Queensland

Water Act 2000

Water Plan (Logan Basin) 2007

Current as at 3 July 2017

Queensland

Water Plan (Logan Basin) 2007

Contents

Contents

Water Plan (Logan Basin) 2007

Part 1 Preliminary

1 Short title

This water plan may be cited as the *Water Plan (Logan Basin) 2007*.

2 Purposes of plan

The following are the purposes of this plan—

(a) to define the availability of water in the plan area;

(b) to provide a framework for sustainably managing water and the taking of water;

(c) to identify priorities and mechanisms for dealing with future water requirements;

(d) to provide a framework for establishing water allocations;

(e) to provide a framework for reversing, where practicable, degradation that has occurred in natural ecosystems.

3 Definitions

The dictionary in schedule 13 defines particular words used in this plan.

Part 2 Plan area and water to which plan applies

4 Plan area

This plan applies to the area shown as the plan area on the map in schedule 1.

Note—

See section 6 for information about the exact location of the plan area.

5 Subcatchment areas

Each part of the plan area that is within a subcatchment area shown on the map in schedule 2, and named in schedule 3, is a subcatchment area for this plan.

6 Information about areas

(1) The exact location of the plan area and subcatchment area boundaries is held in digital electronic form by the department.

(2) The information held in digital electronic form can be reduced or enlarged to show the details of the boundaries.

7 Nodes

(1) A node mentioned in this plan is a place—

(a) on a watercourse in the plan area; and

(b) for which environmental flow objectives are set for performance indicators.

(2) The location of each node is shown on the map in schedule 1 and described in schedule 4.

(3) Each node is identified on the map by a letter of the alphabet.

8 Water to which plan applies

This plan applies to the following water in the plan area—

(a) water in a watercourse or lake;

(b) water in springs not connected to water to which the *Water Plan (Great Artesian Basin) 2006* applies.

Part 3 Outcomes for sustainable management of water

9 Outcomes for water in the plan area

Water in the plan area is to be allocated and sustainably managed in a way that—

(a) recognises the natural state of watercourses, lakes and springs has changed because of water infrastructure, flow supplementation and the taking of water; and

(b) seeks to achieve a balance in the following outcomes—

(i) the general outcomes mentioned in section 10;

(ii) the ecological outcomes for particular parts of the plan area mentioned in section 11.

10 General outcomes for the plan area

Each of the following is a general outcome for water in the plan area—

(a) to provide for future water requirements, including the opportunity for additional water to be taken from the plan area;

(b) to provide for the continued use of all water entitlements and other authorisations;

(c) to protect the probability of being able to obtain water under a water allocation;

(d) to encourage the efficient use of water;

(e) to protect essential water supplies during times of low water availability;

(f) to support natural ecosystems by minimising changes to natural flow regimes;

(g) to allow water-related cultural use of parts of the plan area by the traditional owners of the parts of the area;

(h) to provide consistency with the SEQ regional plan.

11 Ecological outcomes for particular parts of the plan area

Each of the following is an ecological outcome for water in a particular part of the plan area—

(a) for the Logan and Albert Rivers estuary—

(i) to minimise changes to the delivery of fresh water, sediment, nutrients and organic matter to the estuary and southern Moreton Bay; and

(ii) to minimise changes to the brackish water habitat in the estuary;

(b) for Canungra Creek, Christmas Creek, Running Creek, Palen Creek and Upper Logan River subcatchment areas, Albert River and its tributaries upstream of node F, Burnett Creek and its tributaries upstream of node A and Teviot Brook and its tributaries upstream of node E—

(i) to minimise changes to the low flow regime of the watercourses; and

(ii) to minimise changes to the medium and high flow regime important to river forming processes;

(c) for the Carbrook wetlands—to minimise changes to the flooding regime.

Part 4 Performance indicators and objectives

Division 1 Environmental flow objectives

12 Performance indicators for environmental flow objectives

The performance indicators for the environmental flow objectives are—

(a) for assessing periods of low flow, the following—

(i) 50% daily flow;

(ii) 90% daily flow;

(iii) daily flow less than 1ML;

(iv) number of periods of no flow of at least 1 month but less than 3 months;

(v) number of periods of no flow of at least 3 months but less than 6 months;

(vi) number of periods of no flow of at least 6 months; and

(b) for assessing periods of medium to high flow, the following—

(i) mean annual flow;

(ii) 1.5 year daily flow volume;

(iii) 5 year daily flow volume;

(iv) 20 year daily flow volume; and

(c) for assessing seasonal flow patterns—

(i) flow regime class; and

(ii) annual proportional flow deviation.

13 Environmental flow objectives

The environmental flow objectives for this plan are stated in schedule 5.

Division 2 Water allocation security objectives

14 Performance indicators for water allocation security objectives

The performance indicators for the water allocation security objectives are—

(a) for taking supplemented water—monthly supplemented water sharing index; and

(b) for taking unsupplemented water—

(i) for water allocations in a class A water allocation group—

(A) mean unsupplemented water sharing index; and

(B) 95% unsupplemented water sharing index; and

(ii) for water allocations in a class B, C or D water allocation group—

(A) mean unsupplemented water sharing index; and

(B) 70% unsupplemented water sharing index.

Note—

See section 59 for the water allocations in particular water allocation groups.

15 Water allocation security objectives

The water allocation security objectives for this plan are stated in—

(a) for water allocations to take supplemented water—schedule 6, part 1; and

(b) for water allocations to take unsupplemented water—schedule 6, part 2.

Part 5 Strategies for achieving outcomes

Division 1 Decisions made under this plan

16 Application of div 1

This division applies to decisions about the allocation or management of water in the plan area, other than a decision—

(a) about reinstating or replacing an expired water licence; or

(b) to grant a water entitlement to a local government, government agency or the water grid manager for supply under operations that were in existence on the commencement of this plan.

17 Decisions consistent with objectives

Decisions about the allocation or management of water in the plan area, other than a decision about a water permit, must be consistent with—

(a) the environmental flow objectives stated in schedule 5; and

(b) the water allocation security objectives stated in schedule 6.

18 Assessing impact of decisions

(1) The IQQM computer program's simulation for the simulation period is used to assess consistency with the objectives.

(2) If it is not practicable to use the IQQM computer program, another assessment method approved by the chief executive may be used.

(3) The chief executive may approve an assessment method for subsection (2) only if the chief executive is satisfied the

method will assess consistency with the objectives at least as accurately as the IQQM computer program.

19 Decisions not to increase amount of water taken

(1) The chief executive must not make a decision that would increase the average volume of water allowed to be taken under authorisations in the plan area.

(2) Subsection (1) does not apply to—

(a) a decision about unallocated water made under section 22; or

(b) a decision about a water permit.

(3) A decision mentioned in subsection (1) includes a decision about an application for an authorisation to take water made but not dealt with before the commencement of this plan.

20 Restriction on taking water from waterholes or lakes

(1) The chief executive may grant a water licence, water permit or water allocation, or change the location from which water may be taken under a water allocation, to take water from a waterhole or lake only if—

(a) the chief executive imposes a condition on the licence, permit or allocation about maintaining the cultural or environmental values of the waterhole or lake; or

(b) the chief executive is satisfied the taking of the water will not adversely affect the cultural or environmental values of the waterhole or lake.

Example for paragraph (a)—

a condition that the water may be taken only if the water level in the waterhole or lake is above the level that is 0.1m below the level at which the waterhole or lake naturally overflows

(2) Subsection (1) does not apply to the grant of—

(a) a water licence, water permit or water allocation to replace an authorisation in force immediately before the commencement of this plan; or

(b) a water allocation converted from an authorisation in force immediately before the commencement.

(3) In making a decision under subsection (1), the chief executive must consider—

(a) the impact the proposed taking of the water may have on the following—

(i) water quality;

(ii) inundation of habitats;

(iii) the movement of fish and other aquatic species;

(iv) the natural movement of sediment;

(v) recreation and aesthetic values;

(vi) cultural values including, for example, the cultural values of the traditional owners of the area to which the application relates; and

(b) whether the proposed taking is likely to have a direct adverse effect on groundwater flows.

(4) Subsection (1) does not limit the restrictions that may be imposed on the taking of water from a waterhole or lake.

(5) Subsection (3) does not limit the matters the chief executive may consider.

Division 2 General, strategic and town water supply reserves

Subdivision 1 Preliminary

21 Unallocated water held as general, strategic or town water supply reserve

Unallocated water is held as a general, strategic or town water supply reserve and dealt with under this division.

22 Granting or reserving unallocated water

Unallocated water may be granted or reserved from the general, strategic or town water supply reserve under a process in the resource operations plan.

23 Matters chief executive must consider

(1) In dealing with unallocated water, the chief executive must consider—

(a) the need for, and efficiency of, present and proposed uses of water including—

(i) the extent to which water is being taken under existing authorisations in the plan area; and

(ii) emerging requirements for additional water, both within and outside the plan area, and the likely timeframe in which the additional water will be required; and

(iii) alternative water sources including, for example, recycled water and water savings from improvements in the efficiency of water use; and

(b) the availability of an alternative water supply for the purpose for which the water is required; and

(c) the impact the proposed taking of, or interfering with, the water may have on the following—

(i) water quality;

(ii) estuarine areas;

(iii) inundation of habitats;

(iv) the movement of fish and other aquatic species;

(v) the natural movement of sediment;

(vi) recreation and aesthetic values;

(vii) cultural values, including, for example, cultural values of the traditional owners of the area; and

(d) whether the proposed taking of or interfering with, or the proposed use of, the water is likely to—

(i) have a direct adverse effect on groundwater; or

(ii) lead to degradation of land or downstream watercourses; and

(e) whether the proposed use of the water is consistent with—

(i) the SEQ regional plan; and

(ii) a system operating plan applying to the plan area; and

(iii) a regional water security program for the SEQ region; and

(f) if the process in the resource operations plan for granting unallocated water includes a public auction, public ballot or public tender—the price offered under the process.

(2) Subsection (1) does not limit the matters the chief executive may consider.

Subdivision 2 General reserve

24 Application of sdiv 2

This subdivision applies to unallocated water that is held as a general reserve.

25 Granting or reserving unallocated water from the general reserve

(1) Unallocated water may be granted or reserved from the general reserve under a water entitlement to take unsupplemented water.

(2) Each water entitlement must state, for the entitlement, the following—

(a) the purpose for which the water may be taken;

(b) the annual volumetric limit;

(c) the maximum rate at which the water may be taken;

(d) the flow conditions under which the water may be taken.

Subdivision 3 Strategic reserve

26 Application of sdiv 3

This subdivision applies to unallocated water that is held as a strategic reserve.

27 Granting or reserving unallocated water from the strategic reserve

Unallocated water may be granted or reserved from the strategic reserve only—

(a) for infrastructure for a project declared under the *State Development and Public Works Organisation Act 1971*, section 26, to be a significant project; or

(b) for infrastructure identified in—

(i) the SEQ regional plan or instruments that implement the plan; or

(ii) a regional water security program for the SEQ region.

Subdivision 4 Town water supply reserve

28 Application of sdiv 4

This subdivision applies to unallocated water that is held as a town water supply reserve.

29 Granting unallocated water from the town water supply reserve

Unallocated water may be granted from the town water supply reserve under a water licence for the water grid manager to take an annual volumetric limit of up to 150ML from Canungra Creek.

Division 4 Deciding operational and supply arrangements for water infrastructure

44 Matters chief executive must consider

(1) In deciding the operating arrangements and supply requirements for water infrastructure, the chief executive must consider—

(a) the impact of the infrastructure's operation on the following—

(i) water quality;

(ii) instream water levels;

(iii) erosion of the bed and banks of watercourses;

(iv) riparian vegetation;

(v) the extent to which artificial variations in instream water levels and flows may adversely affect natural ecosystems;

(vi) recreation and aesthetic values;

(vii) cultural values, including, for example, cultural values of the traditional owners of the area; and

(b) the impact of the infrastructure on the movement of fish and other aquatic species; and

(c) the impact on natural ecosystems of the transfer of water between watercourses; and

(d) the likelihood of fish deaths caused by the operation of the infrastructure; and

(e) the joint operation of all the infrastructure; and

(f) any system operating plan applying to the plan area; and

(g) any regional water security program for the SEQ region.

(2) Subsection (1) does not limit the matters the chief executive may consider.

Division 6 Converting authorisations to water allocations

Subdivision 1 General

46 Definition for div 6

In this division—

authorisation means an authorisation or authority mentioned in section 47.

47 Application of div 6

This division applies only to—

(a) authorisations converted, under the resource operations plan, to water allocations; and

(b) water allocations converted, under the resource operations plan, from authorisations.

48 Location for taking water

The location for taking water stated on a water allocation must include the place at which water could have been taken under the authorisation.

49 Purpose to be stated on water allocation

The purpose stated on a water allocation must be 'any'.

Subdivision 3 Water allocations to take unsupplemented water

53 Elements of a water allocation to take unsupplemented water

A water allocation to take unsupplemented water must state—

(a) the maximum rate at which water may be taken under the allocation; and

(b) the annual volumetric limit for the allocation.

54 Nominal volumes for water allocations to take unsupplemented water

(1) The nominal volume for a water allocation in a water allocation group mentioned in schedule 8, column 1, is the volume decided by the chief executive.

(2) In deciding the nominal volume, the chief executive—

(a) must have regard to—

(i) the local availability of water; and

(ii) the conditions under which water may be taken under the authorisation; and

(iii) the annual volumes of water estimated by the chief executive to have been taken under the authorisation during the period, of not more than 10 years, immediately before the commencement of this plan; and

(iv) the simulated mean annual diversion for the authorisation; and

(v) the efficiency of the use of the water mentioned in subparagraph (iii); and

(b) must ensure the total of the nominal volumes for the water allocations in the water allocation group is not more than the volume stated in schedule 8, column 2, for the group.

55 Annual volumetric limit for taking unsupplemented water

(1) The annual volumetric limit for a water allocation to take unsupplemented water is—

(a) for an authorisation that states the volume of water that may be taken in a period of 12 months—the volume stated on the authorisation; and

(b) for an authorisation that states the area that may be irrigated—the volume decided by the chief executive having regard to the volume of water required to efficiently irrigate the area, but not more than the volume, expressed in megalitres, calculated by multiplying the area, in hectares, by 6; and

(c) for another authorisation—the volume decided by the chief executive having regard to—

(i) the conditions under which water may be taken under the authorisation; and

(ii) the water taking capacity of any works, being used or authorised to be used, for taking water under the authorisation; and

(iii) the annual volumes of water estimated by the chief executive to have been taken under the authorisation during the period, of not more than 10 years, immediately before the commencement of this plan; and

(iv) the efficiency of the use of the water mentioned in subparagraph (iii).

(2) Subsection (1)(c) does not limit the matters the chief executive may consider.

57 Maximum rates for taking unsupplemented water

The maximum rate at which unsupplemented water may be taken under a water allocation is—

(a) for an authorisation that states a maximum rate—the rate stated on the authorisation; and

(b) for an authorisation that does not state a maximum rate but for which a related development permit states a pump size mentioned in schedule 9, column 1—

(i) if the authorisation holder satisfies the chief executive that the actual rate at which water can be taken is different from the rate stated in schedule 9, column 2, for the pump size—the rate decided by the chief executive having regard to—

(A) the conditions under which water may be taken under the authorisation; and

(B) the water taking capacity of the pump to which the development permit relates (the ***existing pump***) under normal operating conditions; and

(C) the irrigation or water distribution system related to the existing pump during the

period of not more than 10 years immediately before the commencement of this plan; and

(D) the efficiency of the water use mentioned in subsubparagraph (C); or

(ii) otherwise—the rate stated in schedule 9, column 2, for the pump size; and

(c) for an authorisation that does not state a maximum rate but for which a related development permit states a pump size other than a pump size mentioned in schedule 9, column 1—the rate decided by the chief executive having regard to the matters mentioned in paragraph (b)(i)(A) to (D); and

(d) for another authorisation—the rate decided by the chief executive having regard to—

(i) the nature of the authorisation; and

(ii) an estimate of the rate, or measurement of the actual rate, at which water is taken under the authorisation.

58 Conditions for water allocations to take unsupplemented water

In deciding the conditions under which water may be taken under a water allocation to take unsupplemented water, the chief executive must have regard to the conditions stated on the relevant authorisation.

59 Water allocation groups for water allocations to take unsupplemented water

A water allocation to take unsupplemented water in a subcatchment area mentioned in schedule 10, column 1, belongs to—

(a) for an authorisation for town water supply purposes—the water allocation group (class A)

mentioned opposite the subcatchment area in schedule 10, column 2; and

(b) for an authorisation that states the area that may be irrigated or the volume of water that may be taken in a period of 12 months, other than an authorisation for town water supply purposes or stock or domestic purposes—the water allocation group (class B) mentioned opposite the subcatchment area in schedule 10, column 3; and

(c) for other authorisations to take unsupplemented water in the area of the Logan River Water Supply Scheme—the water allocation group (class C) mentioned opposite the subcatchment area in schedule 10, column 4; and

(d) for other authorisations—the water allocation group (class D) mentioned opposite the subcatchment area in schedule 10, column 5.

Division 7 Water licences to take unsupplemented water

60 Amending water licences to take unsupplemented water

(1) This section applies to a water licence to take unsupplemented water in force on the commencement of this plan.

(2) The licence may be amended under a process in the resource operations plan to state the following—

(a) the purpose for which water may be taken under the licence;

(b) the annual volumetric limit for the licence;

(c) the maximum rate at which water may be taken under the licence;

(d) the flow conditions for the licence.

61 Annual volumetric limit for taking unsupplemented water

The annual volumetric limit to take unsupplemented water for a water licence mentioned in section 60 is the annual volumetric limit mentioned in section 55 or decided by the chief executive under that section as if the water licence were a water allocation.

62 Maximum rates for taking unsupplemented water

The maximum rate at which unsupplemented water may be taken under a water licence mentioned in section 60 is the maximum rate mentioned in section 57 or decided by the chief executive under that section as if the water licence were a water allocation.

Division 9 Miscellaneous

65 Releasing water through fish ways

If water to which this plan applies can be released from a dam or weir through fish ways, the environmental management rules in the resource operations plan must provide for the release.

Part 6 Monitoring and reporting requirements

67 Monitoring and reporting requirements

(1) To help the Minister assess the effectiveness of the management strategies for achieving the outcomes mentioned in part 3, the resource operations plan must state—

(a) the monitoring requirements for water and natural ecosystems for this plan; and

(b) the reporting requirements for this plan for operators of infrastructure interfering with water in the plan area.

(2) Also, a monitoring requirement for this plan is to monitor groundwater levels in the plan area.

(3) Subsections (1) and (2) do not limit the monitoring requirements the chief executive may impose for this plan.

Part 7 Implementing and amending this plan

71 Priorities for converting to, or granting, water allocations

Each area described in schedule 11 is a priority area for this plan for the conversion to, or granting of, water allocations.

73 Minor or stated amendment of plan—Act, s 57

The following types of amendment may be made to this plan under section 57(b) of the Act—

(a) an amendment or addition of an environmental flow objective if the amendment or addition achieves an equivalent or improved ecological outcome without adversely affecting the water allocation security objectives or the outcomes under part 3;

(b) an amendment or addition of a water allocation security objective if the amendment or addition does not adversely affect existing water allocations, environmental flow objectives or the outcomes under part 3;

(c) an amendment or addition of a priority area;

(d) an amendment or addition of a node;

(e) an amendment or addition of a priority group;

(f) an amendment or addition of a water allocation group;

(g) an amendment to subdivide a subcatchment area or amalgamate subcatchment areas;

(h) an amendment to subdivide a volume, or amalgamate volumes, stated in schedule 8;

(i) an amendment or addition of a monitoring or reporting requirement under part 6.

74 Amending or replacing plan

The Minister must consider amending this plan or preparing a new plan to replace this plan if the Minister is satisfied—

(a) in relation to this plan's outcomes under part 3—

(i) water entitlements in the plan area are not sufficient to meet water needs sourced from the plan area having regard to—

(A) the extent to which water is being taken under the water entitlements; and

(B) the efficiency of present, and expected future, water use; and

(C) emerging requirements for additional water; and

(D) alternative water sources including, for example, recycled water and water savings from improvements in the efficiency of water use; and

(E) the likely timeframe in which additional water will be required; and

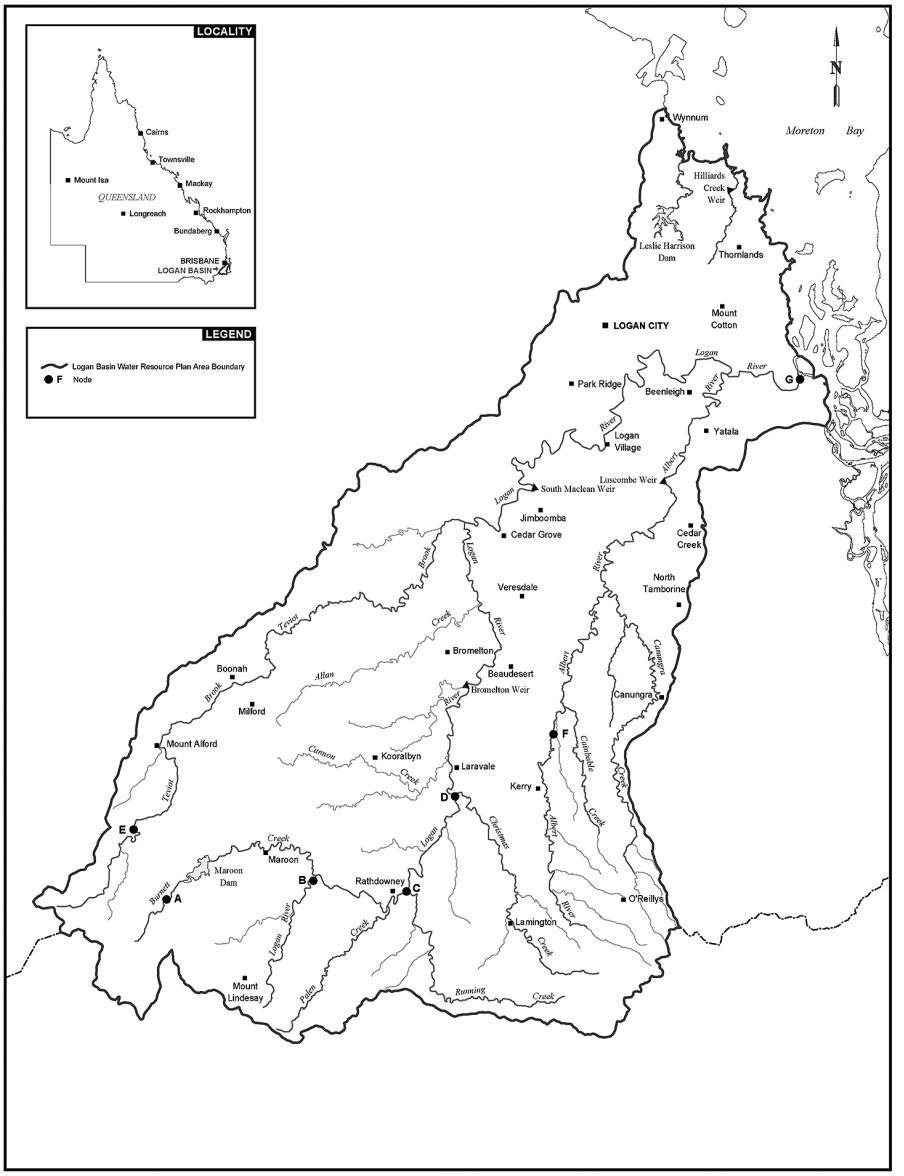
(ii) there are economically viable and ecologically sustainable uses for additional water; or

(b) this plan's ecological outcomes under section 10 or 11 are not being achieved; or

(c) this plan is inconsistent with the SEQ regional plan.

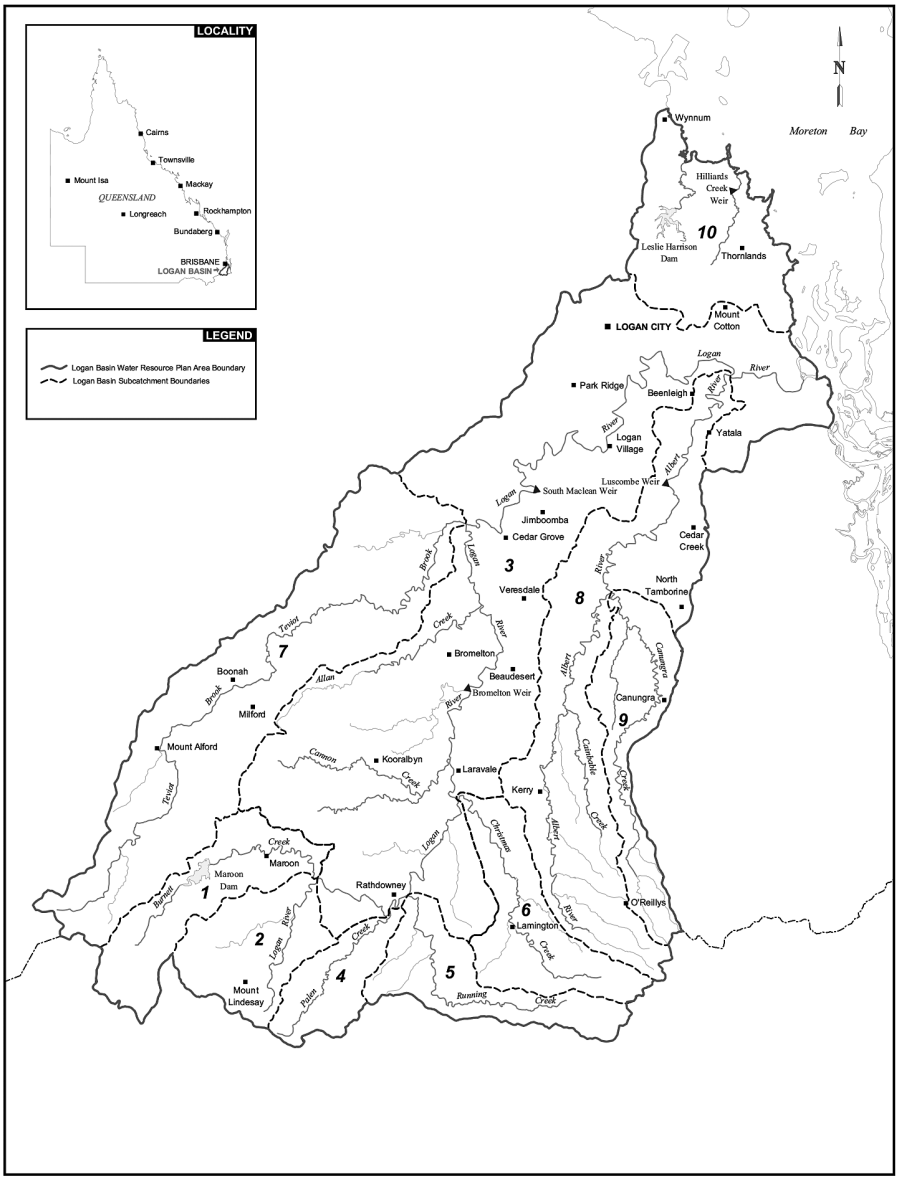
Schedule 1 Plan area

section 4



Schedule 2 Subcatchment areas

section 5



Schedule 3 Subcatchment area names

section 5

Column 1	Column 2
Subcatchment area	**Subcatchment area name**
1	Burnett Creek
2	Upper Logan River
3	Logan River
4	Palen Creek
5	Running Creek
6	Christmas Creek
7	Teviot Brook
8	Albert River
9	Canungra Creek
10	Redlands subcatchments

Schedule 4 Nodes

section 7

Column 1	Column 2
Node	**Location**
A	Burnett Creek upstream of Maroon Dam at AMTD 32.6km
B	Logan River at Foresthome AMTD 166.4km
C	Running Creek at AMTD 0.0km
D	Christmas Creek at AMTD 0.0km
E	Teviot Brook at Croftby AMTD 82.3km
F	Albert River at Lumeah AMTD 75.5km
G	Logan River at AMTD 0.0km

Schedule 5 Environmental flow objectives

section 13

Part 1 Low flow objectives

1 At each node mentioned in table 1, column 1, the 50% daily flow for the pre-development flow pattern for a water flow season is stated in column 2 of the table.

Table 1

Column 1	Column 2			
Node	**50% daily flow in megalitres**			
	Feb–April water flow season	**May–July water flow season**	**Aug–Nov water flow season**	**Dec–Jan water flow season**
A	21	12	7	9
B	40	21	10	26
C	77	48	29	37
D	59	42	28	33
E	9	6	3	5
F	72	43	26	37
G	585	318	185	327

2 At each node mentioned in table 2, column 1, the percentage of the total number of days in a water flow season in the simulation period that the 50% daily flow for the plan scenario flow pattern stated for the water flow season in table 1 is equalled or exceeded be at least the percentage stated in column 2 of the table for the water flow season.

Table 2

Column 1	Column 2			
Node	**Feb–April water flow season**	**May–July water flow season**	**Aug–Nov water flow season**	**Dec–Jan water flow season**
A	41	41	43	41
B	41	40	42	40
C	35	34	23	32
D	35	34	19	19
E	42	43	37	41
F	35	34	27	32
G	30	25	13	21

3 At each node mentioned in table 3, column 1, the 90% daily flow for the pre-development flow pattern for a water flow season is stated in column 2 of the table.

Table 3

Column 1	Column 2			
Node	**90% daily flow in megalitres**			
	Feb–April water flow season	**May–July water flow season**	**Aug–Nov water flow season**	**Dec–Jan water flow season**
A	1	1	0	0
B	2	2	0	1
C	17	18	11	9
D	12	12	7	5
E	0	1	0	0
F	14	15	7	6
G	110	108	47	54

4 At each node mentioned in table 4, column 1, the percentage of the total number of days in a water flow season in the simulation period that the 90% daily flow for the plan scenario flow pattern stated for the water flow season in table 3 is equalled or exceeded be at least the percentage stated in column 2 of the table for the water flow season.

Table 4

Column 1	Column 2			
Node	**Feb–April water flow season**	**May–July water flow season**	**Aug–Nov water flow season**	**Dec–Jan water flow season**
A	80	83	81	80
B	80	78	77	81
C	70	66	35	43
D	51	57	27	25
E	79	76	60	58
F	71	71	41	45
G	53	38	29	44

5 At each node mentioned in table 5, column 1, the percentage of the total number of days in the simulation period on which the daily flow is less than 1ML be between the minimum and maximum percentages stated for the node in column 2 of the table.

Table 5

Column 1	Column 2
Node	**Minimum-maximum percentage**
A	11–19
B	8–26
C	0–2

Column 1	Column 2
Node	**Minimum-maximum percentage**
D	0–4
E	14–55
F	7–61
G	0–24

6 At each node mentioned in table 6, column 1, minimise the extent to which—

(a) the number of periods of no flow of at least 1 month but less than 3 months in the simulation period is less than the minimum or more than the maximum number stated for the node in column 2 of the table; and

(b) the number of periods of no flow of at least 3 months but less than 6 months in the simulation period is less than the minimum or more than the maximum number stated for the node in column 3 of the table; and

(c) the number of periods of no flow of at least 6 months in the simulation period is less than the minimum or more than the maximum number stated for the node in column 4 of the table.

Table 6

Column 1	Column 2	Column 3	Column 4
Node	**Minimum-maximum**	**Minimum-maximum**	**Minimum-maximum**
A	6–26	0–3	0–0
B	8–45	1–12	0–0
C	0–2	—	—
D	0–4	—	—
E	12–73	1–29	0–6

Column 1	Column 2	Column 3	Column 4
Node	**Minimum-maximum**	**Minimum-maximum**	**Minimum-maximum**
F	0–127	0–38	0–11
G	0–17	0–2	0–0

Part 2 Medium to high flow objectives

At each node mentioned in table 7, column 1—

(a) the mean annual flow, expressed as a percentage of the mean annual flow for the pre-development flow pattern, be at least the percentage stated for the node in column 2 of the table; and

(b) the 1.5 year daily flow volume, expressed as a percentage of the 1.5 year daily flow volume for the pre-development flow pattern, be at least the percentage stated for the node in column 3 of the table; and

(c) the 5 year daily flow volume, expressed as a percentage of the 5 year daily flow volume for the pre-development flow pattern, be at least the percentage stated for the node in column 4 of the table; and

(d) the 20 year daily flow volume, expressed as a percentage of the 20 year daily flow volume for the pre-development flow pattern, be at least the percentage stated for the node in column 5 of the table.

Table 7

Column 1	Column 2	Column 3	Column 4	Column 5
Node	**Mean annual flow percentage**	**1.5 year daily flow volume percentage**	**5 year daily flow volume percentage**	**20 year daily flow volume percentage**
A	99	99	—	—

Column 1	Column 2	Column 3	Column 4	Column 5
Node	**Mean annual flow percentage**	**1.5 year daily flow volume percentage**	**5 year daily flow volume percentage**	**20 year daily flow volume percentage**
B	99	99	—	—
C	88	99	—	—
D	82	98	—	—
E	95	99	—	—
F	90	97	—	—
G	76	80	83	86

Part 3 Seasonal flow objectives

At each node mentioned in table 8, column 1—

(a) the annual proportional flow deviation be no greater than the annual proportional flow deviation stated for the node in column 2 of the table; and

(b) the flow regime class be maintained as late summer flow regime class.

Table 8

Column 1	Column 2
Node	**Annual proportional flow deviation**
C	1.2
D	1.2
G	1.5

Schedule 6 Water allocation security objectives

section 15

Part 1 Supplemented water

1 For water allocations in a high priority group in the Logan River Water Supply Scheme—

(a) the monthly supplemented water sharing index be at least 95%; and

(b) the extent to which it is less than 99% be minimised.

2 For water allocations in a medium priority group in the Logan River Water Supply Scheme—

(a) the monthly supplemented water sharing index be at least 80%; and

(b) the extent to which it is less than 85% be minimised.

Part 2 Unsupplemented water

1 For water allocations in a water allocation group mentioned in table 1, column 1—

(a) the mean unsupplemented water sharing index be at least the volume stated, for the group, in table 1, column 2; and

(b) the extent to which the 70% unsupplemented water sharing index is less than the percentage stated, for the group, in table 1, column 3, be minimised; and

(c) the 95% unsupplemented water sharing index be at least the percentage stated, for the group, in table 1, column 4.

Table 1

Column 1	Column 2	Column 3	Column 4
Water allocation group	**Mean unsupplemented water sharing index—volume in megalitres**	**70% unsupplemented water sharing index—percentage**	**95% unsupplemented water sharing index—percentage**
8A	982	—	56
9A	285	—	99
1B	30	81	—
2B	156	83	—
3B	2057	85	—
4B	417	79	—
5B	4540	94	—
6B	6241	90	—
7B	1893	87	—
8B	9192	83	—
9B	4299	86	—
1C	23	—	—
3C	6037	86	—
3D	486	87	—
4D	43	49	—
5D	129	89	—
6D	136	86	—
7D	1176	81	—
8D	4487	84	—
9D	2036	81	—

Schedule 8 Total volumes for water allocation groups

section 54

Column 1	Column 2
Water allocation group	**Volume in megalitres**
8A	982
9A	285
1B	30
2B	156
3B	2057
4B	417
5B	4540
6B	6241
7B	2329
8B	9192
9B	4299
1C	23
3C	6037
3D	486
4D	43
5D	129
6D	136
7D	1405

Column 1	Column 2
Water allocation group	**Volume in megalitres**
8D	4487
9D	2036

Schedule 9 Rates and pump sizes

sections 57 and 62

Column 1	Column 2
Pump size (mm)	**Rate (litres/second)**
32	8
40	13
50	25
65	46
80	50
100	85
125	120
150	150
200	190
250	220
300	300
350	350
400	440

Schedule 10 Water allocation groups

section 59

Column 1	Column 2	Column 3	Column 4	Column 5
Subcatchment area	**Water allocation group (class A)**	**Water allocation group (class B)**	**Water allocation group (class C)**	**Water allocation group (class D)**
1	—	1B	1C	1D
2	—	2B	—	—
3	—	3B	3C	3D
4	—	4B	—	4D
5	—	5B	—	5D
6	—	6B	—	6D
7	—	7B	—	7D
8	8A	8B	—	8D
9	9A	9B	—	9D

Schedule 11 Priority areas

section 71

1 Priority area 1

Priority area 1 is the area of the Logan River Water Supply Scheme which consists of—

(a) the part of Burnett Creek downstream of Maroon Dam including the ponded area of the dam; and

(b) the part of the Logan River from its confluence with Burnett Creek to AMTD 65km.

2 Priority area 2

Priority area 2 consists of—

(a) Running Creek subcatchment area consisting of Running Creek and all its tributaries; and

(b) Christmas Creek subcatchment area consisting of Christmas Creek and all its tributaries.

Schedule 12 Formula

sch 13, definition *annual proportional flow deviation*

$$APFD = \sum_{j=1}^{p} \frac{\sqrt{\sum_{i=1}^{12} \left(\frac{c_{ij} - n_{ij}}{\bar{n}_i} \right)^2}}{p}$$

where—

p means the number of years.

c_{ij} means the modelled flow for month i in year j.

n_{ij} means the modelled natural flow for month i in year j.

n_i means the modelled natural flow for month i across p years.

Schedule 13 Dictionary

section 3

1.5 year daily flow volume, for a node, means the daily flow, at the node, that has a 67% probability of being reached at least once a year.

5 year daily flow volume, for a node, means the daily flow, at the node, that has a 20% probability of being reached at least once a year.

20 year daily flow volume, for a node, means the daily flow, at the node, that has a 5% probability of being reached at least once a year.

50% daily flow, for a month for a node, means the daily flow, at the node, that is equalled or exceeded on 50% of days in the month in the simulation period.

70% unsupplemented water sharing index, for a group of water allocations, means the average total volume of water simulated to have been taken annually under the allocations in at least 70% of years in the simulation period, if the allocations were in existence for the whole of the simulation period, expressed as a percentage of the simulated mean annual diversion for the allocations.

90% daily flow, for a month for a node, means the daily flow, at the node, that is equalled or exceeded on 90% of days in the month in the simulation period.

95% unsupplemented water sharing index, for a group of water allocations, means the average total volume of water simulated to have been taken annually under the allocations in at least 95% of years in the simulation period, if the allocations were in existence for the whole of the simulation period, expressed as a percentage of the simulated mean annual diversion for the allocations.

adopted middle thread distance means the distance in kilometres, measured along the middle of a watercourse, that

a specific point in the watercourse is, at the commencement of this plan, from—

(a) the watercourse's mouth; or

(b) if the watercourse is not a main watercourse—the watercourse's confluence with its main watercourse.

AMTD means adopted middle thread distance.

annual proportional flow deviation, for a node, means the statistical measure of changes to flow season and volume in the simulation period, at the node, calculated using the formula in schedule 12.

annual variability, for a flow at a point in a watercourse, means the amount of change in the flow that happens between years.

annual volumetric limit, for a water entitlement, means the maximum volume of water that may be taken under the entitlement in a period of 12 months.

authorisation means a water licence, water permit, interim water allocation or other authority to take water given under the Act or the repealed Act, other than a permit for stock or domestic purposes.

average volume of water allowed to be taken under authorisations means the total volume of water simulated to have been taken under the authorisations during the simulation period if the authorisations were in existence for the whole of the simulation period, divided by the number of years in the simulation period.

daily flow, for a node, means the volume of water that flows past the node in a day.

discharge, for a flow at a point in a watercourse, means the rate at which water passes the point, measured in cubic metres a second or megalitres a day.

ecological assets include a species, a group of species, a biological function, an ecosystem and a place of natural value.

event duration, for a flow at a point in a watercourse, means the period of time when the discharge is greater than or less

than the level necessary for a particular ecological process to happen.

flow regime means the entire range of flows at a point in a watercourse including variations in the watercourse height, discharge, seasonality, annual variability and event duration.

flow regime class means the measure of flow regime seasonality worked out using the method stated in Haines, A.T., Finlayson, B.L. and McMahon, T.A., 'A global classification of river regimes. Applied Geography, 1988'.

groundwater means water from an underground source.

high priority group, for a water allocation, means a water allocation that is stated to be a high priority in the water allocations register.

hydraulic habitat requirements, of an ecological asset, are the hydraulic or physical attributes of the flow regime that are—

(a) required for a particular biological process or response to happen in relation to the asset; or

(b) necessary to maintain the long-term biological integrity of the asset.

infrastructure operating rules means, for infrastructure to which the resource operations plan applies, the infrastructure operating rules included in the resource operations plan.

IQQM computer program means the department's Integrated Quantity and Quality Modelling computer program, and associated statistical analysis and reporting programs, that simulate daily stream flows, flow management, storages, releases, instream infrastructure, water diversions, water demands and other hydrologic events in the plan area.

mean annual flow, for a node, means the total volume of flow, at the node, in the simulation period divided by the number of years in the simulation period.

mean unsupplemented water sharing index, for a group of water allocations, means the average total volume of water simulated to have been taken annually under the allocations in

the simulation period, if the allocations were in existence for the whole of the simulation period.

medium priority group, for a water allocation, means a water allocation that is stated to be a medium priority in the water allocations register.

monthly supplemented water sharing index, for water allocations in a water supply scheme, means the percentage of months in the simulation period in which the allocations are fully supplied.

node see section 7.

period of no flow, for a node, means a period in which the flow of water in the watercourse at the node is less than 1ML a day.

plan area means the area shown as the plan area on the map in schedule 1.

plan scenario flow pattern means the pattern of water flows, during the simulation period, decided by the chief executive using the IQQM computer program as if—

(a) all unallocated water in the strategic reserve and general reserve is being taken; and

(b) the maximum volume allowed to be taken under each authorisation in the plan area is being taken.

pre-development flow pattern means the pattern of water flows, during the simulation period, decided by the chief executive using the IQQM computer program as if—

(a) there were no dams or other water infrastructure in the plan area; and

(b) no water was taken under authorisations in the plan area.

priority area see section 71.

related development permit, for an authorisation, means the development permit for the works for taking water under the authorisation.

resource operations plan means the resource operations plan to implement this plan.

Note—

See the Act, section 1266.

seasonality, for a flow at a point in a watercourse, means the time of year when the flow happens.

SEQ regional plan means the regional plan under the Planning Act for the region named the SEQ region under the *Planning Regulation 2017*.

simulated mean annual diversion, for an authorisation or group of authorisations, means the total volume of water simulated to have been taken under the authorisations, if the authorisations were in existence for the whole of the simulation period, divided by the number of years in the simulation period.

simulation period means the period from 1 January 1890 to 30 June 2003.

subcatchment area see section 5.

supplemented water means water supplied under a resource operations licence or other authority to operate water infrastructure.

this plan means this water resource plan.

traditional owners, of an area, means the Aboriginal people who identify as descendants of the original inhabitants of the area.

unsupplemented water means water that is not supplemented water.

water flow season means any of the following periods in a year—

(a) the period from 1 February to 30 April (***Feb–April water flow season***);

(b) the period from 1 May to 31 July (***May–July water flow season***);

(c) the period from 1 August to 30 November (***Aug–Nov water flow season***);

(d) the period from 1 December to 31 January (***Dec–Jan water flow season***).

water supply scheme means the Logan River Water Supply Scheme described in schedule 11.

1 Index to endnotes

2 Key

Key to abbreviations in list of legislation and annotations

Key		Explanation	Key		Explanation
AIA	=	**Acts Interpretation Act 1954**	**(prev)**	=	**previously**
amd	=	**amended**	**proc**	=	**proclamation**
amdt	=	**amendment**	**prov**	=	**provision**
ch	=	**chapter**	**pt**	=	**part**
def	=	**definition**	**pubd**	=	**published**
div	=	**division**	**R[X]**	=	**Reprint No. [X]**
exp	=	**expires/expired**	**RA**	=	**Reprints Act 1992**
gaz	=	**gazette**	**reloc**	=	**relocated**
hdg	=	**heading**	**renum**	=	**renumbered**
ins	=	**inserted**	**rep**	=	**repealed**
lap	=	**lapsed**	**(retro)**	=	**retrospectively**
notfd	=	**notified**	**rv**	=	**revised version**
num	=	**numbered**	**s**	=	**section**

Key		Explanation	Key		Explanation
o in c	=	order in council	sch	=	schedule
om	=	omitted	sdiv	=	subdivision
orig	=	original	SIA	=	Statutory Instruments Act 1992
p	=	page	SIR	=	Statutory Instruments Regulation 2012
para	=	paragraph	SL	=	subordinate legislation
prec	=	preceding	sub	=	substituted
pres	=	present	unnum	=	unnumbered
prev	=	previous			

3 Table of reprints

new reprint of the legislation is prepared by the Office of the Queensland Parliamentary Counsel each time a change to the legislation takes effect.

The notes column for this reprint gives details of any discretionary editorial powers under the **Reprints Act 1992** used by the Office of the Queensland Parliamentary Counsel in preparing it. Section 5(c) and (d) of the Act are not mentioned as they contain mandatory requirements that all amendments be included and all necessary consequential amendments be incorporated, whether of punctuation, numbering or another kind. Further details of the use of any discretionary editorial power noted in the table can be obtained by contacting the Office of the Queensland Parliamentary Counsel by telephone on 3003 9601 or email legislation.queries@oqpc.qld.gov.au.

From 29 January 2013, all Queensland reprints are dated and authorised by the Parliamentary Counsel. The previous numbering system and distinctions between printed and electronic reprints is not continued with the relevant details for historical reprints included in this table.

Reprint No.	Amendments included	Effective	Notes
1	none	2 March 2007	
1A	2007 SL No. 242	28 September 2007	

Reprint No.	Amendments included	Effective	Notes
1B	2008 Act No. 34	1 July 2008	
1C	2009 SL No. 280	18 December 2009	

Current as at	Amendments included	Notes
27 June 2014	2014 SL No. 142	RA ss 30, 44A
6 December 2016	2014 Act No. 64	
	2016 SL No. 216	
3 July 2017	2017 SL No. 103	

4 List of legislation

Regulatory impact statements

For subordinate legislation that has a regulatory impact statement, specific reference to the statement is included in this list.

Explanatory notes

All subordinate legislation made on or after 1 January 2011 has an explanatory note. For subordinate legislation made before 1 January 2011 that has an explanatory note, specific reference to the note is included in this list.

Water Plan (Logan Basin) 2007 SL No. 25 (prev Water Resource (Logan Basin) Plan 2007)
approved by the Governor in Council on 1 March 2007
notfd gaz 2 March 2007 pp 983–6
commenced on date of notification
exp 14 December 2026 (see 2000 No. 34 s 52A(3) and 2016 SL No. 207 s 2)
Note—An explanatory note was prepared.
amending legislation—

Water Resource (Logan Basin) Amendment Plan (No. 1) 2007 SL No. 242
notfd gaz 28 September 2007 pp 595–6
commenced on date of notification

Water Supply (Safety and Reliability) Act 2008 No. 34 ss 1, 2(2), 751 sch 2
date of assent 21 May 2008
ss 1–2, 751 commenced on date of assent
remaining provisions commenced 1 July 2008 (2008 SL No. 202)

Sustainable Planning Regulation 2009 SL No. 280 ss 1–2, pt 9 div 42
notfd gaz 27 November 2009 pp 1001–6
ss 1–2 commenced on date of notification
remaining provisions commenced 18 December 2009 (see s 2)

Water Resource Plans Amendment Plan (No. 1) 2014 SL No. 142 pts 1, 15
notfd <www.legislation.qld.gov.au> 27 June 2014
commenced on date of notification

Water Reform and Other Legislation Amendment Act 2014 No. 64 ss 1, 2(2), 255 sch 2
date of assent 5 December 2014
ss 1–2 commenced on date of assent
s 255 commenced 19 December 2014 (2014 SL No. 333)
s 255 sch 2 commenced 6 December 2016 (automatic commencement under AIA s 15DA(2) (2015 SL No. 155 s 2))

Water Regulation 2016 SL No. 216 ss 1–2, 146 sch 20
notfd <www.legislation.qld.gov.au> 2 December 2016
ss 1–2 commenced on date of notification
s 146 sch 20 commenced 6 December 2016 on the commencement of the Water Reform and Other Legislation Amendment Act 2014, s 68 (see s 2)

Planning (Consequential) and Other Legislation Amendment Regulation 2017 SL No. 103
notfd <www.legislation.qld.gov.au> 30 June 2017
ss 1–2 commenced on date of notification
pt 41 commenced 3 July 2017 (see s 2)

5 List of annotations

Short title
s 1 sub 2014 Act No. 64 s 255 sch 2

Water to which plan applies
s 8 amd 2016 SL No. 216 s 146 sch 20

PART 5—STRATEGIES FOR ACHIEVING OUTCOMES

Application of div 1
s 16 amd 2008 Act No. 34 s 751 sch 2

Decisions not to increase amount of water taken
s 19 amd 2008 Act No. 34 s 751 sch 2

Granting unallocated water from the town water supply reserve
s 29 amd 2008 Act No 34 s 751 sch 2

Division 3—Process for granting and amending interim resource operations licence
div hdg om 2014 SL No. 142 s 130

Subdivision 1—Preliminary

sdiv 1 (s 30) om 2014 SL No. 142 s 130

Subdivision 2—Application or amendment after notice from chief executive
sdiv 2 (ss 31–34) om 2014 SL No. 142 s 130

Subdivision 3—Amendment by chief executive
sdiv 3 (ss 35–37) om 2014 SL No. 142 s 130

Subdivision 4—Amendment on application by holder
sdiv 4 (ss 38–41) om 2014 SL No. 142 s 130

Subdivision 5—Granting interim water allocations
sdiv 5 (s 42) om 2014 SL No. 142 s 130

Division 4—Deciding operational and supply arrangements for water infrastructure
div hdg sub 2014 SL No. 142 s 131

Water entitlements to be managed under a resource operations licence
s 43 amd 2008 Act No. 34 s 751 sch 2
om 2014 SL No. 142 s 132

Matters chief executive must consider
s 44 amd 2014 SL No. 142 s 133

Division 5—Granting water entitlements
div 5 (s 45) om 2014 SL No. 142 s 134

Division 6—Converting authorisations to water allocations

Application of div 6
s 47 amd 2014 SL No. 142 s 135

Subdivision 2—Water allocations to take supplemented water
sdiv 2 (ss 50–52) om 2014 SL No. 142 s 136

Elements of a water allocation to take unsupplemented water
s 53 sub 2014 SL No. 142 s 137

Daily and monthly volumetric limits for taking unsupplemented water
s 56 om 2014 SL No. 142 s 138

Amending water licences to take unsupplemented water
s 60 amd 2014 SL No. 142 s 139

Annual volumetric limit for taking unsupplemented water
s 61 sub 2014 SL No. 142 s 140

Maximum rates for taking unsupplemented water
s 62 sub 2014 SL No. 142 s 140

Division 8—Critical water supply strategy
div 8 (ss 63–64) om 2014 SL No. 142 s 141

Measuring devices
s 66 om 2014 SL No. 142 s 142

PART 6—MONITORING AND REPORTING REQUIREMENTS

pt hdg sub 2014 SL No. 142 s 143

Monitoring and reporting requirements
s 67 sub 2014 SL No. 142 s 143

Minister's report on plan—Act s 53
s 68 sub 2014 SL No. 142 s 143
om 2016 SL No. 216 s 146 sch 20

Resource operations licence holders to give reports
s 69 om 2014 SL No. 142 s 143

Minister's report on plan—Act, s 53
s 70 om 2014 SL No. 142 s 143

Implementation schedule
s 72 amd 2008 Act No. 34 s 751 sch 2
om 2014 SL No. 142 s 144

SCHEDULE 5—ENVIRONMENTAL FLOW OBJECTIVES
sch 5 sub 2014 SL No. 142 s 145

SCHEDULE 7—INTERIM WATER ALLOCATIONS
sch 7 sub 2007 SL No. 242 s 3
om 2008 Act No. 34 s 751 sch 2

SCHEDULE 13—DICTIONARY
sch 13 def *critical water supply strategy* om 2014 SL No. 142 s 146(1)
def *daily volumetric limit* om 2014 SL No. 142 s 146(1)
def *high priority group* ins 2014 SL No. 142 s 146(2)
def *medium priority group* ins 2014 SL No. 142 s 146(2)
def *monthly volumetric limit* om 2014 SL No. 142 s 146(1)
def *SEQ region* sub 2009 SL No. 280 s 183
om 2017 SL No. 103 s 160(1)
def *SEQ regional plan* sub 2009 SL No. 280 s 183; 2017 SL No. 103 s 160
def *resource operations plan* amd 2016 SL No. 216 s 146 sch 20
def *supplemented water* amd 2014 SL No. 142 s 146(3)
def *water flow season* ins 2014 SL No. 142 s 146(2)