Gulf
Resource Operations Plan

June 2010

Amendment August 2015

Queensland Government

Contents

Chapter 1 Preliminary

1 Short title

(1) This resource operations plan may be cited as the Gulf Resource Operations Plan 2010.[1]

(2) References to 'this plan' within this document refer to the Gulf Resource Operations Plan 2010.

2 Commencement of the resource operations plan

This plan amendment commences on the first business day after this plan is notified in the Queensland Government Gazette.

3 Purpose of plan

This plan implements the Water Resource (Gulf) Plan 2007.

4 Interpretation of words used in this plan

The dictionary in attachment 1 defines particular words used in this plan.

5 Plan area

This plan applies to the area shown as the plan area on the map in attachment 2.

6 Water management areas—Water Regulation 2002, section 56(4A)

(1) The Flinders River Water Management Area, which has the same boundary as the Flinders River Catchment shown on the map in attachment 2, is a water management area for this plan.

(2) The Gilbert River Water Management Area, which has the same boundary as the Gilbert River Catchment shown on the map in attachment 2, is a water management area for this plan.

7 Resource operations plan zones

(1) Each zone shown on the maps in attachment 3 and 4 is a resource operations plan zone (zone) for this plan.

(2) Each zone includes—

(a) each part of a watercourse, lake or spring that lies within the zone; and

(b) those sections of tributaries where there is access to flow or pondage from a watercourse or lake within the zone.

(c) each part of an aquifer that is under land in which groundwater is declared under section 8 of the Water Resource (Gulf) Plan 2007 to be water in a watercourse and is within the limits of the zone.

8 Information about areas and zones

(1) The location of plan area boundaries, water management areas and resource operations plan zones are held in digital electronic form by the department[2].

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

[1] Due to the size and complexity of this plan, some section numbers have been deliberately left blank. This will facilitate any plan amendments that may occur without the need for the whole plan to be renumbered.

[2] The information held in digital electronic form can be inspected at any of the department's offices

9 Water to which this plan applies

(1) This plan applies to the following water (surface water) in the plan area—

(a) water in a watercourse or lake; and

(b) water in a spring not connected to—

(i) GAB artesian water; or

(ii) GAB subartesian water;

(c) overland flow water, other than water in springs connected to—

(i) GAB artesian water; or

(ii) GAB subartesian water.

(2) This plan also applies to the following underground water (groundwater) in the plan area—

(a) artesian water that is not GAB artesian water;

(b) subartesian water that is not GAB subartesian water.

(3) In this section—

(a) GAB artesian water means artesian water in the plan area under the Water Resource (Great Artesian Basin) Plan 2006;

(b) GAB subartesian water means subartesian water connected to artesian water that is in the plan area under the Water Resource (Great Artesian Basin) Plan 2006.

10 Section number not used

11 Metering

The scheme licence holder must meter the taking of water under those water allocations and seasonal water assignments to which the scheme licence holder distributes water.

12 Departmental water monitoring data collection standards and data reporting standards

(1) Where this plan requires monitoring by a scheme licence holder, including measurement, collection, analysis and storage of data, the scheme licence holder must ensure the monitoring is consistent with the Water Monitoring Data Collection Standards[3].

(2) Where this plan requires transfer of data or reporting by a scheme licence holder, the scheme licence holder must ensure the transfer or reporting is consistent with the Water Monitoring Data Reporting Standards[4].

13 Section number not used

14 Operating and environmental management rules and monitoring requirements

(1) The operating and environmental management rules and monitoring requirements of this plan do not apply in situations where carrying out those rules and requirements would be unsafe to a person or persons.

(2) Where subsection 1 applies, the scheme licence holder must comply with the reporting requirements for operational or emergency incidents stated in Chapter 7 of this plan.

15 Interim program

(1) This section applies where the scheme licence holder is unable to meet the requirements of this plan.

[3] The Water Monitoring Data Collection Standards can be inspected at any of the department's offices or accessed online at: <www.dnrm.qld.gov.au>

[4] The Water Monitoring Data Reporting Standards can be inspected at any of the department's offices or accessed online at: <www.dnrm.qld.gov.au>

(2) A scheme licence holder may at any time, submit an interim program or an amendment to an existing program to the chief executive for approval if the holder proposes to operate in a way that is different to the requirements of this plan.

(3) Any submitted interim program or amendment to an existing program by the scheme licence holder must include a timetable and interim methods to be used.

(4) In considering any submitted program, the chief executive—

(a) may request additional information from the resource operations licence holder; and

(b) must consider the public interest.

(5) In deciding any submitted program, the chief executive may either—

(a) approve the program, including with conditions;

(b) amend and approve the amended program; or

(c) require the scheme licence holder to submit a revised program.

(6) Within 10 business days of making a decision on a program submitted under this section, the chief executive must notify the scheme licence holder of the decision.

(7) Following approval of a program by the chief executive, the scheme licence holder must

(a) publish details of the approved program on their internet site; and

(b) operate in accordance with the approved program.

(8) Where there is conflict between the provisions of this plan and the provisions of an approved program, the approved program prevails for the time that the approved program is in place.

16 Addressing water resource plan outcomes

Attachment 5 lists the outcomes of the Water Resource (Gulf) Plan 2007 and how the rules of this plan address those outcomes.

17 to 28 Section numbers not used

Chapter 2 Unallocated water

29 Scope of Chapter 2

This chapter states the process for making available and dealing with unallocated water mentioned in section 28 of the Water Resource (Gulf) Plan 2007.

30 Record of volume of unallocated water

The chief executive may keep a register of the volume of unallocated water available.

31 Requirement for information about land suitability

(1) A submission for unallocated water where the water is proposed to be used under a water entitlement for irrigation must be accompanied by information that demonstrates the potential suitability of the land for irrigation.

(2) For this section, potential suitability of the land for irrigation means the potential of the land for sustainable irrigation having regard to the following matters that may constrain the extent and location of any irrigation development—

(a) the availability of land where a vegetation clearing application may be made under the *Vegetation Management Act 1999*;

(b) the occurrence of ecological assets and other high value environmental features such as wetlands;

(c) suitability of the topography, including the slope of the land intended to be irrigated;

(d) known cultural heritage sites; and

(e) attributes of the soil, including potential salinity, sodicity and drainage concerns.

32 to 34 Section numbers not used

Part 1 Granting unallocated water from reserves

35 Granting unallocated water

When deciding an application for unallocated water, the chief executive must consider the effect of granting from the unallocated water reserves on indigenous cultural values and the social and economic wellbeing of local indigenous communities.

36 to 38 Section numbers not used

39 Additional considerations for granting water entitlements for taking groundwater

The chief executive may require a person interested in obtaining a water entitlement to take unallocated groundwater from the Nicholson or Einasleigh groundwater management areas to submit information to the chief executive about the likely impact the proposed taking of water may have on groundwater or surface water flows.

40 Section number not used

41 Special conditions for entitlements granted from the indigenous reserve

Water entitlements granted from the indigenous reserve in the Cape York Peninsula Region Area, Morning Inlet catchment area, Settlement Creek catchment area, Gregory River subcatchment area and Staaten River catchment area other than the part of the area that is within the Cape York Peninsula Region Area, must include a condition on the entitlement that the taking of water under the entitlement may be seasonally assigned in accordance with the seasonal water assignment rules for water entitlements granted from the indigenous reserve specified in the resource operations plan.

42 to 51 Section numbers not used

Chapter 3 Granting, converting and amending authorisations

52 to 82 Section numbers not used

Chapter 4 Moondarra Dam and Julius Dam Water Supply Schemes

83 Application of chapter 4

This chapter applies to—

(a) the resource operations licence holder for the Julius Dam Water Supply Scheme;

(b) the resource operations licence holder for the Moondarra Dam Water Supply Scheme;

(c) the distribution operations licence holder for the Julius Dam and Moondarra Dam water supply schemes;

(d) all water allocations associated with the Julius Dam Water Supply Scheme;

(e) all water allocations associated with the Moondarra Dam Water Supply Scheme; and

(f) the infrastructure associated with—

(i) the Julius Dam Water Supply Scheme (attachment 6(a));

(ii) the Moondarra Dam Water Supply Scheme (attachment 6(b)); and

(iii) the distribution operations licence (attachment 6(c)).

84 Section number not used

Part 1 Water sharing rules

85 Announced allocation

(1) The resource operations licence holder (the holder) for the holder's water supply scheme must—

(a) determine an announced allocation for each priority group for use in defining the share of water available to be taken under water allocations in that priority group;

(b) use the water sharing rules specified in this part, to calculate announced allocations throughout the water year;

(c) calculate and set the announced allocation for each priority group to take effect on the first day of each water year;

(d) following the commencement of a water year—

(i) recalculate the announced allocation to take effect no later than fifth business day following—

(A) the first day of every month; and

(B) for the Moondarra Water Supply Scheme, the commencement of critical water supply arrangements for the scheme.

(ii) reset the announced allocation only if a recalculation indicates that the announced allocation would—

(A) increase by five or more percentage points; or

(B) increase to 100 per cent.

(e) make public, details of the announced allocation, including parameters for determining the announced allocation, on the holder's internet site within five business days of—

(i) setting an announced allocation under subsection (c); or

(ii) when resetting the announced allocation under subsection (d).

(2) The announced allocation—

(a) must not be less than zero or greater than 100 per cent;

(b) must be rounded to the nearest per cent; and

(c) must not be reduced during the water year.

86 Calculation of announced allocation for high priority groups (Julius Dam Water Supply Scheme)

(1) The resource operations licence holder for the Julius Dam Water Supply Scheme must determine the announced allocation for water allocations within the Julius Dam Water Supply Scheme using the announced allocation formula for high priority water allocations in formula 1—

Formula 1

$$100 \times \left(\frac{UVJ + H^{DIV}}{H} \right)$$

(2) The parameters used in formula 1 are defined in Tables 1 and 2.

Table 1 Parameters used in the announced allocation

Term	Definition
UVJ Useable volume (ML)	The useable storage volume of Julius Dam UVJ = CV – NOV – SL UVJ = 0 if (CV – NOV – SL) is less than zero CV = current storage volume in Julius Dam NOV = 8190ML SL = the projected storage loss for Julius Dam is determined by dividing the surface area (Attachment 10, Table 1) at the time of calculation by the surface area at full supply volume, and multiplying the resultant factor by the modelled storage loss for the month (table 2) in which the announced allocation is being calculated.
H High priority water allocations (ML)	H is the total nominal volume of high priority water allocations.
HDIV High priority diverted volume (ML)	HDIV is the volume of water taken under high priority water allocations in a water year up to the time of assessment of the announced allocation.

Table 2 Storage loss volume for Julius Dam

Month in which announced allocation is calculated	Maximum storage loss to end of water year (ML)
July	23 509
August	22 063
September	20 252
October	18 240
November	17 338
December	14 798
January	12 468
February	10 549
March	8173
April	5520
May	3403

87 Moondarra Dam critical water supply arrangements

(1) For the purpose of this part, critical water supply arrangements for the Moondarra Dam Water Supply Scheme apply when decided by the chief executive or when—

(a) the volume of water stored in Moondarra Dam is less than 35 per cent of its full supply volume; and

(b) the resource operations licence holder for the Moondarra Dam Water Supply Scheme has—

(i) consulted with the holder of the distributions operations licence and the holders of all water allocations for the Moondarra Dam Water Supply Scheme; and

(ii) following such consultation, decided that it is necessary to allow water to be taken from Moondarra Dam after the volume of water stored in Moondarra Dam is less than or equal to 25 per cent of its full supply volume.

(2) In determining if critical water supply arrangements apply, the resource operations licence holder must consider—

(a) the effects that taking water would have on the quality of water in Moondarra Dam;

(b) the sufficiency of water supply available to customers of the distribution operations licence holder under water allocations held by those customers for the Julius Dam Water Supply Scheme;

(c) any implications for the holder of the distribution operations licence;

(d) the requirements of any relevant drought management plan or arrangements for water demand management developed by the customers of the distribution operations licence holder.

(3) The resource operations licence holder must—

(a) within five business days of being notified by the chief executive that critical water supply arrangements apply or making a decision under subsection 1(b)(ii), notify the holder of the distribution operations licence and the holders of all water allocations for the Moondarra Dam Water Supply Scheme that critical water supply arrangements apply for the scheme; and

(b) notify the chief executive, the holder of the distribution operations licence, and the holders of all water allocations for the Moondarra Dam Water Supply Scheme when the critical water supply arrangements no longer apply.

88 Calculation of announced allocations for medium priority groups (Moondarra Dam allocations)

(1) Other than in circumstances when critical water supply arrangements apply, the resource operations licence holder for the Moondarra Dam Water Supply Scheme (the holder) must determine the announced allocation for medium priority water allocations within the Moondarra Dam Water Supply Scheme using Formula 2.

Formula 2

$$100 \times \left(\frac{UVM + M^{DIV}}{M} \right)$$

(2) In those circumstances when critical water supply arrangements apply, the holder must determine the announced allocation for medium priority water allocations within the Moondarra Dam Water Supply Scheme using Formula 3.

Formula 3

$$100 \times \left(\frac{MUVM + M^{DIV}}{M} \right)$$

(3) The parameters used in formulas 2 and 3 are defined in Tables 3, 4 and 5.

Table 3 Parameters used in the announced allocation

Term	Definition
UVM Usable volume (ML)	The useable storage volume of Moondarra Dam UVM = CV – NOV – LA – CWL Loss (UVM = 0 if CV – NOV – LA – CWL Loss is less than zero) LA = is the allowance for losses above that which can be accommodated from the nominal operating volume and is determined by subtracting the nominal operating volume from the storage loss volume. LA = SL – NOV (LA = 0 if SL – NOV is less than zero). CV = current storage volume in Moondarra Dam NOV = nominal operating volume 26 708ML (25 per cent of the full supply volume) SL = the projected storage loss for Moondarra Dam is determined by dividing the surface area (Attachment 10 Table 2) at the time of calculation by the surface area at full supply volume, and multiplying the resultant factor by the storage loss for the month (Table 4) in which the announced allocation is being calculated. CWLLoss = the projected storage loss from Clear Water Lagoon for the remainder of the water year. Storage loss volumes are provided in Table 5.
MUVM Maximum usable volume (ML)	The maximum useable storage volume of Moondarra Dam MUVM = CV – DSV – SL – CWL Loss UVM = 0 if (CV – DSV – SL – CWL Loss) is less than zero CV = current storage volume in Moondarra Dam DSV = 3640ML (dead storage volume) SL = the projected storage loss for Moondarra Dam is determined by dividing the surface area (Attachment 10) at the time of calculation by the surface area at full supply volume, and multiplying the resultant factor by the storage loss for the month (Table 4) in which the announced allocation is being calculated. CWL Loss = the projected storage loss from Clear Water Lagoon for the remainder of the water year. Storage loss volumes are provided in Table 6.
M Medium priority water allocations (ML)	M is the total nominal volume of medium priority water allocations.
MDIV Medium priority diverted volume (ML)	The volume of water taken under medium priority water allocations in a water year up to the time of assessment of the announced allocation.

Table 4 Storage loss volume for Moondarra Dam

Month in which announced allocation is calculated	Maximum storage loss to end of water year (ML)
July	34 661
August	32 313
September	29 063
October	25 487
November	21 434
December	19 394
January	17 833

February	15 976
March	13 121
April	8745
May	5473
June	2536

Table 5 Projected storage loss for Clear Water Lagoon

Month in which announced allocation is calculated	Maximum storage loss to end of water year (ML)
July	1290
August	1217
September	1128
October	1022
November	894
December	761
January	620
February	483
March	365
April	247
May	149
June	70

Part 2 Dealing with water allocations

89 Scope of part 3

This part provides for dealings with water allocations managed for the Julius Dam and Moondarra Dam water supply schemes.

Division 1 Subdivisions or amalgamation of water allocations

90 Permitted subdivisions and amalgamations

(1) Subdivision of a water allocation is permitted where—

(a) the sum of the nominal volumes of the new water allocations is equal to the nominal volume of the water allocation that is being subdivided; and

(b) the location and priority group of the new water allocations are the same as that of the water allocation that is being subdivided.

(2) Amalgamation of water allocations is permitted where—

(a) the nominal volume of the new water allocation is equal to the sum of the nominal volumes of the water allocations that are being amalgamated; and

(b) the location and priority group of the water allocations that are being amalgamated are the same.

91 Section number not used

Division 2 Water allocation change rules

Subdivision 1 Prohibited changes

92 Prohibited changes

The following changes are prohibited—

(a) a change to a location;

(b) a change of the resource operations licence under which the water allocation is managed;

(c) a change to a priority group other than a priority group stated for the water supply scheme to which the water allocation applies in the Water Resource (Gulf) Plan 2007.

Subdivision 2 Assessed changes to water allocations

93 Change of purpose from 'distribution loss'

(1) The holder of a water allocation that states the purpose as 'distribution loss' may apply to the chief executive under section 129A of the *Water Act 2000* to change the purpose of the water allocation to 'any'.

(2) The water allocation holder must provide information with the application detailing that there is sufficient volume held under water allocations to provide for distribution losses within the system.

94 Section number not used

Part 3 Seasonal water assignment rules

95 Seasonal water assignment rules

(1) The holder of a water allocation to which this chapter applies may enter into an arrangement for a seasonal water assignment (the arrangement) in relation to the water allocation under section 146B of the *Water Act 2000* if the relevant scheme licence holder consents to the arrangement.

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

(3) The scheme licence holder referred to in subsection 1 is—

(a) the distribution operations licence holder for arrangements where the distribution operations licence holder distributes to the assignee; and

(b) the resource operations licence holder for arrangements where the resource operations licence holder distributes to the assignee.

96 to 110 Section numbers not used

Chapter 5 Water licences, applications and transfers

Part 1 Dealing with water licence applications

111 Application of part 1

(1) This part applies to each application for a water licence made under section 206 or 216 of the *Water Act 2000* if granting the application would have one or more of the following effects on water to which this plan applies—

(a) increase the annual volumetric limit for taking water;

(b) interfere with, or increase the interference with, water;

(c) increase the maximum rate or daily volumetric limit for taking the water;

(d) change the location from which water may be taken; or

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

(2) This part applies even if the application was made before the commencement of this plan.

(3) This part does not apply to—

(a) an application made under the following provisions of the *Water Act 2000*—

(i) section 221—reinstating an expired water licence;

(ii) section 224—amalgamating water licences;

(iii) section 225—subdividing a water licence; and

(iv) section 229—effect of disposal of part of land to which water licence to take water attaches.

(b) an application made in accordance with chapter 2 of this plan;

(c) an application to interfere with, or increase the interference with, water in a watercourse, lake or spring by impounding the flow of the water made in accordance with the process stated in section 43 of the Water Resource (Gulf) Plan 2007;

(d) an application to interfere with water by artificially improving or changing the course of a watercourse or lake or spring.

112 Applications to be refused

The chief executive must refuse an application to which this part applies unless this part explicitly provides for granting the application.

113 Application to increase the maximum rate at which water may be taken

(1) This section applies to an application to amend an existing water licence to increase the maximum rate at which water may be taken.

(2) The chief executive may grant the application if there is an existing development permit associated with the existing water licence and—

(a) the maximum rate specified on the water licence is less than—

(i) if the existing development permit states a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the rate stated in Schedule 12, column 2 of the Water Resource (Gulf) Plan 2007;

(ii) if the existing development permit states a pump size other than a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the rate decided by the chief executive having regard to the rates stated for similar pump sizes in Schedule 12, column 2 of the Water Resource (Gulf) Plan 2007.

(b) where Schedule 12 of the Water Resource (Gulf) Plan 2007 does not apply, the works authorised by an existing development permit have the capacity to take water at a rate greater than the maximum rate specified on the existing water licence.

(3) The chief executive must refuse the application if the maximum rate sought under the application exceeds—

(a) if there is an existing development permit associated with the licence that states a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the rate stated in Schedule 12, column 2 of the Water Resource (Gulf) Plan 2007;

(b) if there is an existing development permit associated with the licence that states a pump size other than a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the rate decided by the chief executive having regard to the rates stated for similar pump sizes in Schedule 12, column 2 of the Water Resource (Gulf) Plan 2007;

(c) the rate at which the works authorised by an existing development permit are capable of taking water.

114 Application to increase the daily volumetric limit

(1) This section applies to an application to amend an existing water licence to increase the daily volumetric limit.

(2) The chief executive may grant the application if there is an existing development permit associated with the water licence and—

(a) the daily volumetric limit specified on the water licence is less than—

(i) if the existing development permit states a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the daily volumetric limit stated in Schedule 12, column 3 of the Water Resource (Gulf) Plan 2007;

(ii) if the existing development permit states a pump size other than a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the daily volumetric limit decided by the chief executive having regard to the limits stated for similar pump sizes in Schedule 12, column 3 of the Water Resource (Gulf) Plan 2007;

(iii) where schedule 12 of the Water Resource (Gulf) Plan 2007 does not apply, the works associated with an existing development permit have the capacity to take water at a rate greater than the daily volumetric limit specified on the water licence.

(3) The chief executive must refuse the application if the daily volumetric limit applied for exceeds—

(a) if there is an existing development permit associated with the licence that states a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the daily volumetric limit stated in Schedule 12, column 3 of the Water Resource (Gulf) Plan 2007;

(b) if there is an existing development permit associated with the licence that states a pump size other than a pump size mentioned in Schedule 12, column 1 of the Water Resource (Gulf) Plan 2007—the daily volumetric limit decided by the chief executive having regard to the limits stated for similar pump sizes in Schedule 12, column 3 of the Water Resource (Gulf) Plan 2007;

(c) the maximum volume the works authorised by an existing development permit are capable of taking in a day.

115 and 115A Section number not used

Part 2 Transferring of water licences — (Regulation—s15A)

115B Licences may be transferred

(1) This part applies to an application made under section 223 of the *Water Act 2000* to transfer all or part of a water licence to take surface water or overland flow water from a water management area.

(2) For the purpose of this part—

(a) original water licence means an existing water licence that is proposed to be transferred in part or in full.

(b) resulting water licence(s) means any licence(s) that would be granted or amended as a result of a transfer application being approved.

(c) multi source licence means a water licence that authorises the taking of watercourse water and overland flow water under the one licence.

(d) a licence that is not within zones 3 to 12 is considered to be in an unzoned area.

(e) a licence that is within the boundary limit of zones 3, 4 or 5, that states a flow condition, is in zone 6.

115C Transfer applications to be accepted

The chief executive must accept an application to transfer a water licence within the Flinders and Gilbert river water management areas if this part provides for transfer rules for dealing with the application.

115D General water licence transfer rules

(1) The chief executive may grant an application to transfer a licence if—

(a) The original licence is a metered entitlement in accordance with the Water Regulation 2002;

(b) The original and resulting licence(s) relate to land within the same water management area;

(c) For an original licence in zone 6 or an unzoned area— the resulting licence(s) would not authorise take in zones 3, 4 or 5;

(d) The sum of the Annual Volumetric Limit (AVL) for the resulting licence(s) and other water licences in a given zone— would not exceed the maximum AVL for that zone as shown in Table 6A;

(e) For a transfer where the original and resulting licence(s) are in the same zone—the conditions and Daily Volumetric limit (DVL) on the resulting licence(s) are the same as the original licence;

(f) For a transfer where the original and resulting licence(s) are in different zones—the DVL and flow condition(s) on the resulting licence(s) are determined in accordance with the criteria specified in section 115G.

(2) Despite subsection 1(d), the chief executive may grant an application to transfer a water licence where a resulting licence would exceed the maximum AVL for a zone if —

(a) the original licence was in existence prior to 30 June 2014;

(b) the transfer is into zone 6, 7, 8, 9, 10, 11 or 12 and

(c) the chief executive is satisfied that the applicant has demonstrated that the proposed transfer would not adversely impact on—

(i) downstream entitlements including seasonal assignments;

(ii) the water needs of the environment;

(iii) the water available for town water supply; and

(iv) unallocated water reserves.

Table 6A: Licence transfer maximum annual volumetric limits

Water management area	Zone	Maximum annual volumetric limit (ML)
Gilbert River Water Management Area	Gilbert River Zone 3	1800
	Gilbert River Zone 4	600
	Gilbert River Zone 5	2682
	Gilbert River Zone 6	25 242
Flinders River Water Management Area	Flinders River Zone 7	10 000
	Flinders River Zone 8	17 500
	Flinders River Zone 9	50 000
	Flinders River Zone10	40 000
	Cloncurry River Zone 11	20 000
	Saxby River Zone 12	10 000

115E Specific water licence transfer rules for water transfer group B

The chief executive may grant an application to transfer a licence that states water transfer group B if—

(a) The original licence is a metered entitlement in accordance with the Water Regulation 2002;

(b) The original and resulting licence(s) relate to land within the same water management area;

(c) For an original licence in zone 6 or an unzoned area— the resulting licence(s) would not authorise take in zones 3, 4 or 5;

(d) The chief executive is satisfied that the applicant has demonstrated that the resulting licence(s) would not increase the average volume simulated to be taken annually and that the DVL, AVL and flow condition on resulting licence(s) would not adversely impact on—

(i) downstream entitlements including seasonal assignments;

(ii) the water needs of the environment;

(iii) the water available for town water supply; and

(iv) unallocated water reserves.

(e) The resulting licence(s) state(s) water transfer group B.

115F Additional rules for transfers to or within an unzoned area

(1) This section applies to an application to transfer all or part of a licence to land within an unzoned area for licences that do not state water transfer group B, and is in addition to the rules specified in section 115D.

(2) The chief executive may grant the application if the resulting licence(s) in an unzoned area state(s)—

(a) For surface water licence(s) – an AVL, DVL and flow condition that have been determined by the chief executive in consideration of section 115G.

(b) For multi-source licence(s) – an AVL, DVL, flow condition and storage condition that have been determined by the chief executive in consideration of section 115G.

(c) For overland flow licence(s) – attributes that have been determined by the chief executive in consideration of section 115G.

115G Criteria for determining attributes for transferring licences

(1) In determining licence attributes for an application mentioned under sections 115D(1)(f), 115F(2) the chief executive must consider—

(a) The likelihood of accessing water under the resulting licence(s);

(b) The potential effects of the transfer on—

(i) downstream entitlements including seasonal assignments;

(ii) the water needs of the environment;

(iii) the water available for town water supply; and

(iv) unallocated water reserves.

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

Part 3 Seasonal water assignment under water licences

Division 1 Seasonal water assignment—Flinders and Gilbert river water management areas

115H Scope of Division 1

(1) This division provides for seasonal water assignment of water licences that authorise taking surface water within the Flinders and Gilbert river water management areas.

(2) For the purpose of this division—

(a) Original water licence means an existing water licence that is proposed to be assigned in part or in full;

(b) Resulting water licence(s) means any licence(s) that would be granted or amended as a result of a seasonal water assignment application being approved;

(c) A licence that is not within zones 3 to 12 is considered to be in an unzoned area;

(d) A licence that is within the boundary limit of zones 3, 4 or 5, that states a flow condition, is in zone 6.

115I Seasonal water assignment applications to be accepted

The chief executive must accept an application to seasonally assign a water licence mentioned in section 115 H of this plan if this part provides rules for dealing with the application.

115J Seasonal water assignment rules

The chief executive may grant an application to seasonally assign a water licence if—

(a) The licence being assigned is a metered entitlement in accordance with the Water Regulation 2002;

(b) The licence being assigned and the resulting seasonal assignment relate to land within the same water management area;

(c) For a seasonal assignment in an unzoned area— the original licence is in an unzoned area;

(d) For a licence being assigned in zone 6— the resulting seasonal assignment would not authorise take in zones 3, 4 or 5.

(e) The volume of the seasonal water assignment is no greater than the unused AVL that may be taken under the authority of the water licence being assigned;

(f) The flow condition(s) for a seasonal assignment—

(i) where the licence being assigned and the seasonal assignment are in the same zone— is the flow condition(s) stated on the licence being assigned; or

(ii) where the licence being assigned and the seasonal assignment are in different zones for water licences that do not state water transfer group B— is the flow condition(s) stated in table 6B for the zone to which the licence is being assigned; or

(iii) not mentioned in (i) or (ii) — is determined by the chief executive in consideration of the impact of the assignment on existing licence holders.

(g) The chief executive may impose other conditions for the taking of water under a seasonal water assignment if those conditions are required to ensure the assignment will not impact on existing licence holders.

Table 6B: Seasonal water assignment flow conditions

Water management area	Zone	Flow condition
Gilbert River Water Management Area	3	N/A
	4	
	5	
	6	1728 ML/day at Gilbert River at Rockfields Gauge Station (197001D)
Flinders River Water Management Area	7	432 ML/day at Flinders River (past pump)
	8	864 ML/day at Flinders River at Richmond Gauge Station (915008A)
	9	1728 ML/day at Flinders River at Etta Plains Gauge Station (915012A)
	10	2160 ML/day at Flinders River at Walkers Bend Gauge Station (915003A)
	11	1296 ML/day at Cloncurry River at Canobie Gauging Station (915212A)

	12	432 ML/day at Saxby River (past pump)

116 to 119 Section numbers not used

Division 2 Seasonal water assignment—water licences from Indigenous reserve

120 Scope of division 2

(1) This division provides for seasonal water assignment of water licences that state a condition on the licence that the taking of water under the licence may be seasonally assigned in accordance with the seasonal water assignment rules for water licences granted from the indigenous reserve specified in the resource operations plan.

(2) This division applies to water licences granted in the Cape York Peninsula Region Area, Morning Inlet catchment area, Settlement Creek catchment area, Gregory River subcatchment area and Staaten River catchment area other than the part of the area that is within the Cape York Peninsula Region Area.[5]

121 Seasonal water assignment rules

(1) The chief executive may approve a seasonal water assignment of all or part of the water that may be taken under the original water licence only where—

(a) the seasonal water assignment will be for taking water from the same catchment or subcatchment area that the original water licence authorises water to be taken from; and

(b) the volume of the seasonal water assignment plus the volume of water that is not seasonally assigned will be no greater than the annual volumetric limit that may be taken under the authority of the original water licence.

(2) For the purpose of this division, 'original water licence' means a water licence proposed to be seasonally assigned.

Part 4 Granting water licences for taking overland flow water

122 Section number not used

123 Granting or amending a water licence in accordance with section 79 of the water resource plan

(1) The chief executive may at any time—

(a) grant a licence for taking overland flow water to replace the authority under section 79 of the Water Resource (Gulf) Plan 2007;

(b) amend a licence granted under subsection 1(a).

(2) Before granting or amending a water licence under subsection 1, the chief executive must issue a notice to the owner of the land—

(a) requesting that the owner of the land clearly identify the existing works that take overland flow water;

[5] Seasonal water assignment rules for licences granted from the Indigenous reserves for the Flinders River water management area and the Gilbert River water management area are outlined in Section 115J

(b) stating that the chief executive intends to grant or amend a water licence for taking overland flow water using the works;

(c) requesting additional information including, but not limited to the pattern of water use from the works based on the water requirements and purpose for which the water is used; and

(d) providing any other information required by the chief executive.

(3) A notice under subsection 2 may also require the owner of the land to provide, in accordance with section 124 of this plan, a certified report about the take of overland flow water using the works.

(4) In making a decision about granting or amending a licence under subsection 1, the chief executive must consider—

(a) any relevant information available to the chief executive about the works;

(b) the certified report about the works; and

(c) any other matters the chief executive considers relevant.

124 Certified reports for overland flow works

(1) For the purpose of this part, a certified report is a report prepared in accordance with the standards and requirements set out in a notice provided by the chief executive.

(2) The purpose of the certified report is to provide the chief executive with an accurate representation of—

(a) the infrastructure to which the report relates;

(b) the operation of the infrastructure; and

(c) the ability of the infrastructure to take overland flow water;

(3) The chief executive may require that the certified report be verified and signed by a Registered Professional Engineer.

125 Contents and conditions for a water licence to take overland flow water

A water licence for taking overland flow water—

(a) must state the purpose for which water may be taken under the licence as either—

(i) rural; or

(ii) any.

(b) must state at least one of the following—

(i) the maximum stored volume;

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

(iii) the daily volumetric limit for the licence;

(iv) the annual volumetric limit for the licence;

(v) the mean annual volume for the licence.

(c) may state conditions for the licence, including flow conditions and conditions for storing water taken under the licence.

Part 5 Water licences used in conjunction with overland flow works

126 Application to amend a water licence to change a condition

(1) This section applies to an application to amend a water licence to change a condition that requires water taken under the licence to be stored in particular works used to take overland flow water.

(2) If the chief executive decides to grant the application, the chief executive must issue a water licence for taking overland flow water to the applicant in accordance with Part 4 of this chapter.

127 to 137 Section numbers not used

Chapter 6 Performance assessment

138 Water monitoring

(1) The chief executive must measure or collect, and keep publicly available, records of—

(a) water quantity;

(b) water taken;

(c) prices for water allocations permanently traded;

(d) the number of water allocations and water licences permanently traded and seasonally assigned; and

(e) nominal volume of water allocations permanently traded and the volume of water seasonally assigned.

(2) The chief executive must collect and record publicly available information on future consumptive demands for water.

(3) The chief executive may use information collected to support water resource assessment and reporting.

139 Natural ecosystems monitoring

The chief executive must collect and keep publicly available information on ecological assets that are linked to the ecological outcomes of the Water Resource (Gulf) Plan 2007.

140 Assessment and reporting

The chief executive must make ongoing assessments of whether the trends in the data measured, collected and recorded under sections 138 and 139 of this plan indicate that outcomes specified in the Water Resource (Gulf) Plan 2007 are being achieved.

141 to 150 Section numbers not used

Chapter 7 Scheme licence holder monitoring and reporting

151 Scope of chapter 7

This chapter sets out the monitoring and reporting requirements that apply to the scheme licence holder for the—

(a) Julius Dam Water Supply Scheme; and

(b) Moondarra Dam Water Supply Scheme.

152 Monitoring data must be made available

(1) The distribution operations licence holder must, when requested by the resource operations licence holder, transfer all data measured, collected and recorded to the resource operations licence holder for the Julius Dam and/or Moondarra Dam water supply schemes—

(a) that is reasonably required for the resource operations licence holder to comply with the rules and requirements of this plan; and

(b) within 15 business days of a request being made, or another timeframe if agreed to by the distribution operations licence holder and resource operations licence holder.

(2) The scheme licence holders must transfer any monitoring data required under this chapter to the chief executive upon request, and within the time requested.

Part 1 Monitoring requirements

Division 1 Water quantity

153 Storage water level data

The resource operations licence holder (the holder) must record storage water level data for the holder's water supply scheme in accordance with table 7.

Table 7: Storage water level data

Location	Continuous time series storage water level data
Moondarra Dam	√
Julius Dam	√

154 Announced allocations

The resource operations licence holder (the holder) must record details of announced allocation determinations for the holder's water supply scheme including—

(a) the announced allocations for high and medium priority allocations;

(b) the date announced allocations are determined; and

(c) the value of each parameter applied for calculating the announced allocation.

155 Water taken by water users

(1) For subsection (2), the responsible scheme licence holder means—

(a) the distribution operations licence holder for water allocations distributed by the distribution operations licence holder; and

(b) the resource operations licence holder for other water distributed directly by the resource operations licence holder.

(2) The responsible scheme licence holder must on an annual basis record the volume of water, including distribution loss water, taken by each water user for each storage as follows—

(a) the total volume of water taken;

(b) the total volume of water entitled to be taken at any time; and

(c) the basis for determining the total volume of water entitled to be taken at any time.

156 Seasonal water assignment from a water allocation

(1) The scheme licence holder that approves a seasonal water assignment, in accordance with section 95 of this plan, must, on approval of any seasonal water assignment, notify the other scheme licence holder.

(2) The scheme licence holder that approves a seasonal water assignment in accordance with section 95 of this plan, must record details of the seasonal water assignment arrangements including—

(a) the volume of water that has been seasonally assigned;

(b) the name of both the assignor and the assignee; and

(c) the effective date of seasonal water assignments.

Division 2 Impact of storage operation on natural ecosystems

157 Water quality

The resource operations licence holder, in accordance with section 12 of this plan, must record water quality data for the holder's water supply scheme.

158 Fish stranding

The resource operations licence holder must record and assess reported instances of fish stranding associated with the operation of the holder's water supply scheme to determine if any instance is associated with the operation of that infrastructure.

159 to 160 Section numbers not used

Part 2 Reporting requirements

161 Reporting requirements

(1) The resource operations licence holders must provide the following reports in accordance with this part—

(a) an annual report; and

(b) if required, an operational report.

(2) The resource operations licence holders and the distribution operations licence holder must provide, if required, an emergency report in accordance with this part

162 Section number not used

Division 1 Annual reporting

163 Annual report

(1) The resource operations licence holder must submit an annual report to the chief executive after the end of each water year.

(2) The annual report must include—

(a) water quantity monitoring results for the scheme required under section 164 of this plan;

(b) natural ecosystem impact monitoring and results for the scheme required under section 165 of this plan; and

(c) a discussion on any issues that arose as a result of the implementation and application of the rules and requirements for the scheme as detailed in this plan.

164 Water quantity monitoring

The annual report must include a summary of—

(a) announced allocation determinations including—

(i) an evaluation of the announced allocation procedures and outcomes; and

(ii) the date and value for each announced allocation;

(b) instances where critical water supply arrangements have been implemented;

(c) for the water year, the total annual volume of water taken and entitled to be taken by each water user, namely—

(i) the total volume of water taken;

(ii) the total volume of water entitled to be taken; and

(iii) the basis for determining the total volume entitled to be taken;

(d) seasonal water assignments, namely—

(i) the total number of seasonal water assignment arrangements; and

(ii) the total volume of water seasonally assigned;

(e) all details of changes to the storage and delivery infrastructure, or the operation of storages and delivery infrastructure that may impact on compliance with rules in this plan;

(f) details of any new water quantity monitoring devices used.

165 Impact of storage operation on natural ecosystems

The annual report must include—

(a) a summary of environmental considerations made by the resource operations licence holder in making operational decisions;

(b) a summary of the environmental outcomes of the decision including any adverse environmental impacts;

(c) a summary of fish stranding monitoring and assessment including arrangements to reduce instances fish stranding;

(d) a discussion and assessment of the following water quality issues—

(i) thermal and chemical stratification in the resource operations licence holder's storage;

(ii) contribution of the storage and its management to the quality of water stored;

(iii) cyanobacteria population changes in response to stratification in the resource operations licence holder's storage; and

(iv) any proposed changes to the monitoring program as a result of evaluation of the data.

Division 2 Operational and emergency reporting

166 Operational and emergency reporting

(1) A scheme licence holder must notify the chief executive within one business day of becoming aware of—

(a) any of the following operational incidents for the resource operations licence holder's scheme—

(i) a non-compliance with the rules given in this plan; and

(ii) details of any circumstances where they are unable to supply water allocations.

(b) An emergency where, as a result of the emergency, a scheme licence holder cannot comply with a rule in this plan.

(2) A scheme licence holder must provide to the chief executive upon request and within the timeframe requested a report which includes details of—

(i) the incident or emergency;

(ii) conditions under which the incident or emergency occurred;

(iii) any responses or activities carried out as a result of the incident or emergency; and

(iv) in relation to an emergency only, any rules specified in this plan that the scheme licence holder is either permanently or temporarily unable to comply with due to the emergency.

167 to 180 Section numbers not used

Chapter 8 Amendments to the resource operations plan

181 Scope of chapter 8

This chapter sets out the types of amendments that can be made to this plan under section 106 (b) of the *Water Act 2000.*

182 to 188 Section numbers not used

189 Minor or stated amendment of this plan—*Water Act 2000*, section 106(b)

The following types of amendments that may be made to this plan under section 106(b) of the *Water Act 2000*—

(1) An amendment that the chief executive is satisfied would not cause any significant detrimental impact on—

(a) existing water entitlement holders; or

(b) the availability of water for—

(i) ecological assets; or

(ii) natural ecosystems.

(2) The amendments under subsection (1) may include, but are not limited to, the following—

(a) an amendment that is necessary to implement an amendment to the Water Resource (Gulf) Plan 2007 made under section 57 of the *Water Act 2000* may be made to this plan.

(b) an amendment that provides for improved or more efficient monitoring and reporting requirements.

(c) an amendment to remove granting or amending provisions and associated attachments, once the granting or amending has occurred in accordance with the plan; and

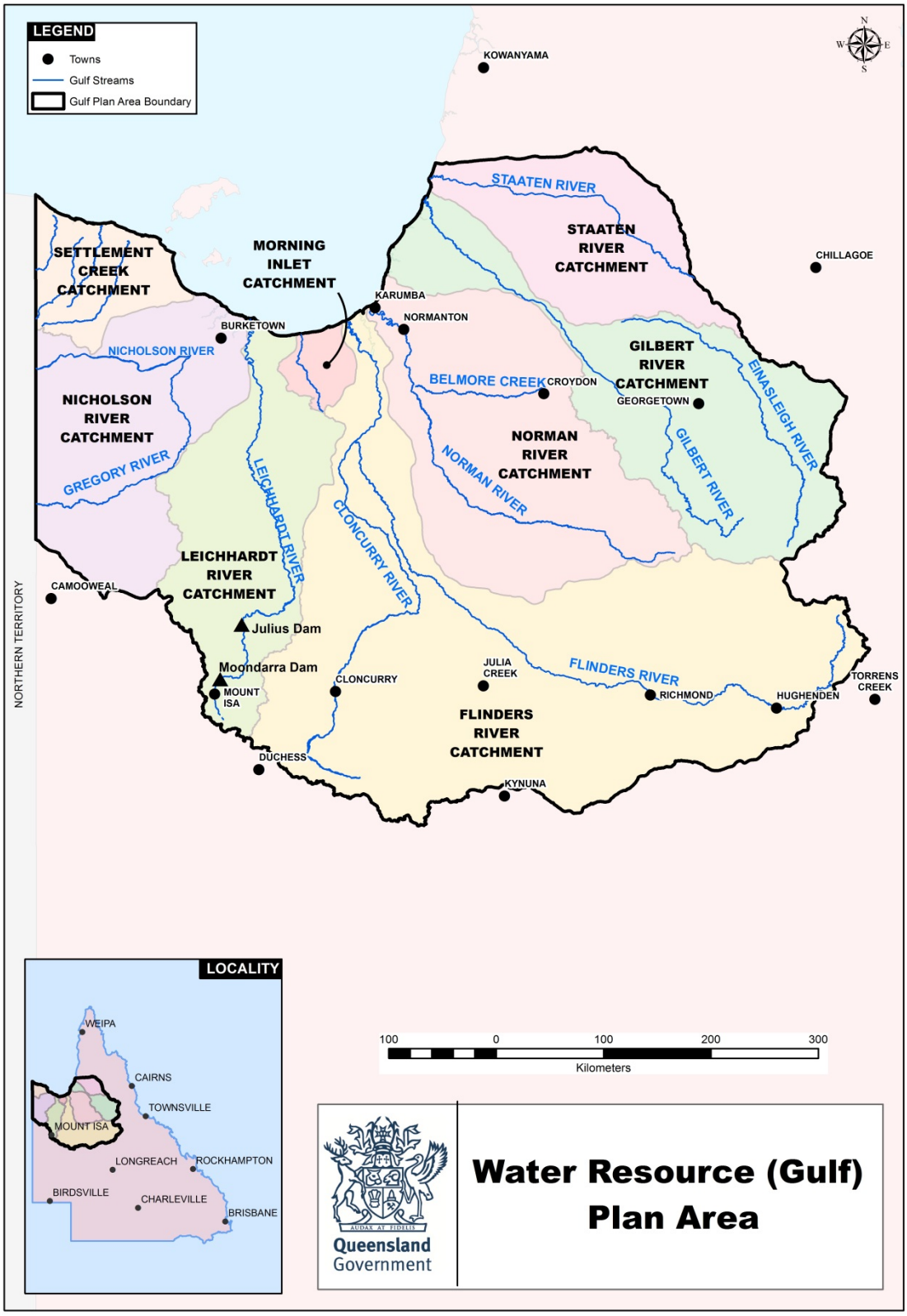
(d) an amendment to infrastructure details, operating and environmental management rules, dealings with water allocations, water sharing rules or seasonal water assignment rules.

Attachment 1 Dictionary

Term	Definition
AHD	Australian height datum (AHD) adopted by the National Mapping Council of Australia for referencing a level or height back to a standard base level.
Announced allocation	For a water allocation managed under a resource operations licence, Announced Allocation means a number, expressed as a percentage, which is used to determine the maximum volume of water that may be taken in a water year under the authority of a water allocation.
Annual volumetric limit	For the purpose of this plan, the annual volumetric limit, for a water licence, has the same meaning as the term nominal entitlement.
Assignee	The person or entity to whom an interest or right to water is being transferred (e.g. seasonally assigned).
Assignor	The person or entity that transfers an interest or right in water to an assignee (e.g. a seasonal water assignment).
Dead storage	For a dam or weir, the dead storage is the volume of water within the ponded area of the storage which cannot be released from the storage under normal operating conditions.
Discharge	Discharge is the rate at which a volume of water passes a point in a stream or pipeline per unit of time. This could be measured in litres per second (L/s), cubic metres per second (m3/s or cumecs) or in megalitres per day (ML/day).
Distribution loss	Water that is 'lost' when delivering water for water allocations in reticulated areas via constructed infrastructure through processes such as (but not limited to) evaporation, seepage, pipeline leakage, accidental loss through temporary pipe failure (breaks), loss through pressure relief systems, scouring and pigging.
Emergency	An emergency includes an occurrence that, by nature of its severity, extent or timing might be regarded as an emergency (for example contamination of water supply, structural damage to infrastructure or a danger to human health).
Existing development permit	For Chapter 5 of this plan, existing development permit means a current development permit that was in effect on 28 June 2010.
Fish stranding	Fish stranding means when fish are stranded or left out of the water on the bed or banks of a watercourse, on infrastructure such as spillways and causeways or left isolated in small and/or shallow pools, from which they cannot return to deeper water. This also applies to other aquatic species such as platypus, turtles and any rare or threatened species.
Inlet	Infrastructure comprised of an entrance channel, intake structure, and gate or valve, which allow for water to be taken from the

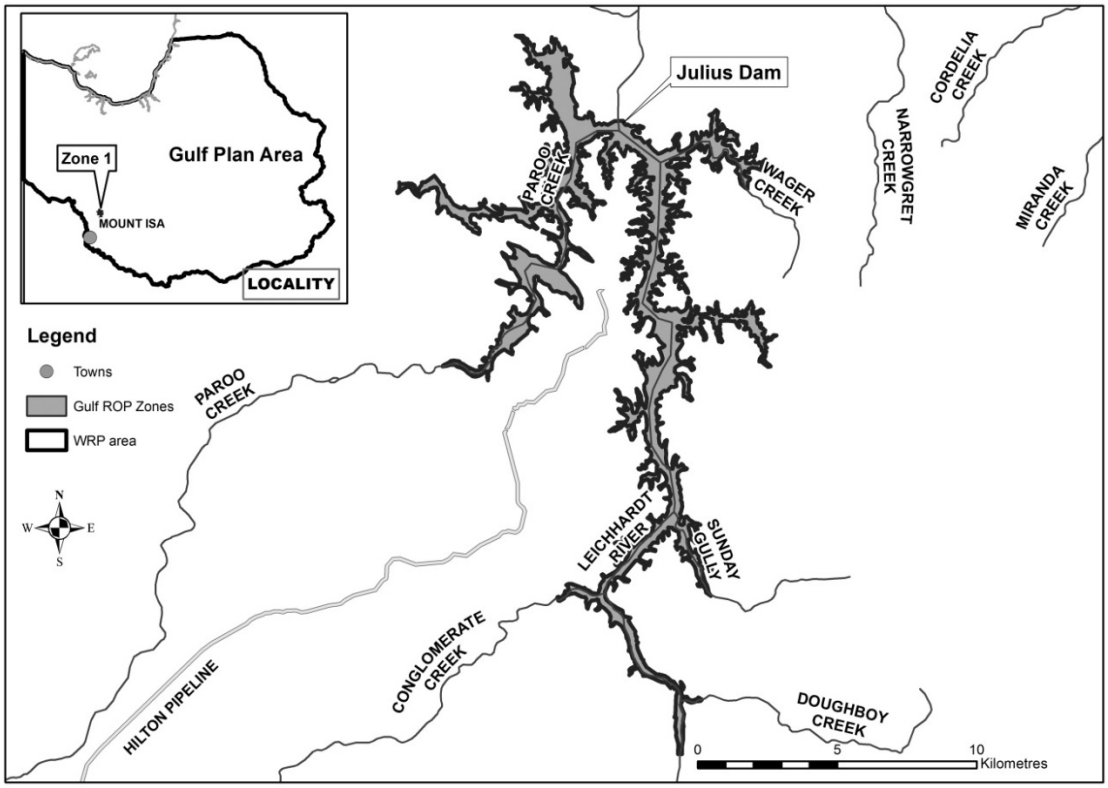
Term	Definition
	storage and discharged into the watercourse downstream of the storage.
Location	(1) For a water allocation, location means the zone from which water under the water allocation can be taken. (2) For a water licence, location means the section of the watercourse, lake or spring abutting or contained by the land described on the water licence at which water may be taken.
Multi-level inlet	An inlet arrangement on a dam or weir that allows stored water to be released downstream from selected levels below the stored water surface.
Nominal entitlement	Nominal entitlement, for a water licence, has the meaning given by section 65 of the Water Regulation 2002.
Ponded area	Area of inundation at full supply level of a storage.
Quarter or quarterly	Three monthly intervals commencing at the start of the water year.
Resource operations plan zone	A geographic location defined by a reach of a watercourse. Resource operations plan zones define the location of a water entitlement and operational arrangements under this plan.
Scheme licence holder	For this plan, the term 'scheme licence holder' means— • the resource operations licence holder for the Julius Dam Water Supply Scheme; • the resource operations licence holder for the Moondarra Dam Water Supply Scheme; and/or • the distribution operations licence holder for the Julius Dam and Moondarra Dam water supply schemes.
Water transfer group B	Defines a group of water entitlements granted from the general unallocated water reserves in the Flinders and Gilbert river water management areas. These licences will be granted with a condition stating that the transfer of water under the entitlement must be done in accordance with the water transfer group B rules.
Water use	The actual consumption of water.
Water year	The water year is the 12 month period beginning 1 July and ending 30 June.

Attachment 2 Gulf plan area

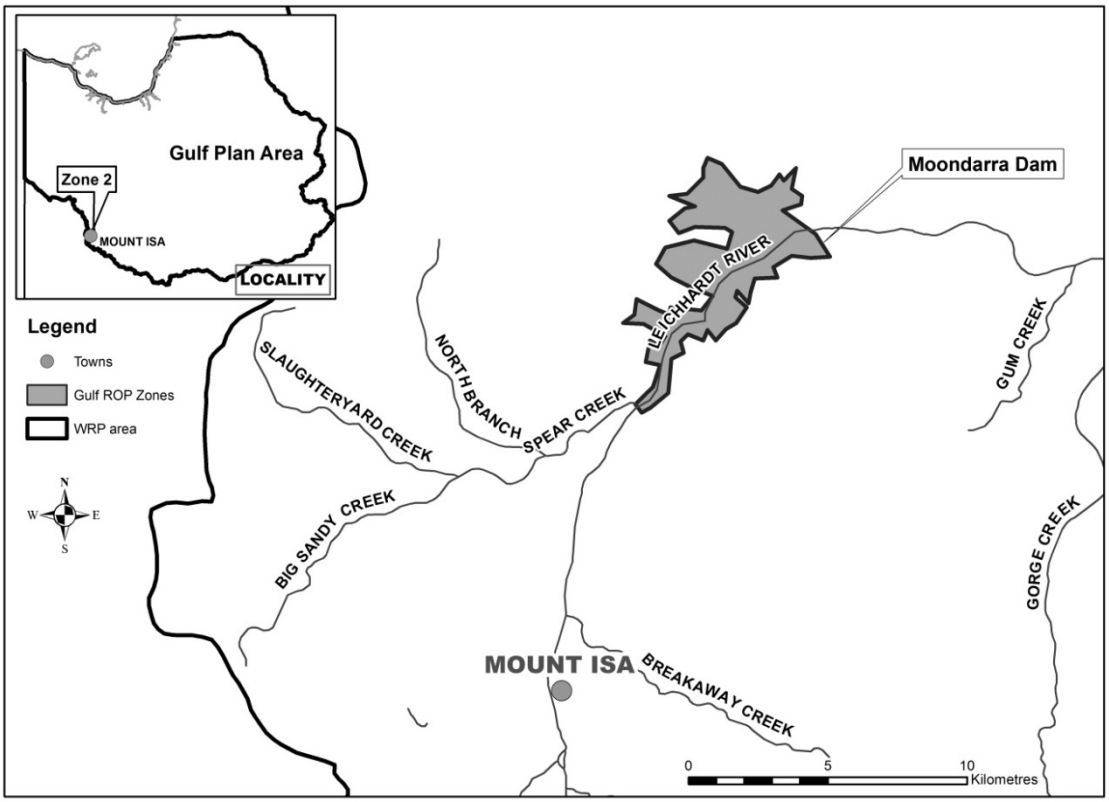


Attachment 3 Supplemented zones

Map A Lake Julius—zone 1

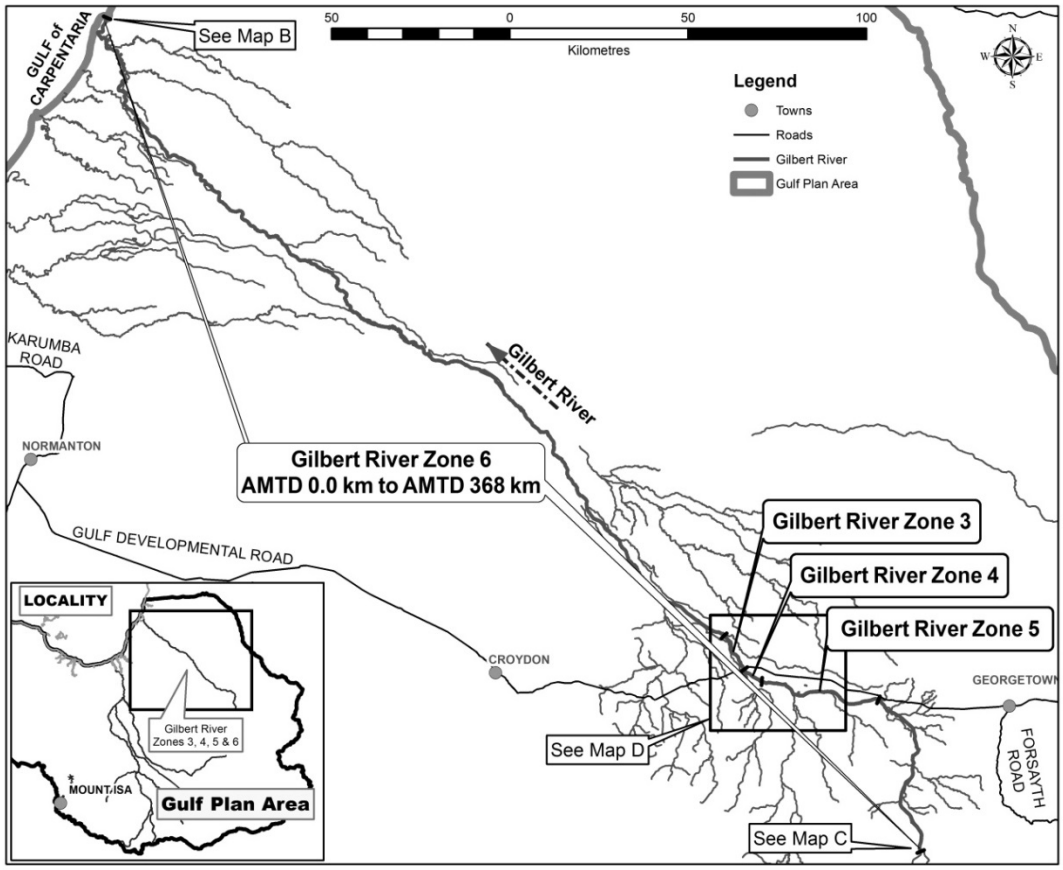


Map B Lake Moondarra—zone 2

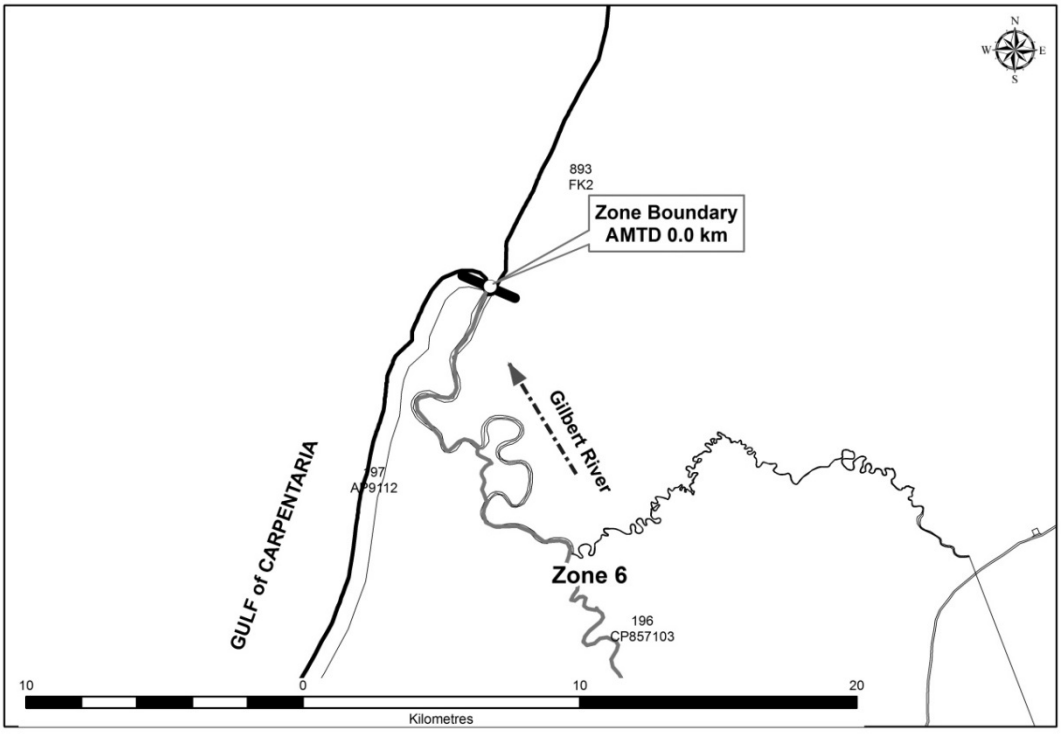


Attachment 4 Unsupplemented zones

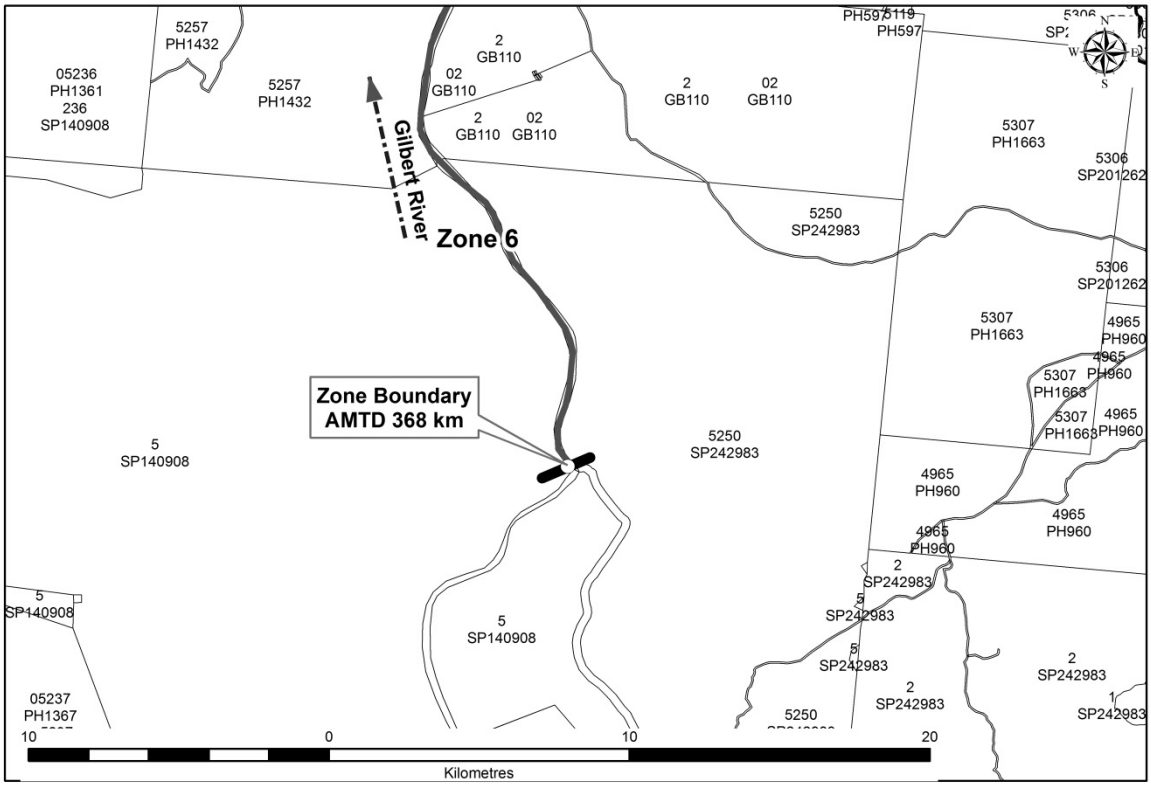
Map A Gilbert River WMA—zones 3, 4, 5 and 6



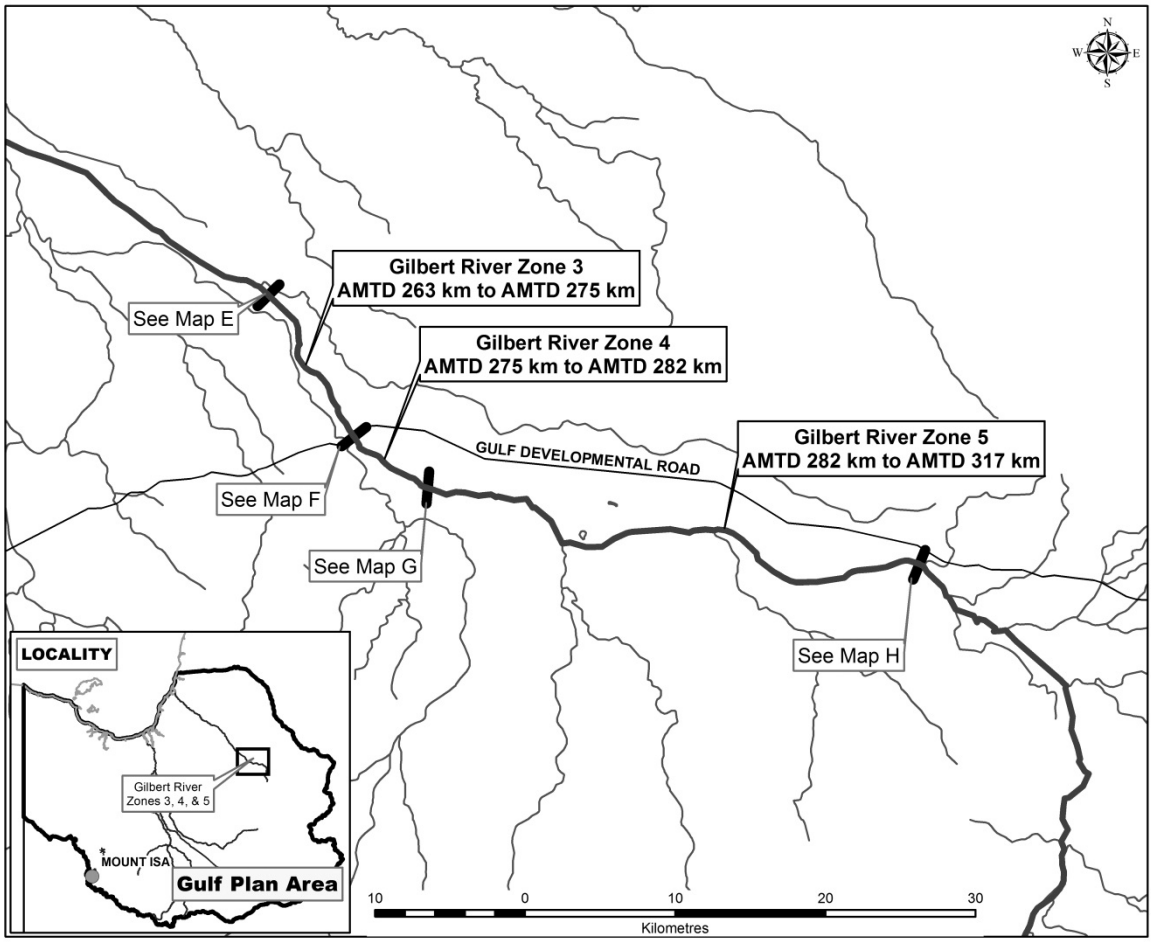
Map B Downstream limit zone 6



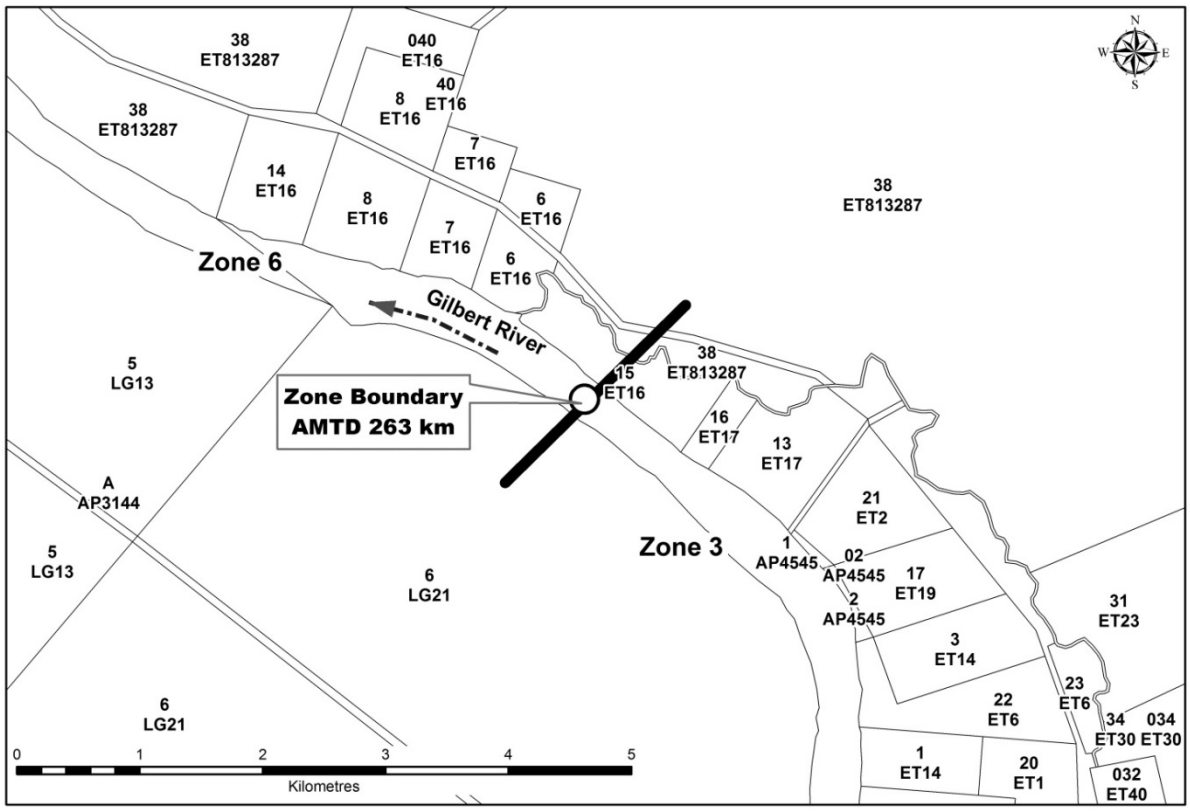
Map C Upstream limit zone 6



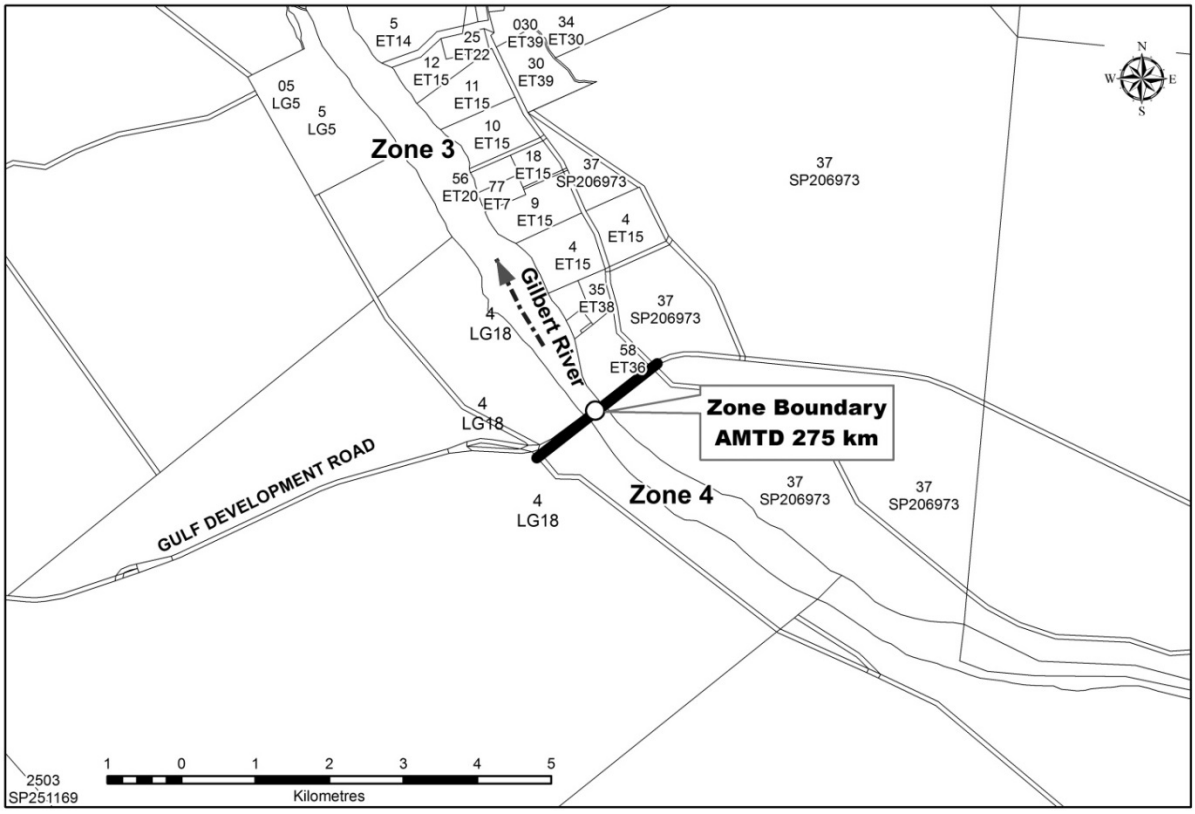
Map D Gilbert River WMA—zones 3, 4 and 5



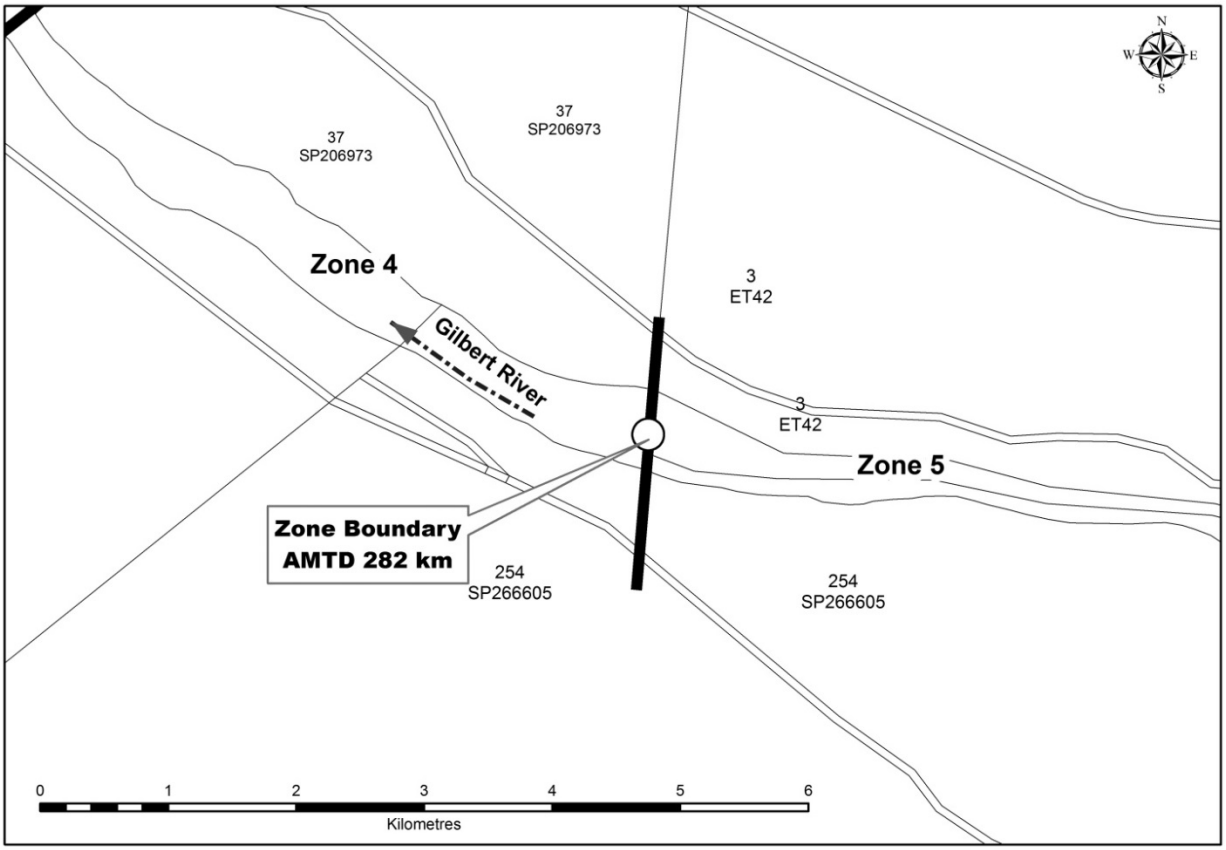
Map E Downstream limit zone 3



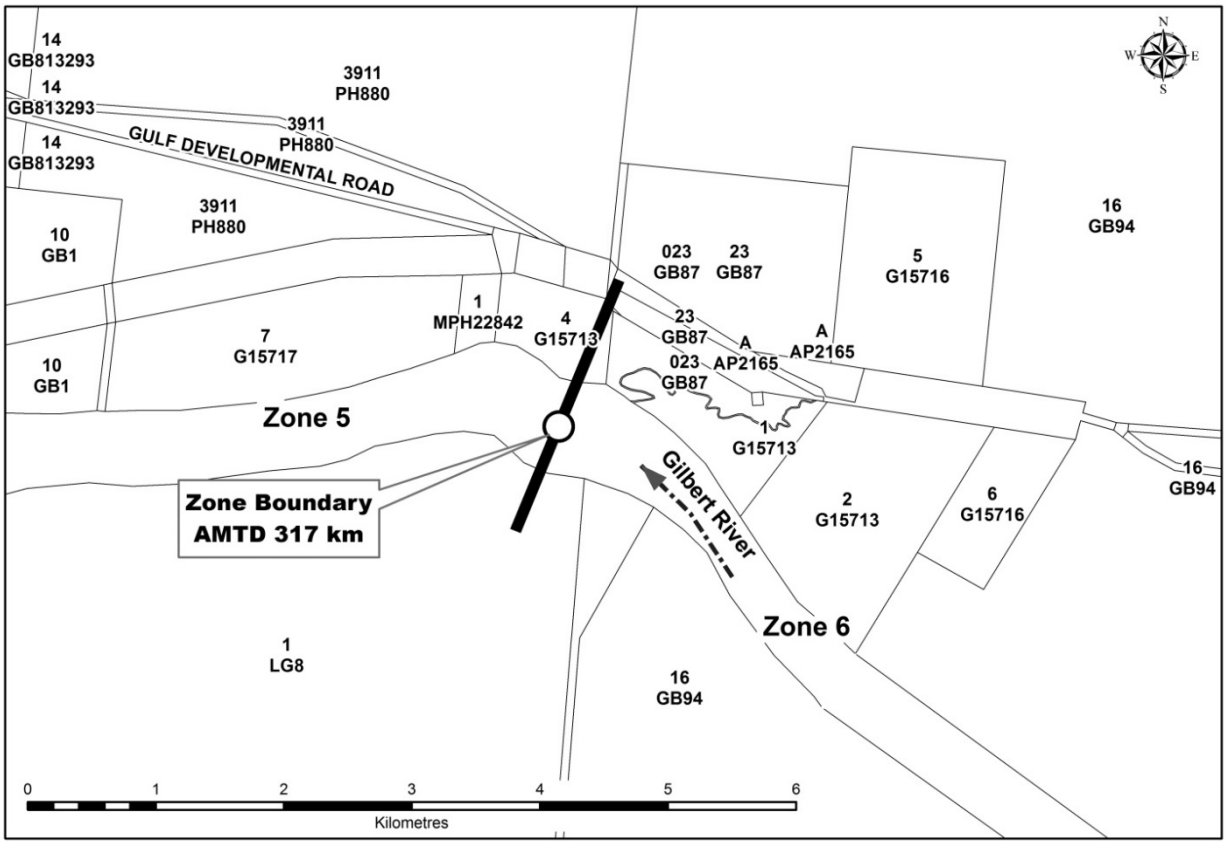
Map F Boundary between zones 3 and 4



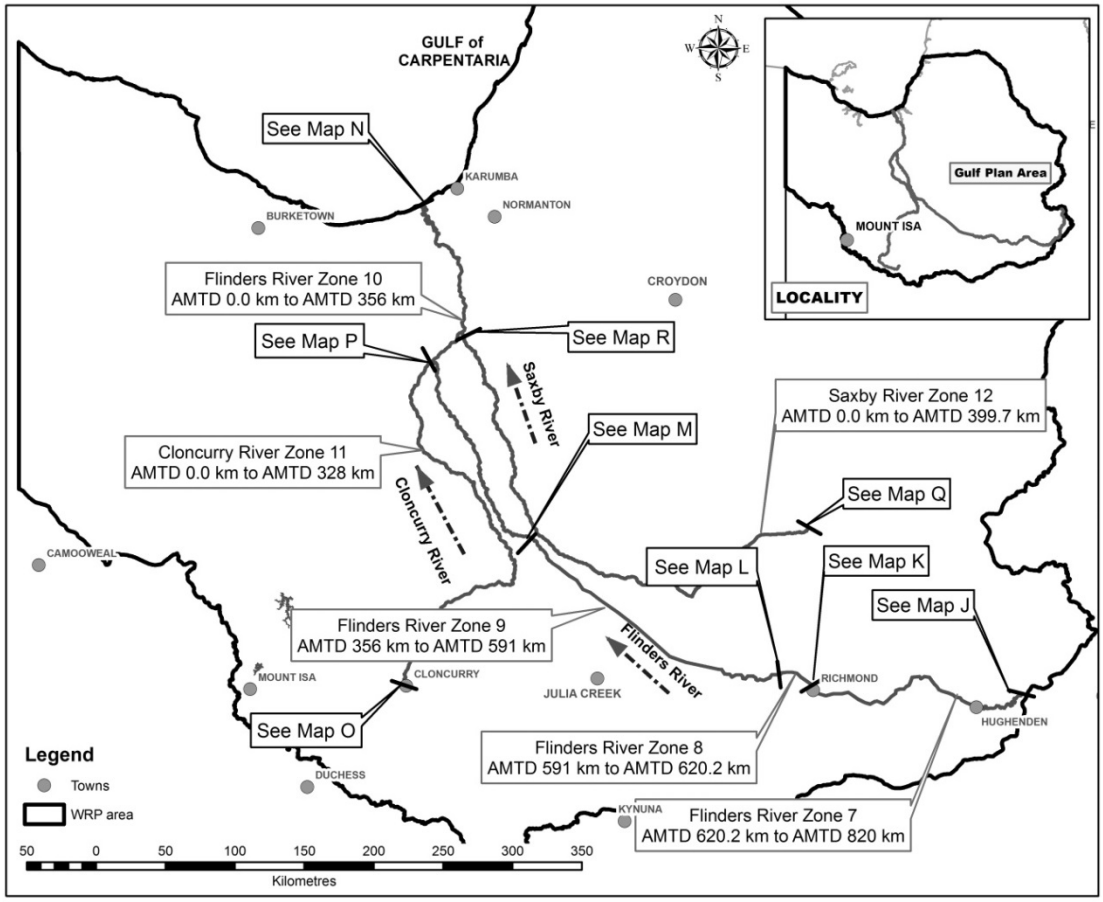
Map G Boundary between zones 4 and 5



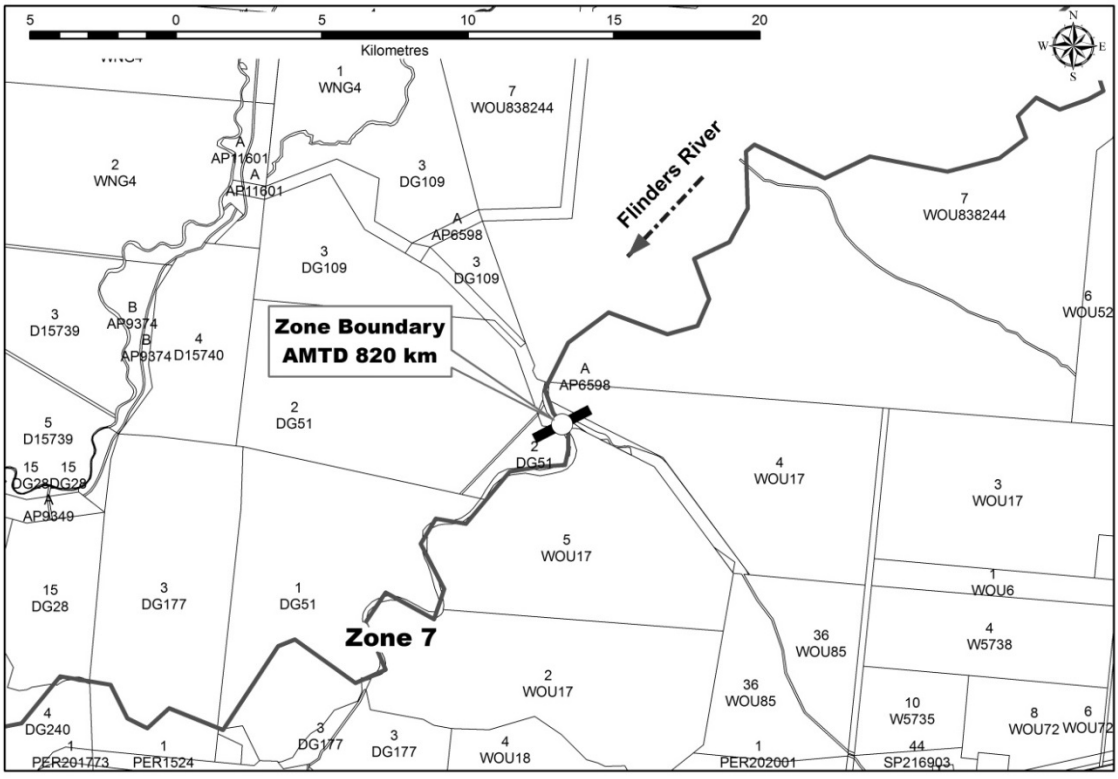
Map H Upstream limit zone 5



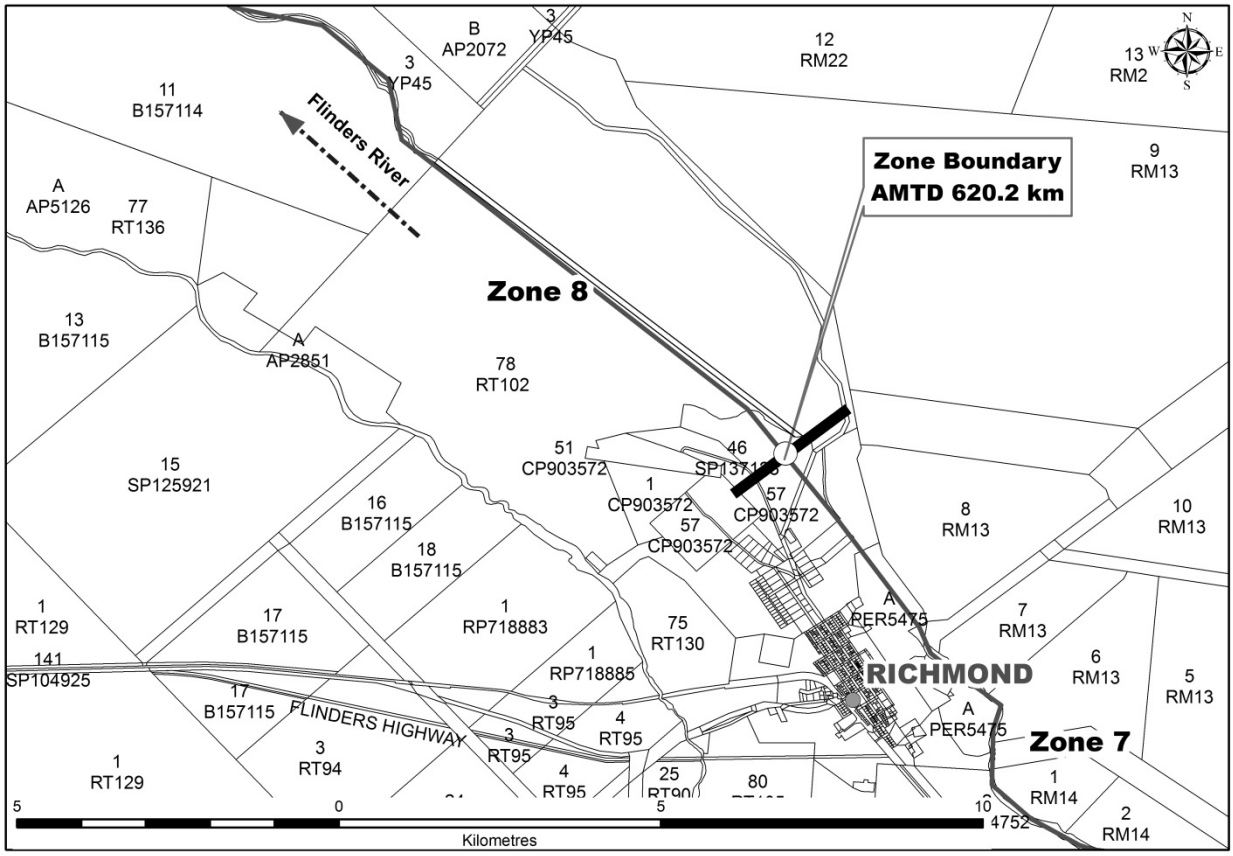
Map I Flinders River WMA—zones 7, 8, 9, 10, 11 and 12



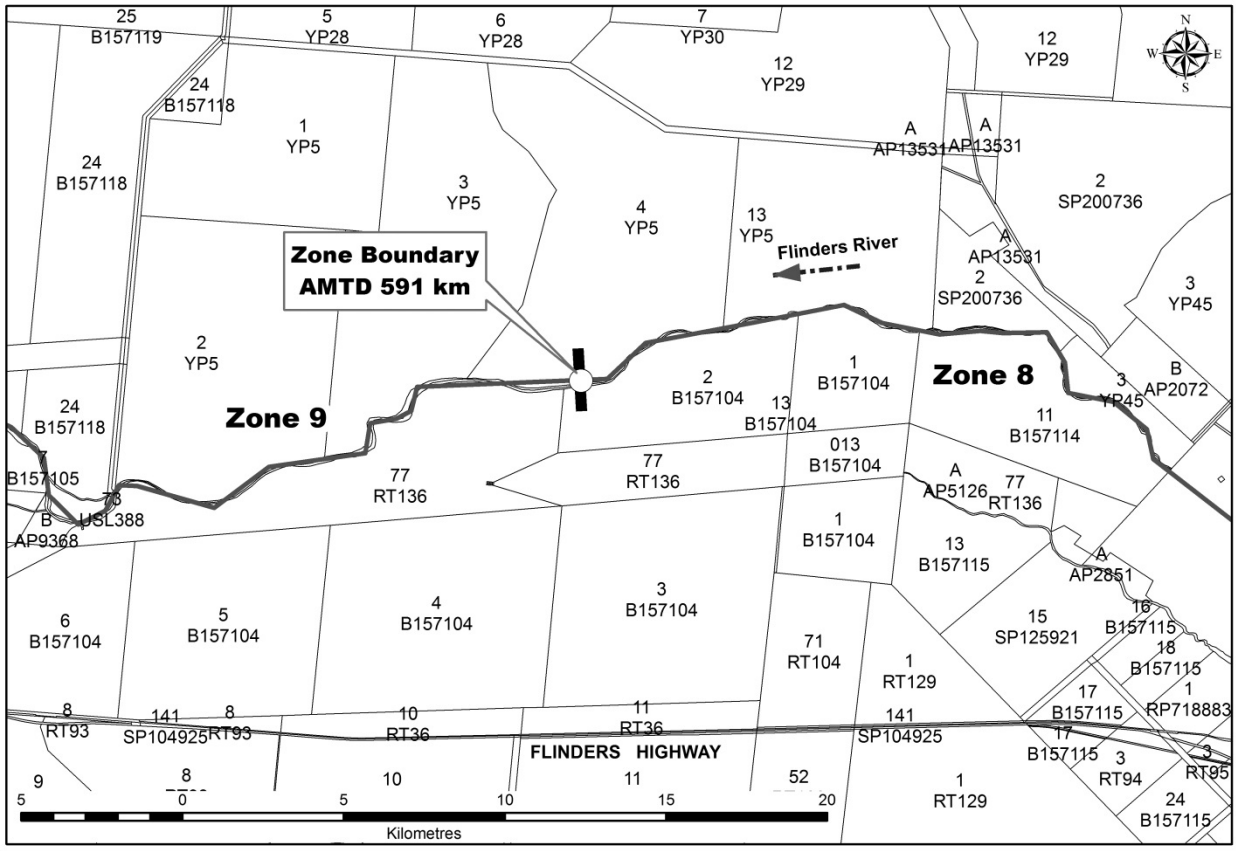
Map J Upstream limit zone 7



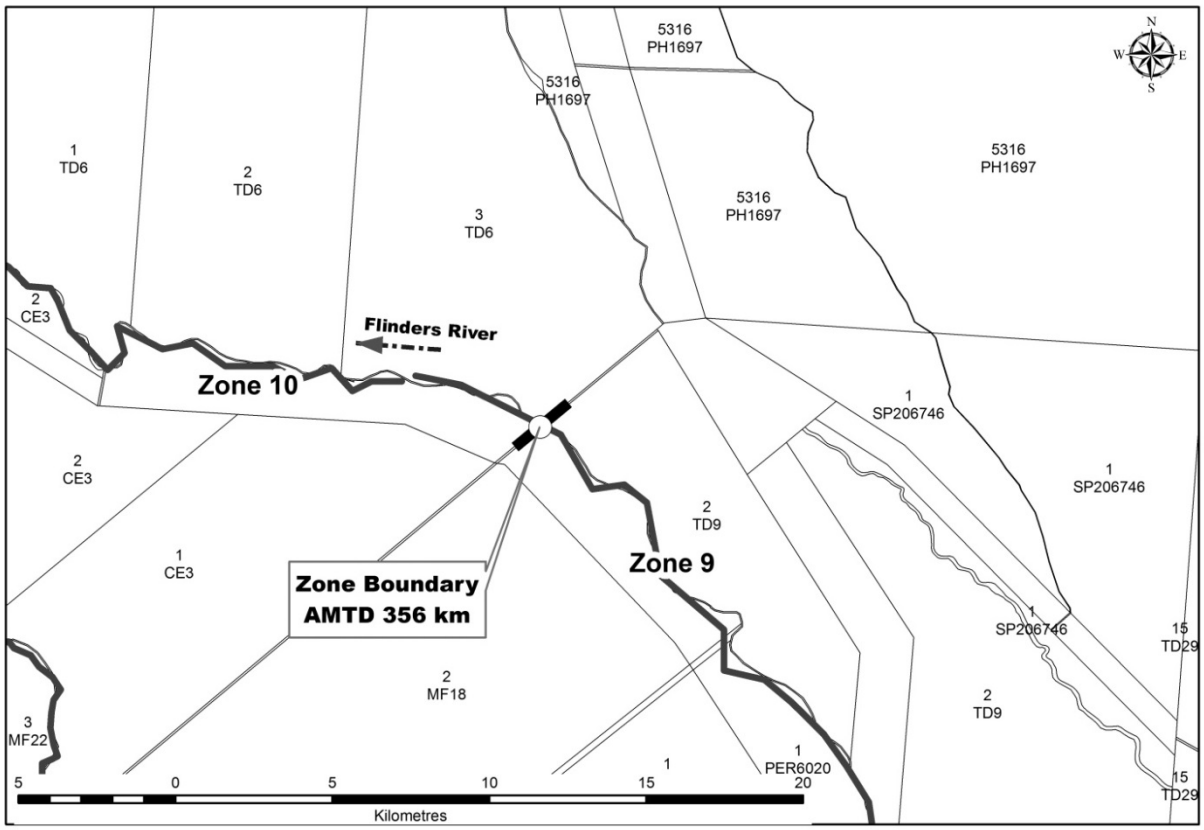
Map K Boundary between zones 7 and 8



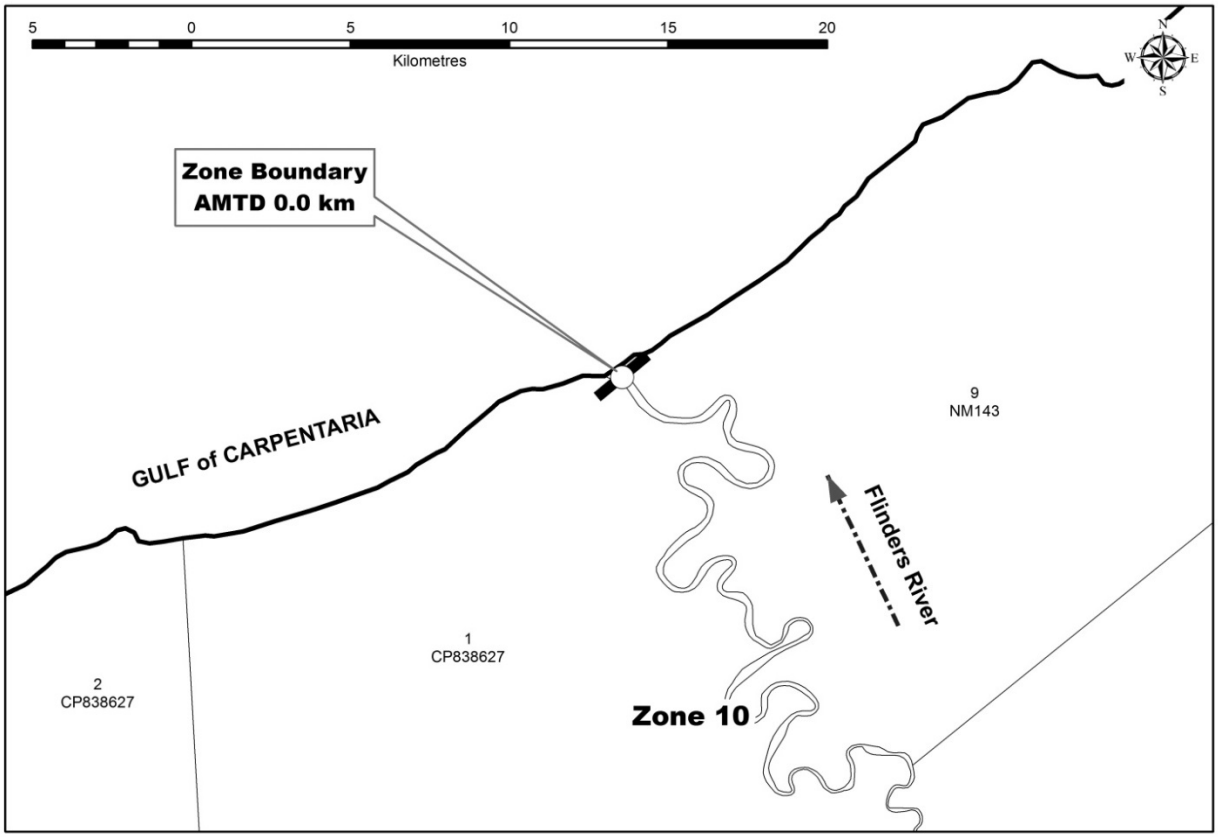
Map L Boundary between zones 8 and 9



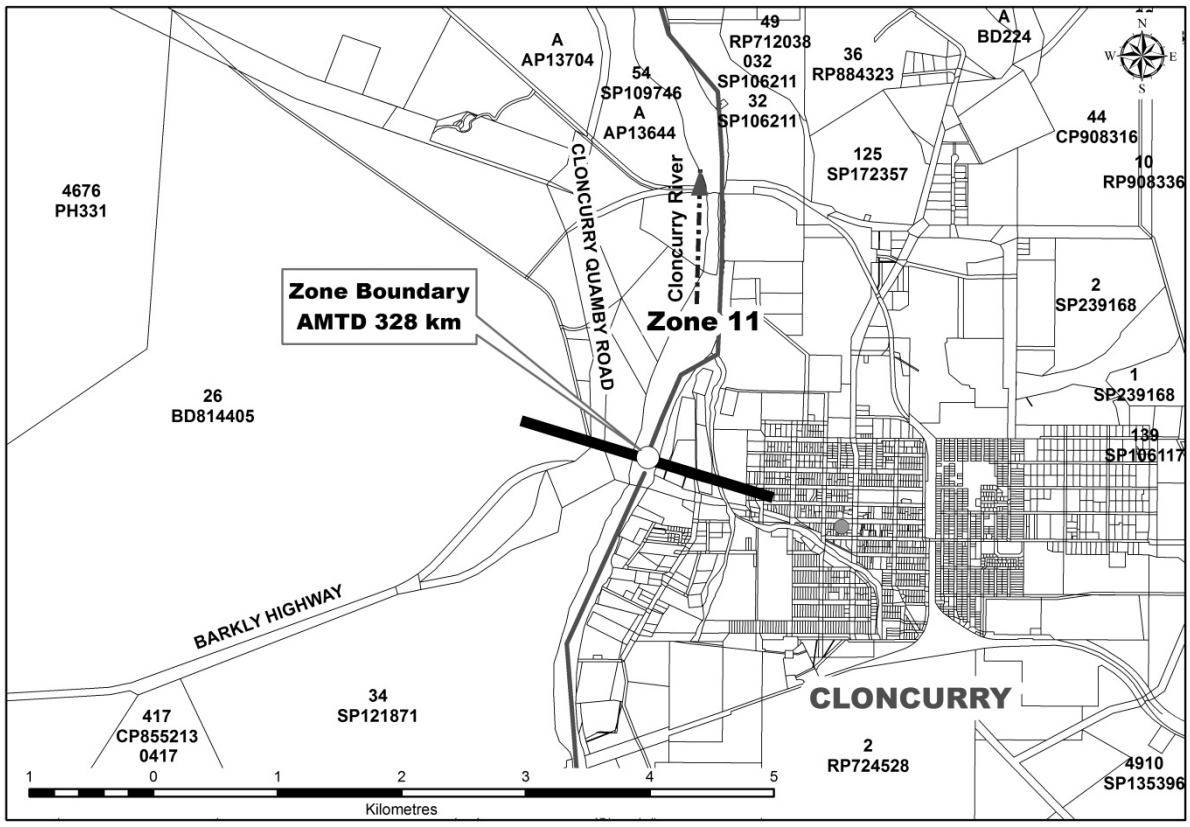
Map M Boundary between zones 9 and 10



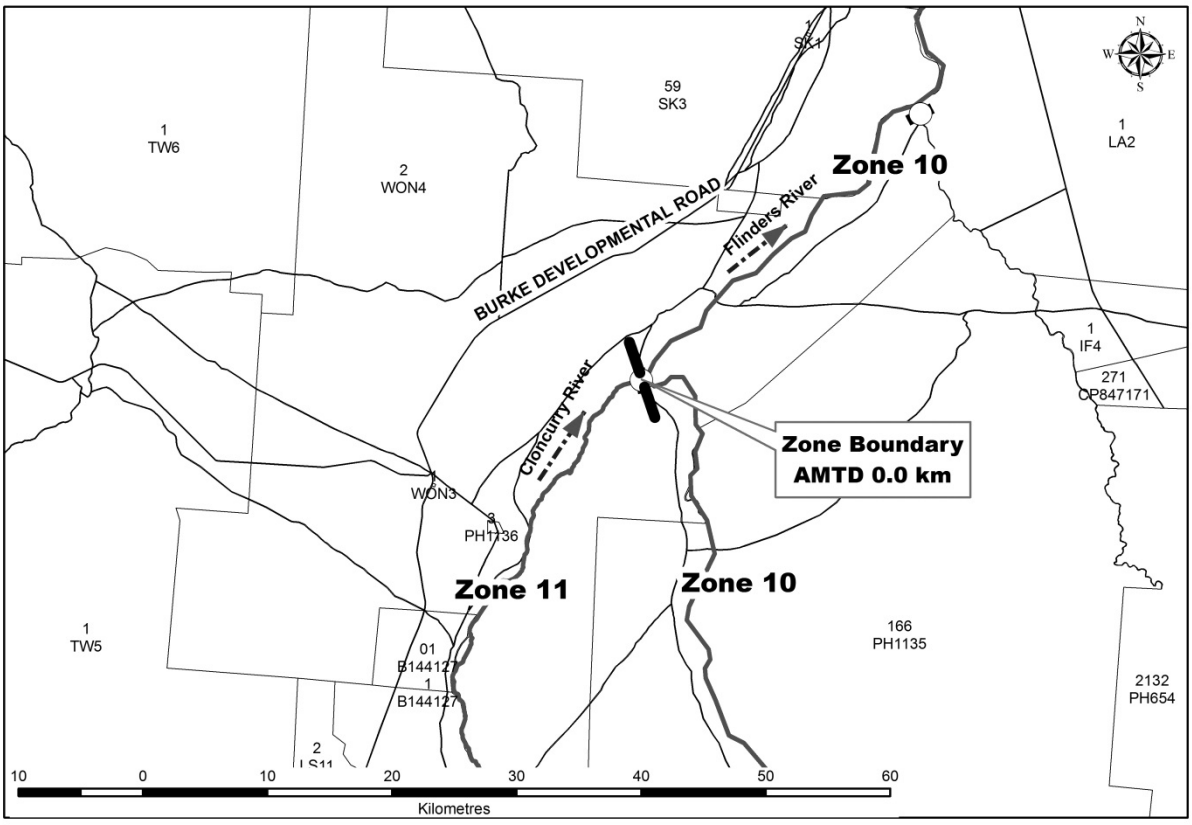
Map N Downstream limit zone 10



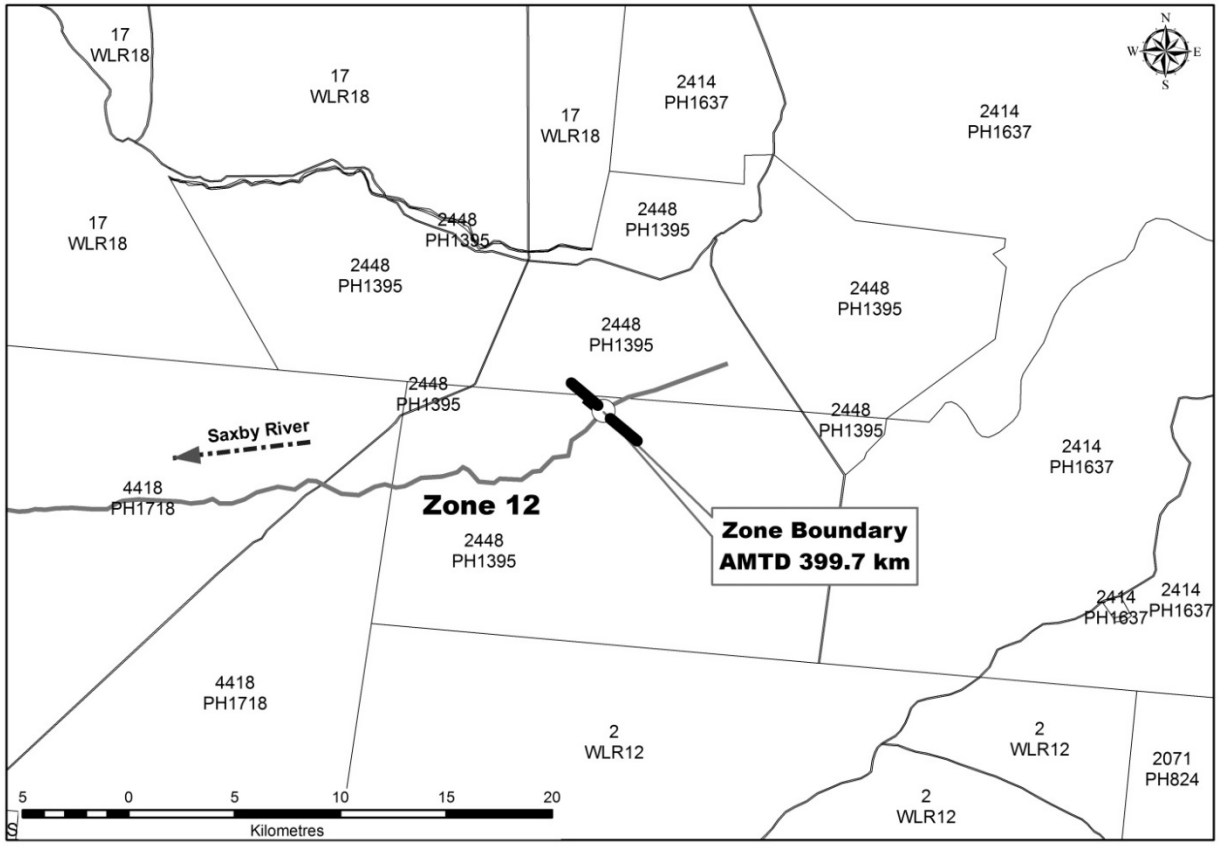
Map O Upstream limit zone 11



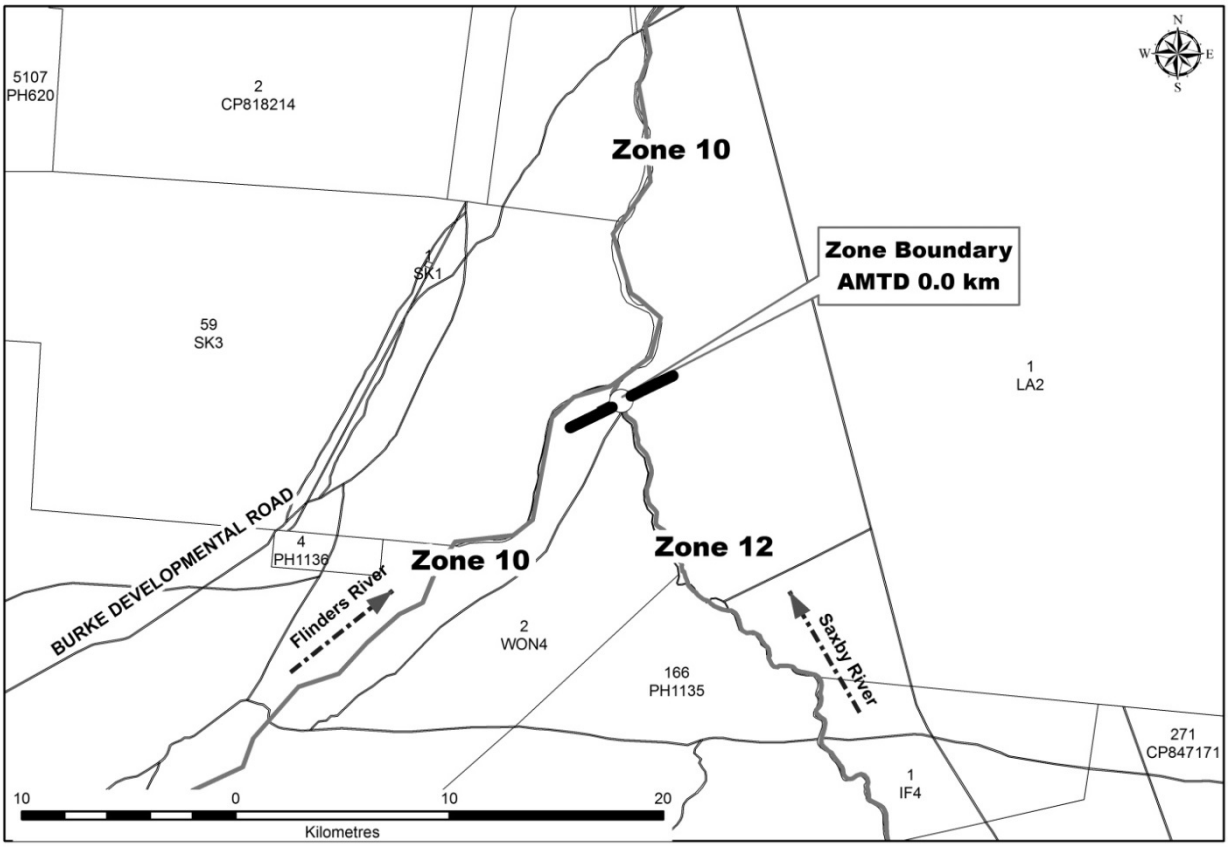
Map P Downstream limit zone 11



Map Q Upstream limit zone 12



Map R Downstream limit zone 12



Attachment 5 Links between this plan and the Water Resource (Gulf) Plan 2007

Outcomes of the Water Resource (Gulf) Plan 2007 (section 13, 14 and 15)	Resource operations plan rules
Economic outcomes for water in the plan area (section 13)—	
13(a) provision for the continued use of all water entitlements and other authorisations to take or interfere with water.	• metering • permanent transfer rules • providing for granting and amending water licences to take overland flow water • dealing with water licence applications
13(b) protection of the probability of being able to take water under a water allocation, including— (i) water for the supply of urban water for Mount Isa City; and (ii) water to support growth in the mining industry in north-west Queensland	• water allocation change rules • seasonal water assignment rules • dealing with unallocated water • water sharing rules including critical water supply arrangements • permanent transfer rules
13(c) to make water available to support growth in industries dependent on water in the plan area.	• dealing with unallocated water • water allocation change rules • seasonal water assignment rules • dealing with unallocated water • water sharing rules including critical water supply arrangements • permanent transfer rules
13(d) to make water in Lake Mary Kathleen available to be taken.	• dealing with unallocated water
13(e) the making available of water in the following areas to support growth in irrigated agriculture— (i) the Gilbert River catchment area; (ii) the Flinders River catchment area; (iii) the Nicholson River catchment area; and (iv) the Lower Leichhardt River subcatchment area.	• dealing with unallocated water • permanent transfer rules
13(f) the making available of water in the following areas to help Indigenous communities in those areas achieve their economic aspirations— (i) Cape York Peninsula Region area; (ii) Flinders River catchment area; (iii) Gilbert River catchment area; (iv) the Morning Inlet catchment area; (v) Settlement Creek catchment area; (vi) Staaten River catchment area; (vii) the Gregory River subcatchment area.	• dealing with unallocated water • seasonal water assignment rules
13(g) encouragement of continual improvement in the efficient use of water.	• scheme licence holder monitoring of water take • metering • water allocation change rules • seasonal water assignment rules • permanent transfer rules
13(h) the support of tourism in the plan area, including, for example, by protecting flows that support the natural	• dealing with unallocated water • environmental flows

aesthetics of watercourses and their surroundings.	
13(i) the support of commercial fishing in the Gulf of Carpentaria, including, for example, by protecting flood flows that may deliver nutrients and water to estuarine and marine environments to stimulate growth and movement of native aquatic animals, including fish, prawns and crabs.	• regulating overland flow • scheme licence holder operating, environmental management and water sharing rules
Social outcome for water in the plan area (section 14)—	
14(a) availability of water for the following purposes— (i) the support of population growth in towns and communities dependant on water in the plan area; (ii) the help of Indigenous communities in the following areas to achieve their social aspirations— (A) Cape York Peninsula Region area (B) Flinders River catchment area (C) Gilbert River catchment area (D) the Morning Inlet catchment area (E) Settlement Creek catchment area (F) Staaten River catchment area (G) the Gregory River subcatchment area.	• dealing with unallocated water • water allocation change rules • seasonal water assignment rules • dealing with unallocated water • water sharing rules including critical water supply arrangements • permanent transfer rules
14(b) the support of water-related cultural values of Aboriginal and Torres Strait Islander communities in the plan area.	• dealing with unallocated water • operating and environmental management rules (e.g. waterhole management)
14(c) the promotion of a cooperative approach between the State and relevant Northern Territory government agencies to water resource management.	• chief executive data collection and assessment
14(d) the maintenance of flows that support water-related aesthetic, cultural and recreational values in the plan area.	• operating and environmental management rules (e.g. rules for operation of infrastructure, minimum stream flow requirements) • environmental flows • chief executive data collection and assessment
Ecological outcomes for both surface water and groundwater in the plan area (section 15)—	
15(1)(a) to maintain the natural variability of flows that support the habitats of native plants and animals and migratory birds in watercourses, floodplains, wetlands, lakes and springs.	• scheme licence holder monitoring and reporting • operating and environmental management rules (e.g. rules for operation of infrastructure, minimum stream flow requirements) • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive
15(1)(b) to provide for the continued capability of one part of a river system to be connected to another, including by maintaining flood flows that— (i) allow for the movement of native aquatic animals between riverine, floodplain, wetland, estuarine and marine environments; (ii) deliver nutrients and organic matter throughout the plan area to support natural processes such as breeding, growth and migration in riverine, floodplain, wetland, estuarine and marine environments; and (iii) deliver water and sediment throughout the plan area to support river-forming processes.	• scheme licence holder monitoring and reporting • operating and environmental management rules • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive

15(1)(c) to minimise changes to natural variability in water levels and to support natural ecological processes, including maintaining refugia associated with waterholes and lakes.	• chief executive data collection and assessment • metering • use of performance indicators for monitoring by chief executive
15(1)(d) to maintain the permanence of water in naturally perennially flowing watercourses and in river bed sands that provide water to support native plants and animals, particularly during dry seasons.	• scheme licence holder monitoring and reporting • operating and environmental management rules • chief executive data collection and assessment • metering • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive
15(1)(e) to promote improved understanding of the matters affecting flow-related health of ecosystems in the plan area.	• metering • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive • links to monitoring and assessment programs undertaken by other stakeholders and agencies
15(1)(f) to ensure water in the bed sands of the Gilbert River between AMTD 317km and AMTD 263km is maintained— (i) to provide aquatic habitat for native aquatic plants and animals, particularly during dry seasons; (ii) to support riparian vegetation; and (iii) to contribute to the flow of water in the Gilbert River.	• operating and environmental management rules • metering • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive
15(1)(g) to maintain the permanence of water flows in the Gregory River and Lawn Hill Creek to provide aquatic habitat for native aquatic plants and animals, particularly during dry seasons.	• operating and environmental management rules • chief executive data collection and assessment • metering • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive
15(1)(h) to maintain flood flows to the estuarine and marine environments of the Gulf of Carpentaria to stimulate breeding, growth and migration of native aquatic animals.	• operating and environmental management rules • chief executive data collection and assessment • metering • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive
15(1)(i) to maintain the natural variability of flood flows that inundate, and deliver nutrients, organic matter and sediment to, the wetlands of the areas known as the Southern Gulf Aggregation and the Southeast Karumba Plain Aggregation.	• scheme licence holder monitoring and reporting • operating and environmental management rules • chief executive data collection and assessment

	• metering • chief executive data collection and assessment • use of performance indicators for monitoring by chief executive
15(1)(j) to maintain flows in the Gilbert River to provide brackish estuarine habitat for juvenile banana prawn development.	• dealing with unallocated water
Ecological outcomes for groundwater only in the plan area (section 15)—	
15(2)(a) to maintain groundwater contributions to the flow of water in watercourses, lakes and springs.	• chief executive data collection and assessment • metering • use of performance indicators for monitoring by chief executive
15(2)(b) to support the ecosystems dependent on groundwater, including, for example, riparian vegetation, wetlands and waterholes.	• chief executive data collection and assessment • metering • use of performance indicators for monitoring by chief executive
15(2)(c) to allocate and manage groundwater in a way that is compatible with the outcomes of the Water Resource (Great Artesian Basin) Plan 2006 to the greatest practicable extent.	• chief executive data collection and assessment • metering

Attachment 6(a) Infrastructure details for the resource operations licence holder for the Julius Dam Water Supply Scheme

Table 1 Julius Dam—Leichhardt River—AMTD 390.9 km

Description of water infrastructure	
Description	Concrete multiple arch—buttress dam. Spillway discharge over the top of the arches
Fully supply level	EL 223.54 m AHD
Saddle dam(s)	Nil
Fabridam	Nil
Gates	Nil
Storage capacity	
Full supply volume	107 500 ML
Storage curves / tables	Drawing no: A3-211928B
Spillway arrangement	
Description of works	The overflow crest of the drop spillway is located centrally on the dam wall.
Levels	Top of spillway – EL 223.54 AHD
Spillway width	219.5 m
Discharge characteristics	Spillway discharge rating curve – Drawing no: A1-32885
River inlet/outlet works	
Description of works	There is a 900 mm outlet pipe.
Inlet	Single level offtake
Cease to flow levels	Cease to flow at EL 207.69 m AHD
Discharge characteristics	The estimated maximum discharge capacity of the river outlet is 375 ML/d at FSL (Drawing no: A3-49249)

Attachment 6(b) Infrastructure details for the resource operations licence holder for the Moondarra Dam Water Supply Scheme

Table 1 Moondarra Dam—Leichhardt River—AMTD 465.1 km

(NRW dam number 174)

Description of water infrastructure	
Description	Concrete faced rock filled embankment
Fully supply level	EL 326.20 m AHD
Saddle dam(s)	
Fabridam	
Gates	
Storage capacity	
Full supply volume	106 833 ML
Dead storage level	314.17 m AHD
Storage curves / tables	
Spillway arrangement	
Description of works	Unlined channel remote from dam with sharp crested weir inlet control
Levels	Crest Level of EL 326.20 AHD
Spillway width	77 m
Auxiliary spillway	
Description of works	Two off—unlined bywash channel with concrete nib wall inlet control
Levels	Aux no. 1 – Crest level EL 326.20 AHD Aux no. 2 – Crest level EL 326.20 AHD
Spillway width	Aux no. 1 – 37.2 m Aux no. 2 – 45.7 m
Discharge characteristics	No outlet works provided

Attachment 6(c) Infrastructure details for the distribution operations licence holder for the Moondarra Dam and Julius Dam water supply schemes

Table 1 Pontoon Pump Station—Lake Moondarra

Diversion rate	
Maximum discharge	1600 L/sec

Table 2 Fred Haigh Pump Station—Lake Julius

Diversion rate	
Maximum discharge	760 L/sec

Table 3 Deep Well Pump Station—Lake Moondarra

Diversion rate	
Maximum discharge	800 L/sec

Table 4 Col Popple Pump Station—Lake Moondarra

Diversion rate	
Maximum discharge	880 L/sec 1250 L/sec (with Lake Moondarra Booster Station operating)

Table 5 Lake Moondarra Dam Pontoon Pump Station (Warrina Park Pump)

Diversion rate	
Maximum discharge	20 L/sec

Table 6 Lions Youth Camp Pump Station—Lake Moondarra

Diversion rate	
Maximum discharge	20 L/sec

Table 7 Transport Bay Pump Station—Lake Moondarra

Diversion rate	
Maximum discharge	20 L/sec

Attachments 7 to 9 Reserved for future amendments

Attachment 10 Water supply scheme storage curves

Table 1 Julius Dam storage curve—(Ref: SunWater Plan Number A3-211928)

Water level (RL metres AHD)	Storage volume (megalitres)	Surface area (hectares)
196.80	0	0
198.00	9	2
199.00	55	7
200.00	170	17
201.00	429	36
202.00	893	58
203.00	1589	81
204.00	2500	102
205.00	3673	131
206.00	5104	156
207.00	6817	187
207.69	8190	210
208.00	8846	220
209.00	11 229	255
210.00	13 942	288
211.00	16 988	322
212.00	20 393	361
213.00	24 234	409
214.00	28 610	467
215.00	33 582	528
216.00	39 183	592
217.00	45 465	668
218.00	52 585	756
219.00	60 562	839
220.00	69 391	925
221.00	79 033	1004
222.00	89 501	1092
223.00	100 905	1192
223.54	107 500	1255
224.00	113 425	1316
225.00	127 292	1460
226.00	142 592	1597
227.00	159 257	1737
228.00	177 314	1876
229.00	196 795	2024
230.00	217 865	2194
231.00	240 699	2375
232.00	265 355	2557
233.00	291 898	2757

Table 2 Lake Moondarra storage curve (Ref: Plan S 24755)

Water level (RL metres AHD)	Storage volume (megalitres)	Surface area (hectares)
309.44	0	0
310.96	494	41
312.49	1235	77
314.01	3335	146
314.17	3640	154
315.53	6175	223
317.06	10 498	344
318.58	16 796	458
319.29	21 367	555
320.11	26 670	668
321.63	39 118	944
323.15	56 237	1276
324.68	79 015	1713
326.20	106 833	2187
327.73	137 085	2487
329.25	185 250	3078
330.77	233 415	3584