the Act in that water year, plus

- (ii) the sum of water allocations credited to the water allocations accounts of all regulated river (general security) access licences in that trading zone, from available water determinations or dealings under section 71T of the Act in that water year, divided by 3,

to exceed 20,000, or

Note. The limit in subclause (1) (b) assumes that a conversion factor of 3:1 has been applied to the share components of all regulated river (general security) access licences in Trading Zone 3.

- (c) from an access licence of a category other than a supplementary water access licence with a share component that specifies this water source to a supplementary water access licence with a share component that specifies this water source, or
- (d) from an access licence of a category other than a major utility (Barnard) access licence with a share component that specifies this water source to a major utility (Barnard) access licence with a share component that specifies this water source, or
- (e) from a major utility (Barnard) access licence with a share component that specifies this water source to an access licence of a category other than a major utility (Barnard) access licence with a share component that specifies this water source.

Note. Dealings under section 71T of the Act for trade to or from major utility access licences are not prohibited in this Plan as these rules are contained in the access licence dealing principles. The access licence dealing principles do not contain rules for dealings under section 71T of the Act for major utility (Barnard) access licences and as such these rules are contained in this Plan.

- (3) Dealings under section 71T of the Act between this water source and other water sources are prohibited.

63 Interstate access licence transfer and assignment of water allocation

- (1) Dealings under section 71U of the Act involving the interstate transfer of access licences to or from this water source are prohibited.
- (2) Dealings under section 71V of the Act involving the interstate assignment of water allocations to or from access licences in this water source are prohibited.

64 Nomination of water supply works dealings

- (1) Dealings under section 71W of the Act are prohibited if the dealing involves:
- (a) an access licence being amended to nominate a water supply work located in a different management zone to that specified in the extraction component of the access licence, or
 - (b) an access licence being amended to nominate a water supply work located in a different water source to that specified in the share component of the access licence, or
 - (c) an access licence that does not nominate a water supply work located in Trading Zone 1 in this water source being amended to nominate a water supply work located in Trading Zone 1 in this water source, if it would cause:
 - (i) the sum of the share components of domestic and stock access licences, major utility access licences, local water utility access licences and regulated river (high security) access licences in that trading zone, plus,
 - (ii) the sum of the share components of regulated river (general security) access licences in that trading zone divided by 3,to exceed 78,408, or
- Note.** The limit in paragraph (c) assumes that a conversion factor of 3:1 has been applied to the share components of all regulated river (general security) access licences in Trading Zone 1 and that domestic and stock rights and native title rights will equal 2,592 ML/year.
- (d) an access licence that does not nominate a water supply work located in Trading Zone 3 in this water source being amended to nominate an access licence located in Trading Zone 3 in this water source, if it would cause:
 - (i) the sum of the share components of domestic and stock access licences, major utility access licences, local water utility access licences and regulated river (high security) access licences in that trading zone, plus,

- (ii) the sum of the share components of regulated river (general security) access licences in that trading zone divided by 3,

to exceed 20,000.

Note. The limit in paragraph (d) assumes that a conversion factor of 3:1 has been applied to the share components of all regulated river (general security) access licences in Trading Zone 3.

- (2) Dealings under section 71W of the Act that involve the nomination of a water supply work located in a State other than New South Wales, by an access licence in this water source are prohibited.
- (3) Dealings under section 71W of the Act that involve the nomination of a water supply work in this water source by an access licence from a State other than New South Wales, are prohibited.

Part 11 Mandatory conditions

Note. Part 12 allows for amendments to be made to this Part.

Division 1 General

65 General

In this Part:

- (a) a requirement to notify the Minister in writing will only be satisfied by writing to the address listed in Appendix 5 of this Plan or to the email address for the Department's Advisory Service, Water Regulation, and

Note. At the commencement of this Plan, the email address for the Department's Advisory Service, Water Regulation is water.enquiries@dpi.nsw.gov.au.

- (b) a *metered water supply work with a data logger* means a water supply work with:
- (i) a meter that complies with Australian Standard AS 4747, *Meters for non-urban water supply*, as may be updated or replaced from time to time, and
- (ii) a data logger, and
- (c) if the holder of a water supply work approval is the same as the holder of the access licence under which water is proposed to be taken, it is not necessary to maintain two separate Logbooks and all the required information can be kept in one Logbook.

Note. *Logbook* is defined in the Dictionary.

Division 2 Access licences

Note. This Division is made in accordance with sections 17 (c), 20 and 66 of the Act.

66 General

- (1) Access licences in this water source must have mandatory conditions where required to give effect to the following:
- (a) the relevant water allocation account management rules specified in Division 1 of Part 9 of this Plan,
- (b) the relevant access rules in Division 2 of Part 9 of this Plan,
- (c) the holder of the access licence upon becoming aware of a breach of any condition of the access licence must:

- (i) notify the Minister as soon as practicable, and
 - (ii) if the notification under subparagraph (i) was not in writing, confirm this notification in writing within seven days of becoming aware of the breach,
 - (d) a mandatory condition that facilitates the provisions of clause 33 of this Plan,
 - (e) any other condition required to implement the provisions of this Plan.
- (2) Access licences in this water source, excluding access licences that nominate only metered water supply works with a data logger, must have mandatory conditions where required to give effect to the following:
- (a) the holder of the access licence must keep a Logbook,
 - (b) the holder of the access licence must record the following in the Logbook:
 - (i) each date and period of time during which water was taken under the access licence,
 - (ii) the volume of water taken on that date,
 - (iii) the water supply work approval number of the water supply work used to take the water on that date,
 - (iv) the purpose or purposes for which the water was taken on that date,
 - (v) any other information required to be recorded in the Logbook under the rules of this Plan,
 - (c) the holder of the access licence must produce the Logbook to the Minister for inspection, when requested,
 - (d) the holder of the access licence must retain the information required to be recorded in the Logbook for five years from the date to which that information relates.
- (3) The Minister may require the holder of the access licence that nominates only a metered water supply work with a data logger to keep a Logbook in accordance with any requirements of subclause (2).
- (4) All access licences, excluding supplementary water access licences and domestic and stock access licences, must have a mandatory condition that only allows the taking of water, other than from uncontrolled flows, if it has been ordered in accordance with procedures established by the Minister.
- (5) Domestic and stock access licences must have a mandatory condition that specifies that if instructed in writing by the Minister, domestic and stock access licence holders must only

take water if it has been ordered in accordance with procedures established by the Minister.

- (6) Major utility access licences must have a mandatory condition that requires the development and application of a water efficiency management plan.
- (7) All regulated river (high security) access licences and regulated river (general security) access licences must have mandatory conditions where required, to give effect to the rules in clause 56.
- (8) All supplementary water access licences, excluding a supplementary water access licence held by AGL Macquarie Pty Ltd, must have mandatory conditions that only allow the taking of water in accordance with announcements as specified in clause 57, and after acting in accordance with any procedures established by the Minister.
- (9) All supplementary water access licences held by AGL Macquarie Pty Ltd must have mandatory conditions that only allow the taking of water in accordance with announcements or with the rules under in clause 57, and after acting in accordance with any procedures established by the Minister.
- (10) All regulated river (high security) access licences, regulated river (general security) access licences and supplementary water access licences taking water in accordance with clauses 56 and 57 must have mandatory conditions that require the access licence holder to provide the Minister with figures recording the quantity of water taken from the nominated water supply work, when required to do so and in the form specified by the Minister.

Division 3 Water supply work approvals

Note. This Division is made in accordance with sections 17 (c) and 100 of the Act.

67 General

- (1) Water supply work approvals for water supply works in this water source must have mandatory conditions where required to give effect to the following:
 - (a) unless exempted by the Minister by notice in writing, the approval holder must have metering equipment installed that meets the following requirements:
 - (i) the metering equipment must accurately measure and record the flow of all water taken through the water supply work,
 - (ii) the metering equipment must comply with Australian Standard *AS 4747, Meters for non-urban water supply*, as may be updated or replaced from

time to time,

- (iii) the metering equipment must be operated and maintained in a proper and efficient manner at all times,
- (iv) the metering equipment must be sited and installed at a place in the pipe, channel or conduit between the water source and the first discharge outlet. There must be no flow of water out of the pipe, channel or conduit between the water source and the metering equipment,
- (v) any other requirements as to type, standard or other criteria for the metering equipment specified in the notice,

Note. The Minister may also direct a landholder or person to install, replace or properly maintain metering equipment under section 326 of the Act.

- (b) if a water supply work is no longer to be used permanently, then the approval holder of that work must provide the Minister with notice in writing that the approval holder intends to decommission the water supply work, at least 90 days prior to the date of commencement of decommissioning,
- (c) upon receiving notice of the intention to decommission from the approval holder under paragraph (b), the Minister may by notice in writing, require that the water supply work not be decommissioned, or that the water supply work be decommissioned in accordance with other requirements. These requirements may be specified by the Minister in a work plan,

Note. If a notice in writing is required from the Minister regarding the decommissioning of a water supply work, this notice will be sent to the approval holder within 60 days of the notice under paragraph (b) being sent.
- (d) if the approval holder receives a notice from the Minister under paragraph (c), the approval holder must proceed in accordance with any requirements in that notice,
- (e) if the approval holder does not receive a notice from the Minister under paragraph (c) within 60 days of providing notice of the intent to decommission under paragraph (b), the approval holder must decommission the water supply work,
- (f) within 60 days of the water supply work being decommissioned under paragraphs (d) or (e), the approval holder must notify the Minister in writing that the water supply work has been decommissioned,
- (g) the holder of the water supply work approval upon becoming aware of a breach of any condition of the approval must:
 - (i) notify the Minister as soon as practicable, and

- (ii) if the notification under subparagraph (i) was not in writing, confirm this notification in writing within seven days of becoming aware of the breach,
 - (h) any other conditions required to implement the provisions of this Plan.
- (2) Water supply work approvals for water supply works in this water source, excluding a water supply work that is a metered water supply work with a data logger, must have mandatory conditions where required to give effect to the following:
 - (a) the holder of a water supply work approval must keep a Logbook,
 - (b) the holder of a water supply work approval must record the following in the Logbook:
 - (i) each date and period of time during which water was taken using the water supply work,
 - (ii) the volume of water taken on that date,
 - (iii) the number of the access licence under which water was taken on that date or, if water was taken under some other authority (such as basic landholder rights), the authority under which water was taken,
 - (iv) the purpose or purposes for which the water was taken on that date,
 - (v) details of any cropping carried out using the water taken through the water supply work including the type of crop, area cropped and dates of planting and harvesting,
 - (vi) where metering equipment has been installed for use in connection with the water supply work, the meter reading before water is taken,
 - (vii) where metering equipment has not been installed for use in connection with the water supply work, details of all pumping activities for the water supply work including pump running hours, pump power usage or pump fuel usage, pump start and stop times and pump capacity per unit of time,
 - (viii) any other information required to be recorded in the Logbook under the rules of this Plan,
 - (c) the holder of the water supply work approval must produce the Logbook to the Minister for inspection when requested,
 - (d) the holder of a water supply work approval must retain the information required to be recorded in the Logbook for five years from the date to which that information

relates.

- (3) The Minister may require the holder of a water supply work approval for a metered water supply work with a data logger to keep a Logbook in accordance with any requirements of subclause (2).
- (4) Subclauses (1) to (3) do not apply to water supply work approvals for water supply works held by Water NSW.
- (5) Subject to subclause (6), water supply work approvals held by Water NSW must have mandatory conditions where required to give effect to the system operation rules in Part 6 of this Plan and the daily access rules in Division 2 of Part 9 of this Plan.
- (6) If, in the Minister's opinion, accurate flow data is not available on a particular day from a flow measuring gauge used to determine the system operation rules in Part 6 of this Plan or the daily access rules in Division 2 of Part 9 of this Plan in this Plan, the Minister may determine the flow that is relevant to those rules and notify Water NSW in writing for that day.
- (7) For the purpose of determining the flow that is relevant to the rule, the Minister may take into consideration evidence of past and current flows and readings at other functioning upstream and downstream gauges.

Part 12 Amendment of this Plan

68 General

- (1) Amendments specified throughout this Plan and in this Part are amendments authorised by this Plan.
- (2) An amendment authorised by this Plan is taken to include any consequential amendments required to be made to this Plan to give effect to that particular amendment.
Note. For example, if Part 1 is amended to add a new management zone, this may require amendments to other parts of this Plan to include rules for that management zone.
- (3) An amendment authorised by this Plan which results in a variation of the bulk access regime is an amendment authorised by this Plan for the purposes of sections 87 (2) (c) and 87AA of the Act.

69 Part 1

Part 1 may be amended to:

- (a) add a river or section of a river to this water source or remove a river or section of river from this water source provided that:
 - (i) any river or section of river that is added has been declared to be a regulated river by an order published in the Gazette, and
 - (ii) the Minister is satisfied that there will be no impact on environmental water or on the available water to any access licences in this water source,
- (b) include in this water source any or all of the portions of waterfront land which have been excised from this water source or extend the area of unconsolidated sediments included in this water source providing that there has been:
 - (i) in the Minister's opinion, a comprehensive assessment of potential environmental impacts and potential impacts on future water allocations to access licences in this water source and access licences that are to be included in the water source, and
 - (ii) consultation with representatives of affected access licence holders and relevant government agencies.

70 Part 9

Part 9 may be amended to revise the maximum volume that may be held in the account of a major utility (Barnard) access licences if the Minister is satisfied that there will be no

impact on water for the environment in this water source or on future water allocations to access licences in this water source.

71 Part 11

Part 11 may be amended to do any of the following:

- (a) amend the rules in relation to record keeping including in relation to requirements for Logbooks,
- (b) amend clause 67 to specify different standards or requirements for decommissioning water supply works or construction requirements for water supply works.

72 Dictionary

The Dictionary may be amended to add, modify or remove a definition.

73 Other

- (1) This Plan may be amended to include provisions for:
 - (a) floodplain harvesting,
Note. *Floodplain harvesting* is defined in the Dictionary.
 - (b) inter-valley transfers and intra-valley transfers required to reflect changes to the Hunter Valley water supply network,
 - (c) rules for water supply works taking water contained within the unconsolidated alluvial sediments underlying the waterfront land of all rivers to which this Plan applies.
 - (2) Consequential amendments may be made to this Plan as a result of an amendment to the Act or regulations.
 - (3) This Plan may be amended following the granting of a native title claim pursuant to the provisions of the *Native Title Act 1993* of the Commonwealth to give effect to an entitlement granted under that claim.
 - (4) This Plan may be amended to provide rules for the protection of water-dependent Aboriginal cultural assets to do any of the following:
 - (a) identify water-dependent Aboriginal cultural assets,
 - (b) restrict the granting and amending of water supply work approvals to protect water-dependent Aboriginal cultural assets,
 - (c) amend the dealing rules to protect water-dependent Aboriginal cultural assets.
-

- (5) Any amendment under subclause (4) will take into account the socio-economic impacts of the proposed change and the environmental water requirements of this water source.
- (6) Before making an amendment pursuant to subclause (4) the Minister should consult with relevant Government agencies and stakeholders.

Dictionary

Note. Unless otherwise defined in this Plan, words and expressions that are defined in the Act or in the regulations have the same meaning in this Plan.

Aboriginal person has the same meaning as it has in the *Aboriginal Land Rights Act 1983*.

alluvial sediments means unconsolidated fluvio-lacustrine sediments.

conservation storage volume is the volume of Glenbawn Dam water storage between the invert of the lower outlet works and the start of the flood mitigation zone.

dead storage is the volume below the invert of the lower outlet works.

flood mitigation zone is the area of Glenbawn Dam that is above 276.25 metres Australian Height Datum, which is kept empty for the purpose of mitigating potential floods.

floodplain harvesting is the collection, extraction or impoundment of water flowing across the floodplain.

Logbook, in relation to an access licence or water supply work approval, means a written record, kept in hard copy or electronic form, that accurately records all information required to be kept in relation to the access licence or water supply work approval under the rules of this Plan.

management zone is an area within a water source in which rules particular to that management zone will apply, for example daily extraction limits and restrictions on dealings.

reserves are volumes of water put aside in a **water storage** to allow the supply of future water requirements.

supply capability is defined as the rate at which water that can be supplied to a section of a water source after satisfying the environmental water provisions and the requirements for water to satisfy basic landholder rights.

trading zone is an area within a water source established under clause 58 and defined in clause 2 of Schedule 1 of this Plan, to which restrictions on dealings apply.

transmission losses are any loss of water volume, through natural influences such as evaporation or seepage, which occurs as water travels down a river.

uncontrolled flows are flows within this water source that:

- (a) are either not required for or not able to be used to meet:
 - (i) environmental flow rules specified in clause 28, or
 - (ii) the supply for domestic and stock rights and native title rights specified in clause 30 (1) (a), or
 - (iii) access licence water orders, or
- (b) have been released to meet an access license water order and this water order has not been taken and the flows cannot be re-regulated.

water storage means the water body impounded by a dam, weir or other structure, which is used to regulate and manage river flows in this water source.

water supply system includes the water storages and all other factors influencing water supply that are under the control of the Minister.

water use development includes all privately owned water management structures, and all aspects of farm, industry, town or private household development which affect the volumes of water taken from this water source, and the management practices that are applied in relation to them.

Schedule 1 Management zones, flow reference points and trading zones

1 Management zones

For the purposes of managing extraction of water by supplementary water access licences and access to uncontrolled flows by regulated river (high security) access licences and regulated river (general security) access licences, management zones are listed in Column 1 of the table below. The description of the management zones is specified in Column 2 of the table below.

Column 1	Column 2
Management zone	Management zone definition
Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction)	From Glenbawn Dam at a water level that is equivalent to 276.25 metres Australian Height Datum down to and including the Goulburn River junction
Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction)	Hunter River from the Goulburn River junction down to and including the Glennies Creek junction
Management Zone 2A (Hunter River from Glennies Creek Junction to Wollombi Brook Junction)	Hunter River from the Glennies Creek junction down to and including the Wollombi Brook junction
Management Zone 2B (Hunter River from Wollombi Brook Junction to Downstream Extent of the Hunter River)	Hunter River from the Wollombi Brook junction to the downstream extent of the Hunter Regulated River Water Source
Management Zone 3A (Glennies Creek)	From Glennies Creek Dam at a water level that is equivalent to 186 metres Australian Height Datum downstream to the Hunter River junction

2 Trading zones

Trading zones referred to in this Plan are listed in Column 1 of the table below and the descriptions of the trading zones are specified in Column 2 of the table below.

Column 1	Column 2
Trading zone	Description
1	All of the Hunter Regulated River Water Source from Glenbawn Dam at a water level that is equivalent to 276.25 metres Australian Height

	Datum down to and including the junction of the Hunter River and Glennies Creek
2	All of the Hunter Regulated River Water Source downstream of the junction of the Hunter River and Glennies Creek
3	All of the Hunter Regulated River Water Source from Glennies Creek Dam at a water level that is equivalent to 186 metres Australian Height Datum down to the junction of the Hunter River and Glennies Creek

Appendix 1 Rivers and lakes in the Hunter Regulated River Water Source

Note. Under the Act regulated rivers are declared by the Minister by an order. This appendix lists the rivers and the lakes that were in the order at the commencement of this Plan. This appendix is provided for informational purposes only. Copies of Ministerial orders are published in the NSW Government Gazette.

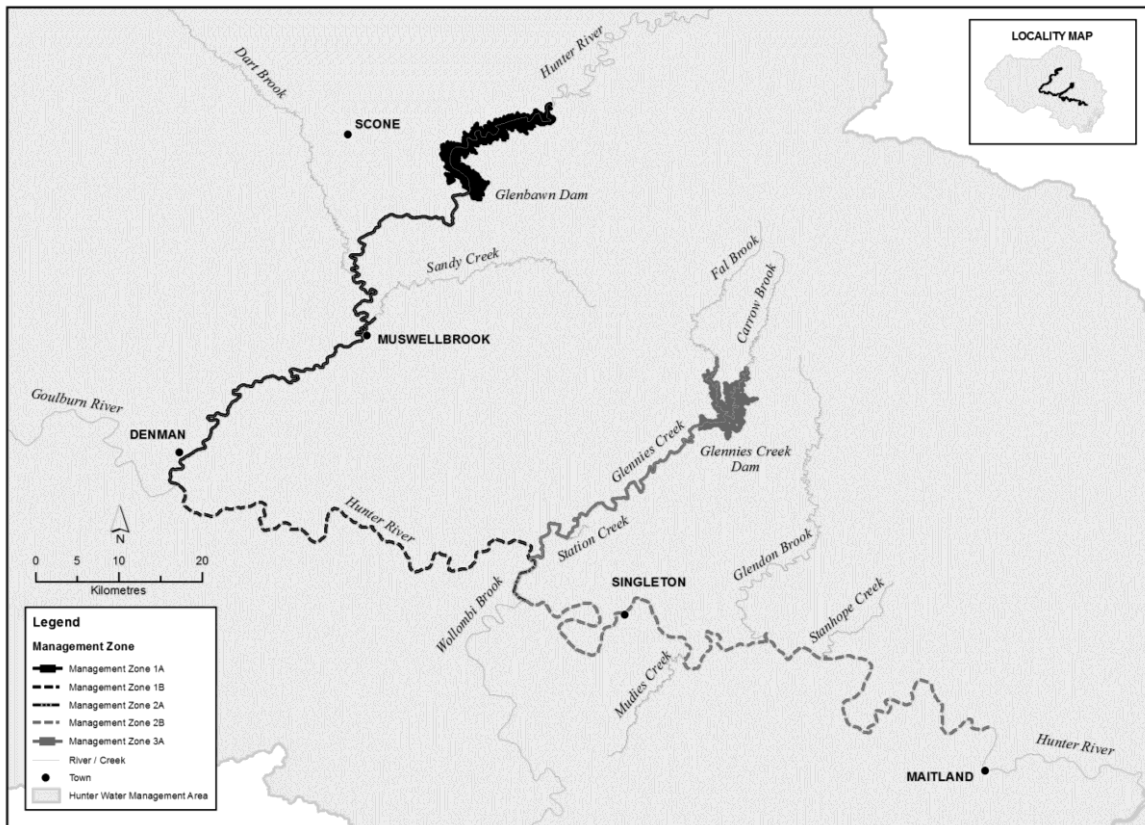
At the commencement of this Plan, the following rivers have been declared to be regulated rivers for the purposes of the Act:

- (a) Dart Brook from its confluence with the Hunter River to the point at latitude -32.199596 and longitude 150.874492 in decimal degrees GDA94, Parish of Ellis, County of Brisbane,
- (b) Glendon Brook from its confluence with the Hunter River to the point at latitude -32.588355 and longitude 151.317235 in decimal degrees GDA94, Parish of Marwood, County of Durham,
- (c) Glennies Creek Dam water storage at a water level that is equivalent to 186.0 metres Australian Height Datum,
- (d) Glennies Creek from Glennies Creek Dam downstream to the confluence of Glennies Creek with Hunter River,
- (e) Glenbawn Dam water storage at a water level that is equivalent to 276.25 metres Australian Height Datum,
- (f) Hunter River from Glenbawn Dam downstream to the point at latitude -32.686680 and longitude 151.561340 in decimal degrees GDA94, Parish of Maitland, County of Northumberland,
- (g) Mudies Creek from its confluence with the Hunter River to a concrete culvert located at latitude -32.612005 and longitude 151.231899 in decimal degrees GDA94, Parish of Whittingham, County of Northumberland,
- (h) Stanhope Creek from its confluence with the Hunter River to the point at latitude -32.608845 and longitude 151.384425 in decimal degrees GDA94, Parish of Stanhope, County of Durham,
- (i) Station Creek from its confluence with Glennies Creek to the rock bar at latitude -32.482847 and longitude 151.106299 in decimal degrees GDA94, Parish of Auckland, County of Durham,
- (j) Sandy Creek from its confluence with the Hunter River at Muswellbrook to the point at

latitude -32.243878 and longitude 150.898126 in decimal degrees GDA94, Parish of Rowan, County of Durham.

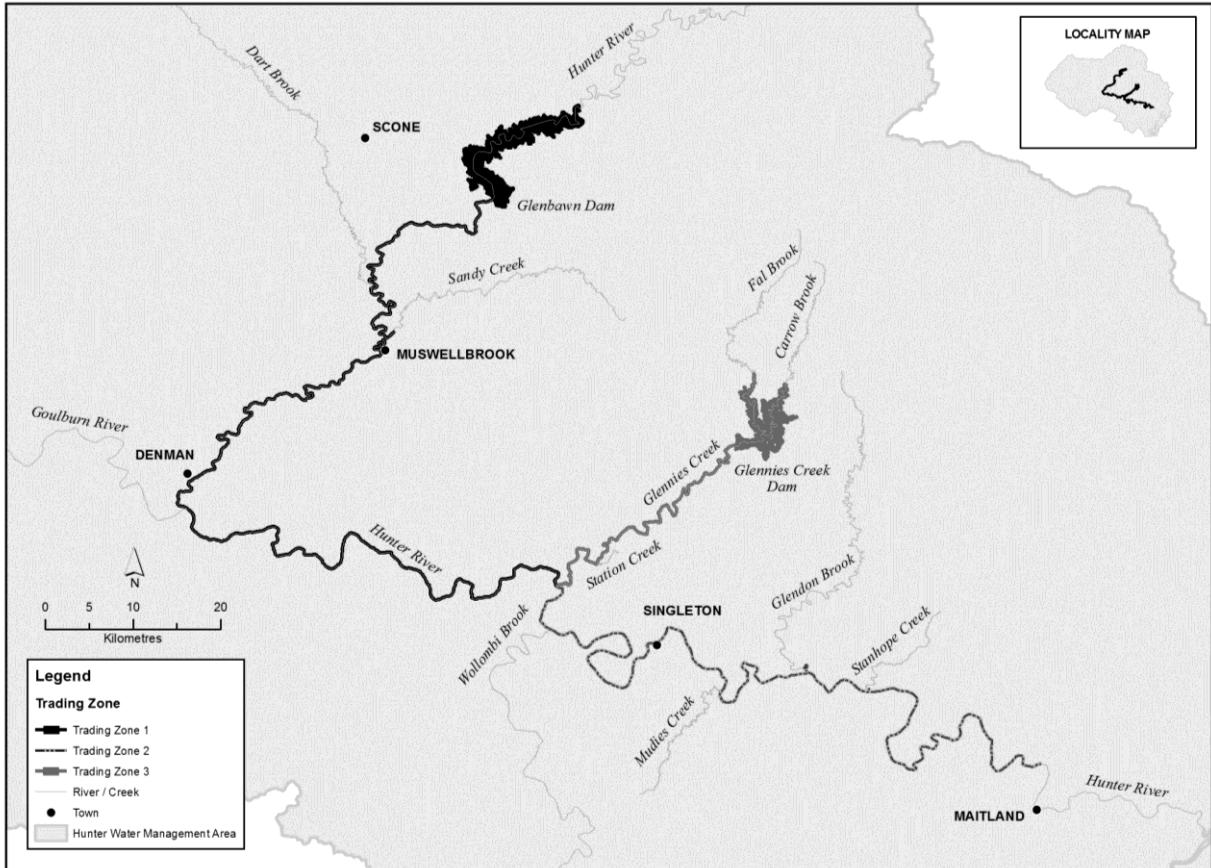
Appendix 3 Overview map of the management zones in the Hunter Regulated River

Overview map of the management zones in the Hunter Regulated River



Appendix 4 Overview map of the trading zones in the Hunter Regulated River

Overview map of the trading zones in the Hunter Regulated River



Appendix 5 Office

Any notifications that may be required to be made to the Minister, as specified in this Plan, can be made to the following office:

DPI Water
PO Box 2213
DANGAR NSW 2309