Queensland

Water Act 2000

Water Plan (Gold Coast) 2006

Current as at 1 September 2019

Queensland

Water Plan (Gold Coast) 2006

Contents

Contents

Water Plan (Gold Coast) 2006

Part 1 Preliminary

1 Short title

This water plan may be cited as the *Water Plan (Gold Coast) 2006*.

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 11 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.

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 water in a watercourse, lake or spring in the plan area.

Part 3 Outcomes for sustainable management of water

9 Outcomes for water in plan area

Water 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 mentioned in section 11.

10 General outcomes

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 existing 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 when water availability is low;

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

(g) to protect, or minimise the impact of the taking of water on, ecological assets and ecosystem structures and processes;

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

(i) to provide consistency between this plan and the SEQ regional plan.

11 Ecological outcomes

(1) Particular ecological outcomes for water in the part of the plan area stated for the outcome are as follows—

(a) for Coomera River within the area known as Canungra Land Warfare Centre, including, in particular, Back Creek, and other waters of high ecological value under the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*, including, in particular, Tallebudgerra Creek and Currumbin Creek—to minimise changes to the flow regimes of the waters;

(b) for Nerang River upstream of the Hinze Dam and Little Nerang Creek upstream of the Little Nerang Dam—

(i) to minimise changes to river-forming processes; and

(ii) to minimise changes to the flow regime;

(c) for Coomera River estuary—

(i) to minimise changes, as far as practicable, to freshwater flows into the Coomera River estuary; and

(ii) to minimise changes to the freshwater inflows to Coombabah Lake.

(2) Also, an ecological outcome for water in the plan area is to minimise changes, as far as practicable, to the volume and seasonality of freshwater flows into Moreton Bay and the Broadwater.

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—

(i) 50% daily flow; and

(ii) 90% daily flow; and

(iii) daily flow less than 1ML; and

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

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

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

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

(i) mean annual flow; and

(ii) 1.5 year daily flow volume; and

(iii) 5 year daily flow volume; and

(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—70% unsupplemented water sharing index.

15 Water allocation security objectives

The water allocation security objectives for this plan are stated in schedule 6.

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 the continued taking of or interfering with water.

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 available to be taken in the plan area.

(2) Subsection (1) does not apply to a decision—

(a) about unallocated water made under section 23 or 24; or

(b) 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 an authorisation to take water from a waterhole or lake only if—

(a) the chief executive imposes a condition on the authorisation 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 and 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 0.5m below the level at which the waterhole or lake naturally overflows

(2) 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, cultural values of the traditional owners of the area; and

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

(3) An authorisation mentioned in subsection (1) does not include a water allocation converted from an authorisation under division 5.

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

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

Division 2 General and strategic reserves

21 Unallocated water held as general or strategic reserve

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

22 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 authorisations in the plan area; and

(ii) emerging requirements for additional water, in 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 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, downstream watercourses or estuarine or marine waters; and

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

(i) the SEQ regional plan; and

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

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

(f) whether the proposed taking of or interfering with, or the proposed use of, the water is consistent with the ecological outcomes mentioned in section 11; and

(g) 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) In considering the impact the proposed taking of or interfering with the water may have on water quality under subsection (1)(c)(i), the chief executive must have regard to the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*.

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

23 Granting unallocated water from the general reserve

(1) The chief executive may grant unallocated water from the general reserve under a process in the resource operations plan.

(2) However, the chief executive—

(a) may grant unallocated water from the general reserve only for the subcatchment areas mentioned in schedule 7, column 1; and

(b) must not grant unallocated water from the general reserve for a subcatchment area if, in granting the unallocated water, the total amount of unallocated water granted for the subcatchment area is more than the volume stated in schedule 7, column 2, opposite the subcatchment area; and

(c) must, in granting a water entitlement for unallocated water, state flow conditions that provide for the protection of low flows in watercourses.

24 Granting 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 for—

(i) the SEQ regional plan; or

(ii) a regional water security program; or

(c) under a process in the resource operations plan.

Division 4 Deciding operational and supply arrangements for water infrastructure

35 Matters chief executive must consider

(1) In deciding the operating arrangements and supply requirements for water infrastructure under the resource operations licence for the Nerang water supply scheme, the chief executive must consider—

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

(i) the water allocation security objectives;

(ii) water quality;

(iii) instream water levels;

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

(v) riparian vegetation;

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

(vii) recreation and aesthetic values of the plan area;

(viii) 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 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 5 Converting authorisations to water allocations

Subdivision 1 General

36 Application of div 5

This division applies only to water allocations converted, under the resource operations plan, from authorisations.

37 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.

38 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

41 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.

42 Nominal volumes for water allocations to take unsupplemented water

In deciding the nominal volume for a water allocation in a subcatchment area mentioned in schedule 8, column 1, the chief executive—

(a) must consider, for each authorisation—

(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—

(i) the total of the nominal volumes for the water allocations, converted from authorisations that state an area that may be irrigated, in the subcatchment area is not more than the volume stated in schedule 8, column 2, for the area; and

(ii) the total of the nominal volumes for the water allocations, converted from authorisations that do not state an area that may be irrigated, in the subcatchment area is not more than the volume stated in schedule 8, column 3, for the area.

43 Annual volumetric limit for taking unsupplemented water

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

(a) if the authorisation states an annual volume of water—the stated volume; and

(b) if the authorisation does not state an annual volume of water—the volume decided by the chief executive having regard to—

(i) the conditions under which water may be taken under the authorisation, including any stated area that may be irrigated and the volume of water required to irrigate the area efficiently; 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)(b) does not limit the matters the chief executive may consider.

45 Maximum rates for taking unsupplemented water

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

(a) if the authorisation states a maximum rate—the stated rate; and

(b) if the authorisation 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 irrigation or water distribution system mentioned in subsubparagraph (C); or

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

(c) if the authorisation does not state a maximum rate but 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) if paragraphs (a) to (c) do not apply—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.

46 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 consider the conditions stated on the authorisation.

Division 6 Authorisations to take unsupplemented water

47 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.

48 Annual volumetric limit for taking unsupplemented water

(1) This section states the annual volumetric limit for an authorisation to take unsupplemented water in force on the commencement of this plan.

(2) The annual volumetric limit is—

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

(b) for an authorisation that states an area that may be irrigated—the volume decided by the chief executive having regard to—

(i) the volume of water required to irrigate the area efficiently; and

(ii) the water taking capacity of any works, in existence on the commencement of this plan, 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; and

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

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

(vi) the local availability of water; 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, in existence on the commencement of this plan, 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).

(3) In deciding the volume for subsection (2)(b), the chief executive must ensure the sum of the annual volumetric limits

for all authorisations converted from authorisations that state an area that may be irrigated in a subcatchment area is not more than the volume stated in schedule 8, column 2, opposite the subcatchment area in column 1 of the schedule.

(4) In deciding the volume for subsection (2)(c), the chief executive must ensure the sum of the annual volumetric limits for all authorisations converted from authorisations that do not state an area that may be irrigated in a subcatchment area is not more than the volume stated in schedule 8, column 3, opposite the subcatchment area in column 1 of the schedule.

(5) Subsection (2)(b) and (c) do not limit the matters the chief executive may consider.

49 Maximum rates for taking unsupplemented water

The maximum rate at which unsupplemented water may be taken under a water licence mentioned in section 47(1) is the maximum rate mentioned in section 45 or decided by the chief executive under that section as if the water licence were a water allocation.

Division 8 Miscellaneous

52 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 under the resource operations plan must provide for the release.

Part 6 Monitoring and reporting requirements

54 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) Subsection (1) does not limit the monitoring requirements the chief executive may impose for this plan.

Part 7 Implementing and amending this plan

58 Priorities for converting to, or granting, water allocations

Each area described in schedule 10 is a priority area for this plan for the conversion to, or granting of, water allocations to take water in the plan area.

59 Implementation schedule

(1) This section states—

(a) the proposed arrangements for implementing this plan; and

(b) the priorities for the conversion to, or granting of, water allocations.

(2) Within 2 years after the commencement of this plan, it is proposed to prepare a resource operations plan—

(a) to convert authorisations in priority area 1 to water allocations; and

(b) to deal with unallocated water available for future water requirements in the plan area; and

(c) to make environmental management rules, water sharing rules, water allocation change rules and seasonal water assignment rules for water in priority area 1; and

(d) to implement the monitoring requirements in part 6.

(3) Within 4 years after the commencement, it is proposed to amend the resource operations plan—

(a) to convert authorisations in priority area 2 to water allocations; and

(b) to make environmental management rules, water sharing rules, water allocation change rules and seasonal water assignment rules for water in priority area 2.

(4) It is proposed to make a system operating plan that will apply to the plan area and, to the extent to which it applies to water entitlements in the Nerang water supply scheme, will state additional arrangements for taking water under the water entitlements.

Note—

See section 360V (Commission to make system operating plan for region) of the Act.

(5) Subsections (2) and (3) do not limit the matters that may be included in the resource operations plan.

60 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.

61 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 the outcomes mentioned in 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

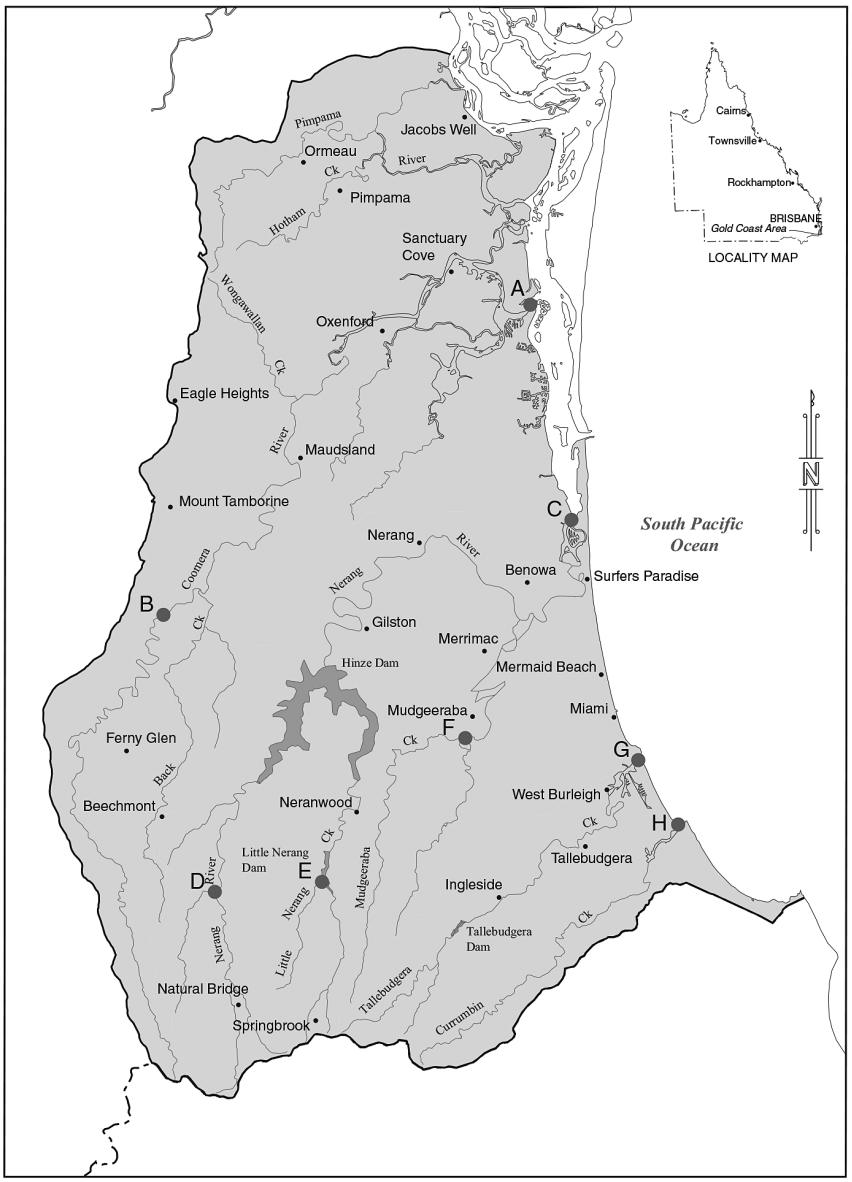
(ii) there are economically viable and ecologically sustainable uses for additional water; or

(b) the plan's ecological outcomes are not being achieved; or

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

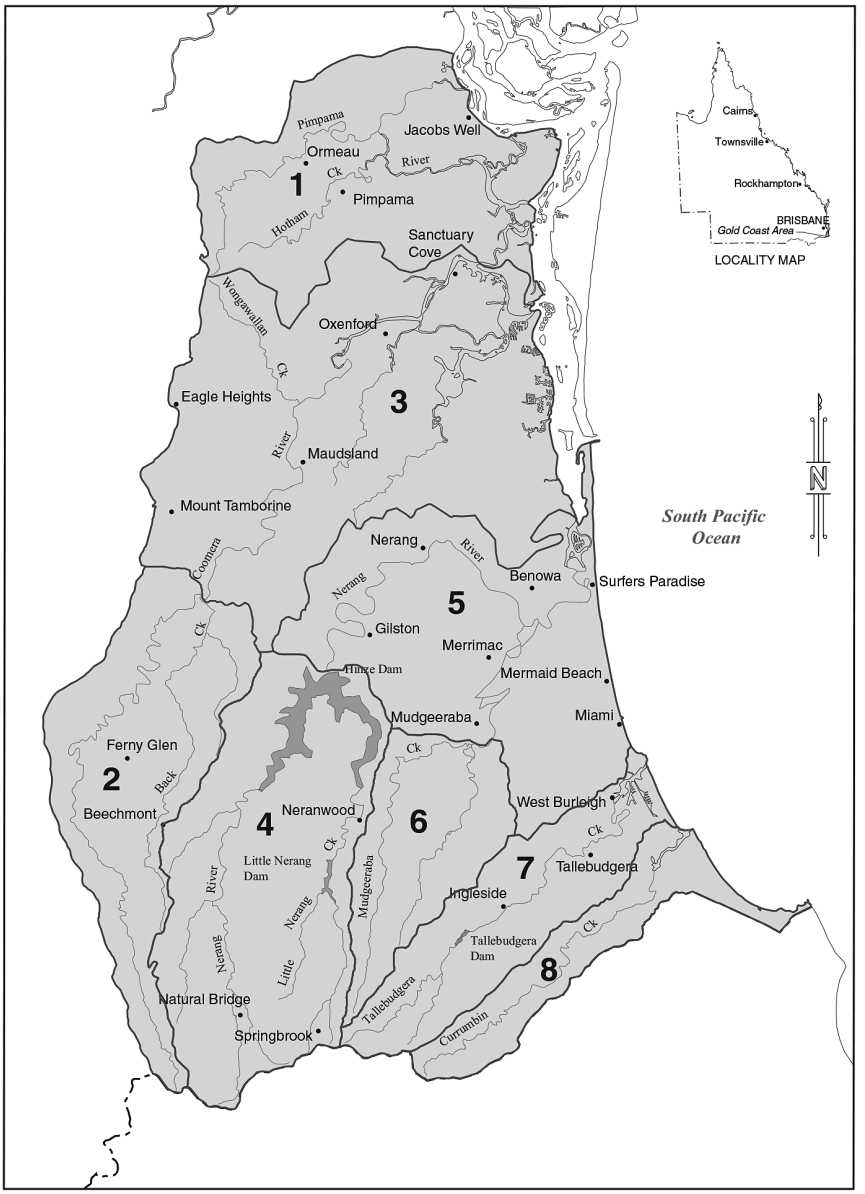
Schedule 1 Plan area

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	Pimpama River
2	Upper Coomera River
3	Lower Coomera River
4	Upper Nerang River
5	Lower Nerang River
6	Mudgeeraba Creek
7	Tallebudgera Creek
8	Currumbin Creek

Schedule 4 Nodes

section 7(2)

Column 1	Column 2
Node	**Location**
A	Coomera River at end of system (AMTD 0.0km)
B	Coomera River at Army Camp GS146010A (AMTD 45.9km)
C	Nerang River at end of system (AMTD 0.0km)
D	Nerang River upstream of dam (AMTD 55km)
E	Little Nerang Dam inflows (AMTD 16.1km)
F	Mudgeeraba Creek at Springbrook Road GS146020A (AMTD 13.3km)
G	Tallebudgera Creek at end of system (AMTD 0.0km)
H	Currumbin Creek at end of system (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	241	164	60	83
B	49	29	11	17
C	334	123	40	126
D	88	33	13	32
E	59	29	12	21
F	21	9	2	7
G	78	33	14	30
H	57	37	17	25

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	33	32	28	33
B	16	7	36	40
C	30	26	23	30
D	46	44	36	41
E	47	47	46	47
F	42	43	30	41
G	29	28	32	31
H	46	47	43	46

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	33	41	7	5
B	7	7	1	1
C	39	20	4	6
D	13	7	2	3
E	12	9	3	3
F	2	1	0	0

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
G	13	10	2	2
H	11	10	0	0

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	76	69	71	74
B	79	75	58	57
C	67	59	52	63
D	79	75	57	63
E	86	88	87	84
F	78	66	41	60
G	78	75	68	74
H	85	84	79	76

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	2–13
B	6–30
C	2–11
D	3–24
E	1–7
F	15–36
G	3–14
H	6–18

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	0–9	0–0	0–0
B	3–90	0–16	0–5
C	0–4	0–0	0–0
D	2–64	—	—
E	0–0	—	—
F	7–85	0–14	0–2
G	1–21	0–2	0–0
H	5–40	—	—

Part 2 Medium to high flow objectives

At each node mentioned in table 7, column 1—

(a) the mean annual flow (the ***MAF***), expressed as a percentage of the MAF 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 (the ***1.5 year DFV***), expressed as a percentage of the 1.5 year DFV 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 (the ***5 year DFV***), expressed as a percentage of the 5 year DFV 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 (the ***20 year DFV***), expressed as a percentage of the 20 year DFV 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	**MAF %**	**1.5 year DFV %**	**5 year DFV %**	**20 year DFV %**
A	85	92	—	—
B	70	80	—	—
C	66	—	—	—
D	96	97	—	—
E	97	97	—	—
F	75	67	91	92
G	80	92	96	—
H	96	97	—	—

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**
A	0.8
B	2.0
C	2.0

Column 1	Column 2
Node	**Annual proportional flow deviation**
F	1.3
G	1.2

Schedule 6 Water allocation security objectives

section 15

Part 1 Supplemented water

For water allocations in a high priority group—

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

(b) the extent to which it is less than 100% be minimised.

Part 2 Unsupplemented water

1 For water allocations, converted from authorisations that stated an area that may be irrigated, for taking unsupplemented water in a subcatchment area mentioned in table 1, column 1, the 70% unsupplemented water sharing index be at least the percentage stated for the subcatchment area in column 2 of the table.

Table 1

Column 1	Column 2
Subcatchment area	**70% unsupplemented water sharing index—percentage**
2	85
3	85
4	86
5	81

Column 1	Column 2
Subcatchment area	**70% unsupplemented water sharing index—percentage**
6	78
7	65
8	79

2 For water allocations, converted from authorisations that did not state an area that may be irrigated, for taking unsupplemented water in a subcatchment area mentioned in table 2, column 1, the 70% unsupplemented water sharing index be at least the percentage stated, for the subcatchment area, in column 2 of the table.

Table 2

Column 1	Column 2
Subcatchment area	**70% unsupplemented water sharing index—percentage**
2	94
3	95
4	95
5	95
6	95
7	90
8	95

Schedule 7 General reserve

section 23(2)

Column 1	Column 2
Subcatchment area	**Volume in megalitres**
2	50
3	200
4	50
5	50
6	50
7	50
8	50

Schedule 8 Unsupplemented water to be taken

sections 42 and 48

Column 1	Column 2	Column 3
Subcatchment area	**Volume in megalitres**	**Volume in megalitres**
2	1455	435
3	1500	1700
4	1365	55
5	685	240
6	240	310
7	120	90
8	330	55

Schedule 9 Rates and pump sizes

section 49

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 Priority areas

section 58

1 Priority area 1

Priority area 1 is the area that consists of—

(a) the Nerang water supply scheme; and

(b) the Nerang River downstream of the Hinze Dam at AMTD 36.4km to AMTD 21.2km.

2 Priority area 2

Priority area 2 consists of the parts of the plan area, other than priority area 1, that have unsupplemented water.

Schedule 11 Dictionary

section 3

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

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

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

50% daily flow, for a month, means the flow, in megalitres, 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 authorisations, means the average total volume of water simulated to have been taken annually under the authorisations in at least 70% of years in the simulation period, if the authorisations were in existence for the whole of the simulation period, expressed as a percentage of the simulated mean annual diversion for the authorisations.

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

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 means the statistical measure of changes to flow season and volume in the

simulation period calculated using the formula for annual proportional flow deviation described in Technical Report 5 of 'Fitzroy Basin Water Allocation and Management Planning Technical Reports' published by the department.

Editor's note—

Copies of the reports are available for inspection on the department's website.

annual volumetric limit, for an authorisation, means the maximum volume of water that may be taken under the authorisation in a water year.

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.

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 riverine 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, 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 means the water allocations in a water supply scheme that are stated to be high priority group in the water allocations register.

hydraulic habitat requirements, of an ecological asset, are the biophysical conditions created by aspects 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 for infrastructure to which the resource operations plan applies, means 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.

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

Nerang water supply scheme means the area that consists of—

(a) the impoundment of the Hinze Dam at AMTD 36.4km on the Nerang River; and

(b) the impoundment of the Little Nerang Dam at AMTD 16.1km on Little Nerang Creek; and

(c) Little Nerang Creek downstream of Little Nerang Dam at AMTD 16.1km to AMTD 0km.

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 58.

priority area 1 see schedule 10, section 1.

priority area 2 see schedule 10, section 2.

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 December 2000.

subcatchment area see section 5.

supplemented water means water supplied under an interim resource operations licence, 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***).