



**Queensland
Government**

Department of Regional Development,
Manufacturing and Water



Barron Water Plan 2023

Ministers Consideration Report

Acknowledgement of Traditional Owners

The Department of Regional Development, Manufacturing and Water respectfully acknowledges the Traditional Custodians of the Barron water plan area. We recognise the ongoing spiritual and cultural connection Aboriginal Peoples and Torres Strait Islander Peoples have with land, water, sea and sky. We pay our deep respects to their Elders past and present, support future leaders, and acknowledge First Nations People's right to self-determination.

This publication has been compiled by Water Planning and Science, Department of Regional Development Manufacturing and Water.

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Foreword

This report has been prepared to inform stakeholders of the considerations I made in finalising the Water Plan (Barron) 2023.

Thank you to all those who participated and contributed to the development of the Water Plan (Barron) 2023, particularly those who were part of the Barron Water Consultation Group, and those who provided written submissions on the draft Barron water plan and preliminary public consultation notice.

I also sincerely thank the Aboriginal people and Torres Strait Islanders who participated in engagement activities. Cultural engagement has shown waterways, rivers, lakes and springs are highly significant components in the cultural landscape. The protection of keystone cultural species through maintaining flows is important.

I am pleased that the submissions and feedback received on the draft Barron water plan indicated broad support for the plan provisions, including all plan outcomes.

Water in this plan area is important for town water supply, agriculture, cultural values, fishing, tourism, hydro-electric power generation and the environment including flows to support the receiving waters of the Great Barrier Reef. The issues raised during consultation and in submissions reflect interest across these broad areas, and importantly this plan considered the impacts of climate change on water availability in setting the outcomes and strategies of the plan.

All issues raised through consultation and submissions have been fully considered and addressed in finalising the water plan.

Ongoing involvement in the water planning process across all sectors has ensured that the final water plan supports a balanced approach of environment, social, cultural and economic considerations. The Water Plan (Barron) 2023 continues to advance the sustainable management of Queensland's water resources.

Hon. Glenn Butcher MP

Minister for Regional Development and Manufacturing, and Minister for Water

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1. Introduction

1.1 Purpose of this report

In accordance with section 48 of the *Water Act 2000* (Water Act), following approval of the Water Plan (Barron) 2023 (final water plan) by the Governor in Council, the Minister must publish a report stating the considerations made in finalising the plan.

This report outlines the submissions received on the draft plan and how the issues raised in the submissions were addressed by the Minister in finalising the water plan.

This report also provides information about the consultation process undertaken by the Department of Regional Development, Manufacturing and Water (DRDMW) in developing the water plan.

Although not required by the Water Act, this report summarises submissions on the draft water management protocol and how these matters were considered by the chief executive. Section 69 of the Water Act requires the chief executive to publish a Statement of Changes upon amending or replacing a water management protocol and this has been included as part of this report.

This report also provides information on the submissions received in relation to entitlements or submissions on changes in the water entitlement notice.

1.2 Overview of the water amendment plan area

The Barron water plan area is in Far North Queensland and covers approximately 5 200 km² (see Figure 1). It comprises the Barron River catchment and the upper reaches of the Walsh and Mitchell rivers. The plan area covers the bulk of the Atherton Tablelands region and includes the Mareeba–Dimbulah Water Supply Scheme.

The water plan applies to all surface water (excluding overland flow water), and underground water in the Atherton and Cairns Northern Beaches underground water management areas.

Tinaroo Falls Dam supplies the Mareeba–Dimbulah Water Supply Scheme through a network of channels, pipelines and supplemented streams, and includes inter-basin transfers between the Barron and Walsh-Mitchell River catchments.

Water in the plan area supports several industries including agriculture, grazing, tourism, mining, and hydroelectricity.

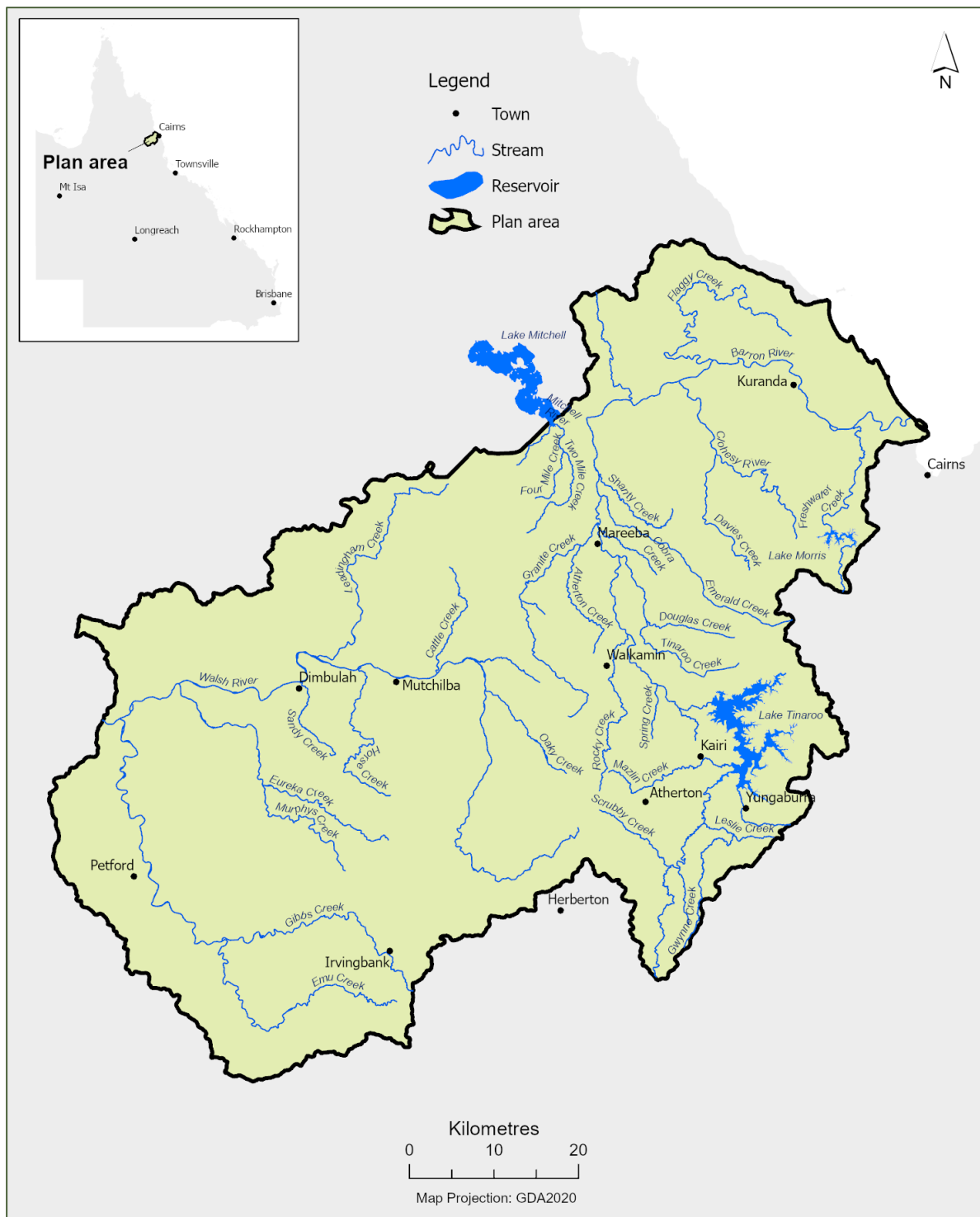


Figure 1 Barron water plan area

1.3 Intent of the water plan

The provisions in the final water plan and water management protocol provide a framework for sustainably managing and allocating:

- surface water (water in a watercourse, lake or a spring)
- underground water.

The final water plan and water management protocol contain outcomes and strategies for:

- balancing the water needs for environmental, social, cultural, and economic purposes in the plan area
- providing for the continued use of all entitlements (surface and groundwater) and other authorisations to take or interfere with water
- providing unallocated water reserves to meet new and emerging demands including reserves for Aboriginal people and Torres Strait Islanders
- providing a framework for permanent and seasonal water trading of water licences and water allocations
- enabling water to be taken without a water entitlement for low-risk activities and non-riparian stock and domestic use
- enhancing monitoring and reporting of water resources in the Barron water plan area.

Key changes implemented through the replacement water plan include:

- recognising Aboriginal people and Torres Strait Islanders' aspirations and outcomes for the management of water
- identifying an additional 20,550ML of unallocated water to meet new and emerging demands, including water reserves for Aboriginal people and Torres Strait Islanders and future irrigation expansion
- defining environmental outcomes to better support the Great Barrier Reef
- stating environmental flow objectives through better hydrological links to ecosystem needs
- redefining water allocation security objectives to maintain water security and provide more flexibility for assessed trades and unallocated water releases
- consideration of climate change effects on future water availability

1.4 Development of the water plan and water management protocol

The water planning process commenced in March 2021 with the release of the preliminary public notice for public consultation and submissions. A draft Water Plan (Barron) was then released in July 2022 for a second phase of public consultation. The planning process for the replacement plan is summarised in Table 1.

Table 1 Water planning milestones for the water amendment plan

Date	Milestones
March 2021	Preliminary public notice released for public consultation and submissions about the Minister's proposal to replace the Water Plan (Barron) 2002.
1 March – 16 April 2021	Preliminary public notice submissions period.
May – June 2021	Preliminary engagement with Aboriginal groups within the plan area.

Date	Milestones
6 July 2022	Notice of release of draft Water Plan (Barron) 2022, draft water management protocol and draft water entitlement notice released for consultation.
July – August 2022	Stakeholder meetings held with local councils, industry groups, water service providers, water entitlement holders, environmental groups and other key stakeholders.
6 July - 19 August 2022	Draft plan submissions period.
November – January 2023	Continued engagement with Aboriginal groups within the plan area.
9 December 2022	Notice gazetted to postpone the expiry of the Water Plan (Barron) 2002.
June 2023	Governor in Council approval of the final Water Plan (Barron) 2023 and Water Entitlement Notice.
June 2023	Final Water Plan (Barron) 2023 and Water Entitlement Notice published in the Queensland Government Gazette.
June 2023	Final water management protocol published on the department's website.

1.5 Copies of the water plan and supporting documents

The water plan and water management protocol are available by searching Barron at www.business.qld.gov.au.

The spatial areas of the water plan, subcatchments, underground water management areas, water supply schemes and zones, and property boundaries can be viewed on Queensland globe at www.qldglobe.information.qld.gov.au.

2. Consultation and submissions

Community and stakeholder engagement has been incorporated through all stages in developing the water plan, water management protocol and the water entitlement notice.

The first round of public consultation was undertaken following the preliminary public consultation notice, released in March 2021.

A second round of consultation occurred with the release of the draft water plan, draft water management protocol and water entitlement notice in July 2022.

On the 9 December 2022, the expiry of the Water Plan (Barron) 2002 was extended to 30 June 2023 to allow additional time to consult with Aboriginal people and Torres Strait Islanders, and to consider feedback and submissions received on the draft plan.

2.1 Consultation on the preliminary public notice

Forty-nine (49) submissions were received during the preliminary public consultation (PPC) submission period. Submissions were received from a range of stakeholders including local water users and water entitlement holders, industry users, water service providers, representative bodies, local government, environmental groups and tourism and recreational users.

Key issues raised through the PPC submission process within scope of the water plan include:

- improving rules for underground water and surface water such as for trading and water sharing
- recognising cultural values and water for cultural use
- managing releases for the environment and the Barron Gorge hydro-electric power station
- improving consultation with water users
- addressing operational rules for the Mareeba–Dimbulah Water Supply Scheme

- managing overland flow water
- providing unallocated water reserves and addressing increased demand in water
- considering climate change impacts
- maintaining water rights
- addressing water quality impacts.

2.2 Consultation on the draft water plan

The consultation undertaken on the draft water plan included:

- consultation group sessions with key stakeholders and community representatives
- targeted engagement with Traditional Custodian groups within the plan area
- awareness raising through social media and the department's website
- by appointment meetings with interested individuals
- liaison with other State Government departments
- dedicated email and phone contacts to have questions answered by the department
- formal submission process.

A water consultation group was formed to represent key community and stakeholder interests and to provide input and feedback into the draft plan. The group consisted of representatives from various stakeholder groups including:

- individual water users and representative bodies
- industry users
- Resource Operations Licence (ROL) holder
- tourism operators
- environmental groups
- local governments.

An initial water consultation group meeting was held prior to the release of the draft plan. A further two meetings were held during the submissions period to discuss in detail the draft water plan and draft water management protocol. The role of this group included:

- review of information provided by the department
- fair representation of stakeholder interests
- providing feedback on the community perception of relevant departmental processes
- reporting on effectiveness of the Barron water plan and water management protocol in managing water resources
- providing advice on behalf of representative groups to the department
- education through knowledge sharing of the best available science and the water management framework for the Barron plan area.

Additional stakeholder meetings were held, by request of stakeholders, or where the department sought additional information to clarify and discuss submissions received.

2.3 Engagement with First Nations Peoples

To ensure the interests of First Nations Peoples were captured and considered during the water planning process, the department appointed a contractor to assist with community engagement.

Preliminary engagement activities were undertaken with Aboriginal people and Torres Strait Islanders to inform the development of the draft plan. Discussions were held with knowledge-holders, community leaders and other Aboriginal people across the Barron water plan area on a wide range of topics, not all of which can be addressed through water planning. Topics included cultural values of the waterways, concerns from First Nations Peoples about water and water management, changes First Nations Peoples had observed and aspirations for the future.

This consultation identified several key themes and specific issues which were summarised in a confidential report provided to the department. This report is unable to be published due to the culturally sensitive information provided by some contributors. The findings of the report were used to develop key provisions in the draft plan including general, economic, social and cultural outcomes relating to Aboriginal people and Torres Strait Islanders and the establishment of unallocated water reserves for Indigenous purposes.

Further consultation was undertaken after the draft plan was released to ensure the views of First Nations Peoples were adequately captured through draft plan outcomes, Indigenous reserves of unallocated water and unallocated water release processes. The department engaged with all Registered Native Title Body Corporates within the plan area. Additional meetings were also undertaken with other claimant family groups and Indigenous Corporations identified by an Indigenous not-for-profit company engaged by the department to identify key stakeholders.

2.4 Submissions

Forty-seven (47) submissions were received regarding the draft water plan, draft water management protocol and draft water entitlement notice.

Section 3 and 4 of this report summarises key issues raised, relevant background information, and how the issues were considered and addressed in finalising the water plan and water management protocol. Where necessary, the submitters were contacted for clarification on their submission.

3. Issues raised and how they were considered in the water plan

3.1 Plan area and purpose

Draft water plan provisions

The draft water plan defined the area to which the plan applies and the over-arching purpose of the plan.

Issues raised

- In relation to the plan area, one (1) submitter requested clarification on the Mareeba–Dimbulah Water Supply Scheme (MDWSS) area.
- In relation to the purpose of the water plan, one (1) submitter stated that Native Title holders have special rights and interests that are distinct from the interests of the broader Indigenous community. The submitter requested that the water plan be amended to remove the conflation between Native Title holders and the Aboriginal and Torres Strait Islander community. This amendment was to reflect the enduring and special relationship that Native Title holders have with their lands and waters.

Consideration and finalised plan provisions

No changes were made to the plan area or purpose in the final water plan.

Clarification regarding the Mareeba–Dimbulah Water Supply Scheme area was provided directly to the relevant submitter.

The water plan provides purposes that are deliberately inclusive of all Aboriginal people and Torres Strait Islanders and seeks to recognise their interests and connection to water resources. Aboriginal people means people of the Aboriginal race of Australia. Torres Strait Islander is a person who is a descendant of an Indigenous inhabitant of the Torres Strait Islands. This also aligns with obligations under section 28 of the *Human Rights Act 2019*.

3.2 Plan outcomes

3.2.1 General outcomes

Draft water plan provisions

The general outcomes of the plan set the broad goals of the plan.

The water plan recognised that the natural state of watercourses, lakes, springs and aquifers has changed because of the taking of, or interference with, water.

The water plan aimed to ensure water is allocated and managed in a way that seeks to achieve a balance between economic, social, cultural and environmental outcomes.

Issues raised

- One (1) submitter supported the majority of the water plan outcomes, specifically the general plan outcome that the plan balances all needs of those who rely on the Barron.
- One (1) submitter supported general water plan outcomes which promote agriculture.
- One (1) submitter supported general water plan outcomes which promote improved understanding of the impact of climate change on water availability.
- One (1) submitter requested the general outcome be amended to reflect that in developed areas the natural state of watercourses has changed because of the taking of, or interference with, water. The submitter was seeking acknowledgement that there are areas that remain undisturbed.

Consideration and finalised plan provisions

No changes were made to the general outcomes in the final water plan.

The current wording in the general outcomes recognising the natural state of watercourses has changed is a general statement and does not quantify whether this relates to developed or undeveloped areas. The current wording is considered sufficient and clear.

3.2.2 Social and economic outcomes

Draft water plan provisions

Economic outcomes of the water plan are stated in section 18.

Social outcomes of the water plan are stated in section 19.

Issues raised

- One (1) submitter supported social water plan outcomes which maintain flows for water-related aesthetic and recreational values, however sought clarification that paddle sports are considered 'recreational' values for the purpose of social water plan outcomes.
- One submitter requested that;
 - a new economic outcome be included to provide a flow regime that supports the suitability of water for industries dependant on water resources in the plan area.
 - a new social outcome be included to provide a flow regime that supports the suitability of water for water-related aesthetic, cultural and recreational values.

- One submitter stated that economic outcomes are inadequate. The plan should create opportunities for Native Title holders to be involved in managing water resources, including through jobs and services provided by Native Title holder business and ranger groups.

Consideration and finalised plan provisions

No changes were made to the social and economic outcomes in the final water plan.

The social water plan outcomes include recreational values which does include paddle sports and other recreational activities.

There are multiple outcomes that cover the suggested economic and social outcomes— related to industries and aesthetic, cultural and recreational values— and the existing outcomes sufficiently address these matters.

A water plan does not directly create jobs or require services from Native Title holders. Opportunities related to Indigenous reserves of unallocated water and decision processes considering cultural values will involve Native Title holders. There may also be future opportunities for partnerships with programs to measure, monitor and contribute to ecological science related to plan outcomes.

3.2.3 Cultural outcomes

Draft water plan provisions

Cultural outcomes of the water plan are stated in section 20.

Issues raised

- Three (3) submitters supported the inclusion of cultural water plan outcomes and other general and economic outcomes relating to Aboriginal people and Torres Strait Islanders.
- One (1) submitter requested the following in relation to cultural outcomes for Aboriginal people and Torres Strait Islanders;
 - references to Aboriginal people and Torres Strait Islanders throughout the water plan be reviewed to reflect the enduring and special relationship that Native Title holders have with their lands and waters.
 - an additional cultural outcome be added to manage and allocate water in a way that is consistent with native title rights and interests.
 - cultural outcomes set out in the plan must be clear, measurable and informed through consultation.
 - the department establish a forum for Native Title holders and other Indigenous Queenslanders to provide advice and make decision on all aspects of water planning and implementation that impact them.
 - Native Title holders be funded to complete surveys to support an improved understanding of water required to support cultural values and develop guidelines for determining cultural water requirements.
 - cultural and environmental uses of water must be given priority over economic uses of water where there are competing demands for water.

Consideration and finalised plan provisions

No changes were made to the cultural outcomes in the final water plan.

Cultural outcomes in the water plan were informed by engagement activities undertaken to establish the cultural values of the plan area. The cultural outcomes in the plan were well supported by Aboriginal people and Torres Strait Islanders consulted during the water planning process, including registered native title body corporates, native title claimants' groups and other Aboriginal corporations and representative bodies.

The use of the term 'Aboriginal people and Torres Strait Islanders' throughout the plan is deliberately inclusive of the broader Indigenous community to ensure the social, economic and cultural needs of all Aboriginal and Torres Strait Islander people are considered. This also aligns with obligations under section 28 of the *Human Rights Act 2019*.

The rights and interests of Native Title holders are established under the *Native Title Act 1993* (Commonwealth) and the water plan is consistent with this legislation.

Section 95 of the Water Act recognises and protects native title rights and interests by providing a statutory right for an Aboriginal party or Torres Strait Islander party to take or interfere with water for traditional activities or cultural purposes. A water plan cannot alter or limit this right.

Additional plan outcomes are not required to ensure the water is managed and allocated in a way that is consistent with native title rights and interests.

The department is grateful for the suggestion to establish a forum for Native Title holders and other Indigenous Queenslanders to provide advice and make decisions on all aspects of water planning. The department is developing strategies to involve and seek input from Aboriginal people and Torres Strait Islanders in the water planning process in the future and will continue to engage with the submitter in relation to their suggestion.

The water plan does not establish a hierarchy or priority for plan outcomes, but rather seeks to achieve a balance between economic, social, cultural and environmental outcomes (see section 17 of the final water plan). The water plan framework sets outcomes, objectives and strategies to ensure water is sustainably managed and allocated through shares of water.

3.2.4 Environmental outcomes

Draft water plan provisions

Environmental outcomes of the water plan are stated in section 21.

Issues raised

- One (1) submitter supported environmental outcomes relating to longitudinal (to estuary and Great Barrier Reef) and lateral (floodplain) connections.
- One (1) submitter requested the following;
 - a new environmental outcome be included to provide a flow regime that supports environmental values and water quality objective established under the *Environmental Protection (water and Wetland Biodiversity) Policy 2019* in catchments which flow to the Great Barrier Reef.
 - environmental outcome be amended to incorporate underground water quality considerations.

Consideration and finalised plan provisions

No changes were made to environmental outcomes in the final water plan.

The environmental assessments for the development of the water plan considered environmental values under the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* and water quality objectives under the Reef 2050 Water Quality Improvement Plan.

It is important to note that while water plans support water quality outcomes through responsible flow management, there are many other pressures on water quality that are external to the scope of water plans. These pressures include point source pollution, poor land use management, clearing of vegetation, and degradation of riparian vegetation and wetlands communities. The water plan outcomes are considered sufficient to protect environmental values and achieve water quality objectives associated with flow management.

Assessment of subterranean dependent ecosystems was undertaken as part of the Environmental Assessment Report for development of the draft Barron water plan. The existing plan outcomes to maintain flows to groundwater water dependent ecosystems includes subterranean dependent ecosystems and therefore the outcomes are considered sufficient to address subterranean outcomes.

3.3 Measures, objectives and performance indicators

3.3.1 Measures including metering

Draft water plan provisions

The water plan measures provide a way to determine how effective plan strategies have been in achieving the plan outcomes.

Measures for this plan included the development of a monitoring, evaluation and reporting strategy by 20 December 2023 under section 22 of the water plan.

Issues raised

- Two (2) submitters requested additional consultation and/or co-design of a monitoring, evaluation and reporting strategy (MERS) under section 22 of the draft plan.
- Two (2) submissions were received that stated overland flow should not be metered.

Consideration and finalised plan provisions

There were no changes made to measures in the final water plan.

The Barron MERS will be available upon request on or after the 20 December 2023.

Whilst some water plans require metering to be implemented as part of the measures to achieve plan outcomes, all entitlements (except stock and domestic water licences) in the Barron water plan area are already metered in accordance with schedule 11 of the *Water Regulation 2016*.

As overland flow water is not regulated in the final water plan there are no metering requirements. Considerations relating to the management of overland flow are captured in section 3.7 of this report.

3.3.2 Water allocation security objectives

Draft water plan provisions

Water allocation security objectives (WASOs) protect the share of water available to the holder of a water allocation. The WASO for both supplemented and unsupplemented water allocation groups is the performance ratio.

The performance ratio is equal to the simulated average annual volume that may be taken divided by the total nominal volume for the group. The nominal volume is stated on each water allocation and is a number (megalitre (ML)) that represents the share of the resource derived based on the first-generation hydrological model.

Issues raised

- One (1) submitter supported the transition to performance ratios (i.e. WASO) as indicators, as no changes were expected to environmental release rules for the Mareeba–Dimbulah Water Supply Scheme. This submitter supported provisions that would allow for flexibility if a change to the environmental release rules was desired. This submission was also caveated with the note that the new hydrological model was not available at the time of submission.
- One (1) submitter requested additional information to be made publicly available on how to understand performance ratios as a performance indicator and how this compares to the water sharing index that is currently in place.
- One (1) submitter requested that the draft plan include specific water efficiency standards for water users that should be met to ensure allocation security.

Consideration and finalised plan provisions

There were no changes made to the WASOs in the final water plan.

The WASOs are a measure to define the share of the resource based on the eWater Source hydrological model, and they are not a measure of reliability of the water allocation.

The new WASO (performance ratio) is stated for both supplemented and unsupplemented water allocations and results in no net reduction in the level of protection for water allocation holders, while increasing flexibility for water users in undertaking assessed trades and considering unallocated water releases. There is no change to how water entitlement holders take water, and it does not change the way Sunwater currently operate Mareeba–Dimbulah Water Supply Scheme.

The approved eWater Source hydrological model is now available from Department of Environment and Science and replaces the previous IQQM (Integrated Quantity and Quality Modelling) hydrological model.

A series of factsheets are available on the departments website to describe the historical performance of each water allocation group, plan objectives (EFOs and WASOs) and how climate change was considered in the water plan.

In relation to specific water efficiency standards being included to meet WASOs:

- Water plans do not regulate how water entitlement holders use their water on-farm or on-site.
- In implementing a process for dealing with unallocated water, the chief executive must consider water use efficiency and the availability of an alternative water supply (section 34 of the final water plan).
- Embedding water trading provisions into water plans enables users to optimise their water entitlements for their enterprise and enables water to move to its highest valued use thereby supporting improved water use efficiency.
- Water sharing rules in the water management protocol are designed to share water seasonally and particularly during dry years thus sharing limited water resources between the environment and water users. Water sharing rules enable water users to operate for optimal efficiency to ensure their take does not go beyond the percentage of their entitlement allowed.
- Entitlement holders are required to adhere to the volumetric limits specified on their entitlements.
- There is no requirement to state water use efficiency standards to achieve WASOs.

3.3.3 Environmental flow objectives

Environmental Flow Objectives (EFOs) protect the share of water available to the environment. EFOs set the limits of development and ensure water is available at key locations with a certain performance through model simulation period (section 35 of the water plan).

The EFOs for the Barron water plan included:

- days in low flow periods for longitudinal stream connectivity
- days in riffle drown-out flow periods to support in-stream riffles
- days in riparian and floodplain vegetation flow periods to support riparian and floodplain vegetation communities
- days in river-forming flow periods to support fluvial geomorphology river forming processes
- days in Barron River estuarine salinity periods to support estuarine processes
- mean annual flow volumes.

Issues raised

- Two (2) submitters requested additional measures and objectives that support improving reef water quality in accordance with the Reef 2050 Plan principles and actions.
- Two (2) submitters requested additional measures and objectives that support environmental values, water quality objectives and wetland biodiversity in accordance with the *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*.

Consideration and finalised plan provisions

There are some changes in EFOs in the final water plan.

This is a change of the EFO Mean Annual Flow for node 11 (Walsh River at Flatrock) reducing the performance indicator by 2% to 95%. This change is necessary to provide for the additional 17 000ML of unallocated water as stated in the final water plan (see section 3.4 Unallocated water of this report).

The EFO Mean Annual Flow is a measure of water development through take of water which has or can occur in the water plan in comparison to predevelopment flows. This indicator does not directly link to ecological assets or the ecological needs of the plan area and is a tool to assist in balancing the economic development of the plan area with non-consumptive uses such as social, cultural and environmental uses.

Other than the change in the EFO Mean Annual Flow performance indicator on node 11 to 95%, there are no other changes to EFOs performance indicators throughout the final water plan.

Minor amendments to schedule 5 section 5 (Days with river-forming flow periods) have been made to improve readability and ensure the performance indicator aligns to post-processing specifications of the hydrological model.

The Reef 2050 Long-Term Sustainability Plan is the Australian and Queensland Government's overarching framework for protecting and managing the Great Barrier Reef ([Reef 2050 Long-Term Sustainability Plan | Environment, land and water | Queensland Government \(www.qld.gov.au\)](https://www.qld.gov.au/environment/land-and-water/reef-2050-long-term-sustainability-plan)).

Reef 2050 Water Quality Improvement Plan 2017-2022 seeks to improve the quality of water flowing from the catchments adjacent to the Great Barrier Reef ([Reef 2050 Water Quality Improvement Plan \(reefplan.qld.gov.au\)](https://reefplan.qld.gov.au)).

Water plans play an important role in supporting:

- water quality goals outlined in the Reef 2050 Long-Term Sustainability Plan and Reef 2050 Water Quality Improvement Plan where they relate to water flows
- environmental values and water quality under *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* where they relate to water flows.

Water plans achieve this through the following mechanisms:

- Environmental outcomes (section 21 of the final water plan) including
 - maintain and if possible, improve flows of water that support
 - native plants and animals and their associated freshwater habitats
 - riparian systems and their functions
 - long term water quality suitable for riverine and estuarine ecosystems
 - river forming processes
 - ecosystem food chains and the provision of carbon energy.
 - maintain and if possible, improve flows of water that support freshwater flows to the estuary including to
 - provide freshwater flows to marine waters of the Great Barrier Reef
 - deliver sediment, nutrients and organic matter that support productivity in the waters of the Great Barrier Reef that receive flows of water
 - maintain brackish water estuarine habitat
 - benefit native estuarine plants and animals.
- EFOs setting the limits of development and ensuring water is available at key locations. Of particular note:
 - days in low flow periods for longitudinal stream connectivity

- total number of days in Barron River estuarine salinity periods which aims to ensure freshwater contribution to the estuary continues to occur and critical salinity thresholds to support dependent estuarine and ecological processes are met.
- Strategies including limitations on taking and interfering with water, considerations for the chief executive in dealing with unallocated water and considerations for deciding applications for interference.

There are many factors that influence water quality (including land clearing, point source pollution, riparian vegetation degradation, catchment run off etc.) however these matters are not covered by the water plan. A water plan's role in water quality relates to the management of water flows.

Additional measures referencing the principles and actions in the Reef Plan 2050 and reef water quality are considered unnecessary and do not provide further protection to support flows and address water quality matters to the estuary environment and receiving waters of the Great Barrier Reef.

The suggested additional outcomes referencing environmental values and water quality under *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* are considered unnecessary and do not provide further protection in addition to the existing provisions.

3.3.4 Other suggested objectives

Draft water plan provisions

The draft water plan stated EFOs and WASOs. No other objectives were stated in the draft water plan.

Issues raised

- Two (2) submitters requested additional measures and objectives that support the delivery of the Far North Queensland Regional Plan 2009-2031 outcomes for water.
- One (1) submitter requested that cultural flow objectives and performance indicators incorporating Indigenous knowledge be included in the plan.
- One (1) submitter requested performance indicators be provided for social outcomes, specifically maintain recreational values for paddle sports. These indicators were requested to clarify how performance against social outcomes would be assessed. This submission was in the context of the hydro electricity releases being made during daylight hours to support recreational activities.

Consideration and finalised plan provisions

There were no changes in the final water plan to include other objectives (e.g. regional plan, social, cultural etc).

The Far North Queensland Regional Plan 2009–2031 sets the long-term direction for how the northern region will grow and respond to change over time. The regional plan references the water planning process as an 'aligned strategy' being open, transparent and equitable and ensures water is managed in an ecologically sustainable way whilst achieving the best use of available water supplies. The Far North Queensland Regional Plan identified strategic priorities for water in the region including ensuring more efficient management and use of water and the ongoing need for water to accommodate growth in the region.

Water plans provide for the sustainable allocation and management of water balancing the needs of economic, social, cultural and environmental considerations. The water plan supports the regional plan priorities through multiple outcomes, for example:

- to maintain the availability of water for the supply of urban water to towns and communities dependent on the water resources of the plan area
- to provide water for domestic purposes in the plan area
- to provide water to meet increased demand for urban water supply for Cairns local government area from Lake Placid
- to provide mechanisms that support water being made available for growth in industries dependent on water resources in the plan area

- to maintain the availability of water for various purposes in the plan area including urban and rural needs as well as hydro-electric power generation, tourism and aquaculture
- to improve and support the effective and efficient operation of the market in water allocations and relocatable water licences
- to maintain the flows of water to significant areas that support water-related aesthetic and recreational values, including the Barron Falls, Barron Gorge and Tinaroo Falls Dam
- to maintain the flows of water that support the water-related cultural, spiritual and social values of Aboriginal people and Torres Strait Islanders.

Several plan objectives and strategies support these outcomes including meeting future needs through providing a water trading framework allowing water to move to its highest value use and providing for further growth through unallocated water, including providing for urban water supply for Cairns local government area from Lake Placid.

The development of cultural flow objectives and performance indicators is limited by gaps in knowledge and understanding of cultural flow requirements compared to environmental flow objectives/requirements for the water plan area. The department intends to continue to collaborate with Aboriginal people and Torres Strait Islanders through genuine, meaningful engagement to start to fill the knowledge gaps.

Maintaining environmental flow objectives aligns with maintaining recreational values/amenities. The development of a social measure and/or objective to maintain flows for recreational use downstream of the Barron Gorge Hydroelectric Power Station is not considered necessary.

3.4 Unallocated water – water plan

Unallocated water is water reserved under a water plan that can be made available for future use without compromising the security of existing users or the environmental flows.

Section 31 in the water plan identified the total volume of unallocated water available.

3.4.1 Strategic reserve

Draft water plan provisions

The draft water plan stated a volume of 4 000ML for strategic reserve – town water supply.

Issues raised

- One (1) submitter supported the existing 4 000ML strategic reserve for town water supply (Lake Placid).
- One (1) submitter requested additional detail regarding how the plan addresses future consumptive demand, particularly town water supply in the Cairns local government area, and balances this with the needs of existing users.
- Four (4) submitters provided support for new infrastructure proposals within the plan area, this included one (1) submission supporting general infrastructure development to attract investment and economic benefit to the region.

Consideration and finalised plan provisions

There were no changes to the volume of strategic reserve – town water supply purposes – in the final water plan.

The volume of water available for each subcatchment is specified in the water management protocol (see section 4.1 Unallocated Water – Water Management Protocol).

In implementing a process for dealing with unallocated water under the general and strategic reserves the chief executive must consider:

- the efficiency of existing and proposed water use practices
- the availability of an alternative water supply for the purpose

- the impact the proposed taking of, or interfering with, the water may have on–
 - water quality
 - inundation of habitats
 - the movement of fish and other aquatic species,
 - recreational and aesthetic values
 - cultural values
- whether the proposed taking or interfering is likely to have a direct adverse effect on underground water flows.

Strategic reserves may reserve water for infrastructure proposals, however this plan has no reserves of unallocated water for infrastructure proposals. See also section 6.1.5 Tablelands Regional Water Assessment.

3.4.2 General reserves

Draft water plan provisions

The draft water plan stated a volume of 1 250ML for general reserve. The general reserve was available for any purpose.

Issues raised

The issues raised regarding general unallocated water volumes are summarised below:

- three (3) submitters requested additional general reserve for a volume up to 22 500ML, particularly for water harvesting products in the Walsh River and Mitchell River areas.
- two (2) submitters requested additional supplemented unallocated water including additional high priority supplemented surface water allocation from Tinaroo Falls Dam.

Four (4) submissions relating to accessing additional water from groundwater system were received:

- two (2) submitters requested additional groundwater in the Atherton underground water management area be made available.
- two (2) submitters opposed the release of additional water from the Atherton underground water management area. These submitters raised concerns regarding the impact additional water entitlements may have on exiting entitlement holders and identified existing trading opportunities as an alternate avenue to access water. These submitters requested additional consultation and climate change modelling for groundwater systems be undertaken prior to any additional water being reserved/released.

Consideration and finalised plan provisions

There were no changes to the volume of general reserve – any purposes – in the final water plan. However, an additional volume of 17 000ML has been made available with no defined purpose – see section 3.4.4 Unallocated water – no defined purpose.

The volume of water available for each subcatchment is specified in the water management protocol (see section 4.1 Unallocated Water – Water Management Protocol).

There is no unallocated water reserved for supplemented water from the Mareeba–Dimbulah Water Supply Scheme. There is an active market for supplemented water allocations in the Mareeba–Dimbulah Water Supply Scheme and water allocations can be purchased on the open market. Alternatively, water users may contact Sunwater about purchasing any uncommitted water within the Mareeba–Dimbulah Water Supply Scheme. Water users can move water within the trading framework as specified in the water management protocol including changing location and changing the priority groups.

There was no additional unallocated water from groundwater included in the final water plan. Additional extraction from the groundwater may affect the frequency that water sharing rules are

applied to existing water users. Water users can trade water licences according to the relocation rules specified in the water management protocol, including changing zones.

3.4.3 Indigenous reserves

Draft water plan provisions

The draft water plan stated a volume of 2 600ML for Indigenous reserve. This reserve was made available for an Indigenous purpose meaning a use for the purpose of helping Aboriginal people and Torres Strait Islanders achieve their economic, social and cultural aspirations.

Issues raised

- There was strong interest in Indigenous reserves of unallocated water amongst Indigenous groups expressed during consultation processes.
- Two (2) submitters supported the provision of Indigenous reserves in the plan.
- One (1) submitter requested that cultural and environmental uses of water must be given priority over economic uses of water where there are competing demands for water.

Consideration and finalised plan provisions

There were no changes to the volume of Indigenous reserve – Indigenous purpose in the final water plan.

The volume of water available for each subcatchment is specified in the water management protocol (see section 4.1 Unallocated Water – water management protocol).

The water plan does not provide a hierarchy where cultural or environmental uses of water is given priority over other uses. The water plan seeks to achieve a balance between the economic, social, cultural and environmental outcomes. The water plan framework sets outcomes, objectives and strategies to ensure water is sustainably managed and allocated through shares of water.

3.4.4 Unallocated water – no defined purpose

Draft water plan provisions

The draft plan states the total reserves of unallocated water and the purposes for these volumes including general, strategic and Indigenous reserve. The draft water plan did not state an unallocated water reserve with an undefined purpose.

Issues raised

- Three (3) submitters requested additional general reserve for a volume up to 22 500ML, particularly for water harvesting products in the Walsh River and Mitchell River areas.
- There was also strong interest in Indigenous reserves of unallocated water amongst Indigenous groups expressed during consultation processes.

Consideration and finalised plan provisions

An addition 17 000ML of unallocated water is stated in the final water plan and has no defined purpose. There is likely interest in this water for both general and Indigenous purposes. The volume of water available for each subcatchment is specified in the water management protocol (see section 4.1 Unallocated Water – water management protocol).

The final water plan unallocated water total volumes have been established based on:

- consideration of submissions and demand analysis
- impact on environment flow objectives and water allocation security objectives informed by the eWater Source hydrological model
- impact on plan outcomes including persistence of waterholes
- impacts to existing entitlements and unallocated water reserves in Water Plan (Mitchell) 2007

- potential impact on the risks for overland flow development
- potential impacts considering climate change projections.

The hydrological modelling to assess the increase in unallocated water determined that the WASOs and EFOs (with the exception of mean annual flow at node 11) would be achieved. The mean annual flow performance indicator for node 11 (Walsh River at Flatrock) has been amended in the final plan to be 95% which represents a reduction of 2% in mean annual flow.

There are no other amendments to performance indicators in the final water plan for days in low flow periods, days in riffle down out flow periods, days in riparian and vegetation flow periods, days in river-forming flow periods, or days in Barron River estuarine salinity periods.

The additional unallocated water volume of 17 000ML is not expected to significantly change the risk profile of overland flow development to plan outcomes within the plan area noting that development opportunities are most likely to occur where agriculture currently exists, development will most likely be limited to existing areas of cleared native vegetation and on suitable soil types.

The Barron water plan adjoins and flows into the Water Plan (Mitchell) 2007 downstream of Flatrock gauging station (node 11) on the Walsh River and downstream of the Mitchell River (node 12). The additional 17 000ML of unallocated water is specified as a water harvesting product and does not impact existing water users or unallocated water reserves in the Water Plan (Mitchell) 2007.

The additional unallocated water volume of 17 000ML does not elevate risks considered as part of the climate change analysis. The product is specified as a water harvesting volume with a flow condition in the water management protocol, and will not have an impact on low flows, persistence of waterholes, and existing entitlements.

3.4.5 Release processes and considerations

Draft water plan provisions

The draft water plan stated a process for releasing unallocated water for general and strategic purposes is a process in the Water Regulation 2016 which may include auction, tender or fixed price sale.

Section 34 of the draft water plan stated considerations the chief executive must take into account in dealing with unallocated water under the general or strategic reserve.

The draft water plan stated the process for granting unallocated water for the Indigenous reserves is that stated in the water management protocol.

All decisions made by the chief executive about the allocation and management of water (other than water permits) must be consistent with:

- outcomes of the water plan
- environmental flow objectives
- water allocation security objectives.

Issues raised

- Two (2) submitters expressed support for commencing a competitive unallocated water release process after the final plan is released.
- Two (2) submitters requested unallocated water only be released if there are no other water supply options available.
- Two (2) submitters requested water use efficiency be added as criteria the chief executive must consider in implementing a strategic or general release process under the draft water plan.
- One (1) submitter requested that the impact of built infrastructure used to facilitate the take of unallocated water (for example dams, weirs and pumping pools) on the movement of fish be considered.

- One (1) submitter requested that:
 - Native Title holders undertake surveys to protect cultural values from specific impacts of allocation decisions, and where appropriate for Native Title holders, the results provided to the decision maker in a way that keeps the information confidential.
 - all licences have conditions that require the protection of water dependant sacred sites and cultural values.
 - Native Title holders, who are the keepers of cultural values, must be consulted in relation to the allocation and management of water, and the water plan must provide mechanisms for how such consultations will occur.

Consideration and finalised plan provisions

No changes have been made to the release processes for general and strategic reserves in the final water plan.

Existing provisions (section 34 in the water plan) consider water use efficiency, the availability of an alternative water supply, the movement of fish and other aquatic species, and cultural values, including, cultural values of local Aboriginal or Torres Strait Islander communities when implementing an unallocated water release process.

Existing provisions (section 50 in the water plan) address the matters the chief executive must consider deciding applications for interference with water in a watercourse, lake or spring which includes the movement of fish and other aquatic species and cultural values, amongst other matters.

The chief executive may impose conditions on a water entitlement (in accordance with section 57(d) of the water plan) requiring the protection of cultural values, including culturally significant sites etc.

The release process for Indigenous reserves are stated in the Barron Water Management Protocol and are addressed in section 4.1.2 of this report.

3.5 Surface Water – water plan

Draft water plan provisions

The draft water plan contained provisions relating to the management of surface water including:

- limitations on the take of water for particular activities (prescribed activities)
- unallocated water reserves and matters the chief executive must consider in dealing with unallocated water (addressed in section 3.4 of this report)
- elements of water allocations and water licences
- matters for deciding applications for interference with water
- limitations on size of interference with water for certain purposes e.g. pumping pool, stock and domestic, town water supply.

Issues raised

- One (1) submission requested current allocations be maintained with no reduction in volume of individual entitlements. The submitter was concerned that redefining water allocations would involve a reduction to current allocation and the submitter requested that all water allocations are maintained to provide viable agricultural possibilities.
- One (1) submission supported strategies that improve water availability and security in the Mareeba–Dimbulah Water Supply Scheme.
- One (1) submitter requested reference to fishways as defined under the *Fisheries Act 1994* be included to clarify considerations relating to the movement of fish and other aquatic species.
- One (1) submitter requested that the impact of built infrastructure used to facilitate the take of unallocated water (for example dams, weirs and pumping pools) on the movement of fish be considered.

- One (1) submission requested that
 - Native Title Holders undertake surveys to protect cultural values from specific impacts of allocation decisions, and where appropriate for Native Title Holders, the results provided to the decision maker in a way that keeps the information confidential.
 - all licences have conditions that require the protection of water dependant sacred sites and cultural values.
 - Native Title holders, who are the keepers of cultural values, must be consulted in relation to the allocation and management of water, and the water plan must provide mechanisms for how such consultations will occur.

Consideration and finalised plan provisions

No changes have been made in the final water plan which would reduce water rights or security of entitlement for existing water entitlement holders.

Existing provisions (section 50 in the water plan) address the matters the chief executive must consider deciding applications for interference with water in a watercourse, lake or spring which includes the movement of fish and other aquatic species and cultural values, amongst other matters.

The final plan maintains plan provisions which require the chief executive to consider the impact on cultural values when:

- deciding to implement a general or strategic reserve release process
- deciding an application for a licence to interfere
- deciding an application in the Cairns Northern Beaches underground water management area.

In considering cultural values the chief executive requires sufficient information on cultural values to support the assessment and decision. Proponents may need to provide supporting information such as a cultural values report with information on culturally significant sites, artefacts, culturally significant species, or other information informed through consultation with Aboriginal people and Torres Strait Islanders relevant to the area.

The chief executive may impose conditions on a water licence (in accordance with section 57(d) of the final water plan) requiring the protection of cultural values, including culturally significant sites etc. Proponents would also be required to comply with obligations under other acts such as the *Aboriginal Cultural Heritage Act 2003* and *Torres Strait Islander Cultural Heritage Act 2003*.

In making decisions the chief executive must consider obligations under the *Native Title Act 1993* (Commonwealth) and the *Human Rights Act 2019*.

3.6 Groundwater – water plan

3.6.1 Atherton underground water management area

Draft water plan provisions

The draft water plan proposed to continue managing groundwater within the Atherton underground water management areas. The water plan showed on a map the Atherton underground water management area and underground water management area zones, and stated the process for dealing with applications.

The chief executive must not accept an application for a water licence in the Atherton underground water management area. The chief executive cannot grant a licence dealing if it would:

- increase the amount of water that may be taken
- increase the rate of take of water that may be taken
- increase or change the interference with water.

The water management protocol provided a framework relocating groundwater licences including relocating rules and water sharing rules. These matters are addressed in section 4.3.1 of this report.

Issues raised

Thirty-two (32) submissions related to the conversion of relocatable water licences to water allocations in the Atherton underground water management area:

- Thirty (30) submitters requested relocatable water licences within the Atherton underground water management area be converted to water allocations.
- One (1) submitter opposed the conversion of relocatable licences to allocations, and instead proposed all allocations within the water plan area be converted to licences.
- One (1) submitter requested further consultation be undertaken prior to any conversion of licences to allocations.

Two (2) submitters suggested that the proposed underground water zones in the draft water plan be amended to improve fairness and representativeness of monitoring bores between zones, and to accommodate more uniform water sharing rules across the Atherton underground water management area.

One (1) submitter requested that:

- Native Title holders undertake surveys to protect cultural values from specific impacts of allocation decisions, and where appropriate for Native Title holders, the results provided to the decision maker in a way that keeps the information confidential.
- all licences have conditions that require the protection of water dependant sacred sites and cultural values.
- Native Title holders, who are the keepers of cultural values, must be consulted in relation to the allocation and management of water, and the water plan must provide mechanisms for how such consultations will occur.

Consideration and finalised plan provisions

There are no changes related to the Atherton underground water management area in the final water plan.

Relocatable water licences have been retained in the Atherton underground water management area. It is considered that there is no tangible benefit in terms of sustainable water management or flexible access to additional resources in converting relocatable water licences to water allocations.

No additional unallocated water (groundwater) is provided in the Atherton underground water management area. The water licences in the Atherton underground water management area are relocatable water licences and can be moved to new land parcels in accordance with rules stated in the water management protocol. The ability to relocate these water licences provides a trading framework which allows water users to sell unused water and access additional entitlements without the release of additional water.

Submissions requesting changes to water sharing rules across zones can be considered by applying water sharing rules to different or multiple zones – see also section 4.3.1.2 of this report (Water sharing rules). The current underground water management zones are considered adequate to support an optimised flexible relocation framework.

3.6.2 Cairns Northern Beaches underground water management area

Draft water plan provisions

The draft plan showed on a map the Cairns Northern Beaches underground water management area.

It also stated the criteria for deciding applications in the Cairns Northern Beaches underground water management area.

Issues raised

- One (1) submitter requested that decisions about applications in the Cairns Northern Beaches underground water management area must consider water quality and potential for land degradation.
- One (1) submitter requested that:
 - section 67(2) of the draft water plan, which relates to criteria for deciding an application for underground water in the Cairns Northern Beaches underground water management area, require explicit consideration of cultural matters (e.g., impacts ground water dependant vegetation and fauna that is culturally important).
 - Native Title holders undertake surveys to protect cultural values from specific impacts of allocation decisions, and where appropriate for Native Title holders, the results provided to the decision maker in a way that keeps the information confidential.

Consideration and finalised plan provisions

In the final water plan the criteria for the chief executive to decide applications in the Cairns Northern Beaches underground water management area (section 67) has been amended to include consideration of the impacts of seawater intrusion and cultural values.

In the Cairns Northern Beaches underground water management area it is recognised there is risk of seawater intrusion if over extraction of groundwater occurs and hence amendment to explicitly consider seawater intrusion is necessary.

The consideration of cultural values aligns with cultural outcomes and including cultural values as part of the matters the chief executive must consider in deciding applications in Cairns Northern Beaches underground water area (section 67) is necessary.

Other matters not listed in section 67 (2) can also be considered under section 67 (3) where they are relevant to a decision.

3.7 Overland Flow

Draft water plan provisions

Overland flow water is water that runs across the land after rainfall, either before it enters a watercourse, after it leaves a watercourse as floodwater, or after it rises to the surface naturally from the underground.

The draft water plan stated that the plan applies to surface water and underground water. It did not apply to overland flow water.

Issues raised

- Four (4) submissions were received regarding overland flow. All submissions supported the existing plan provisions which do not regulate overland flow. Feedback from one member in the water consultation group was that overland flow water should be regulated before it becomes a problem and the risks increase and water development affects industry.
- Two (2) submissions were received which stated overland flow should not be metered. Issues relating to metering are addressed in section **Error! Reference source not found.**3.3.1 of this report.

Consideration and finalised plan provisions

There are no changes to overland flow in the final water plan.

An audit of constructed overland flow storages in the Barron water plan area occurred in January 2022 and indicated that the number of overland flow storages is relatively low.

No changes have been made to the final water plan as overland flow is not considered a risk to achieving plan outcomes. The department will continue to monitor overland flow development.

3.8 Climate change

Draft water plan provisions

The Department of Environment and Science has assessed the current and potential future climate for the Barron water plan area. Current trends in average temperature, potential losses from evaporation and annual rainfall were compared to the historical period. Projected trends to 2030 and 2050 were generated from a range of General Circulation Models described in the Intergovernmental Panel on Climate Change Fifth Assessment Report and further evaluated by CSIRO for Australian conditions. The projections considered the Representative Concentration Pathway 4.5 and 8.5 emissions scenarios as a realistic envelope for the future emissions trends.

The temperature projections for the Barron catchment show increases and the scenarios diverge around 2030, meaning some temperature rise is inevitable. There is also an associated increase in potential water losses through evaporation across the catchment. Annual rainfall data shows a small decreasing trend although the projected rainfall has large uncertainty which is typical for Queensland. Monthly rainfall data shows more variability alongside a trend towards a small increase in dry season months and decreases in the summer months. These seasonal rainfall changes are projected to lower annual rainfall totals.

Projected changes and its impact on water availability were considered in the draft water plan settings including the performance indicators and objectives to help manage climate change risks and adverse impacts.

Issues raised

- Five (5) submitters raised concerns about the impact of climate change on the sustainable management of water including impacts on the environment and on the future use and availability of water. Four (4) of these submissions requested further detail on how climate change was assessed and considered in the draft plan, including the suggestion that a water plan should have specific provisions and measures to address climate change.

Consideration and finalised plan provisions

There are no changes proposed to how climate change has been considered in the water plan.

Climate change projections were considered in the development of the draft water plan through consideration of risks posed in setting Environmental Flow Objectives and Water Allocation Security Objectives.

A series of factsheets will be available on the departments website to describe:

- Climate change - how climate science was assessed and considered in the final water plan
- Historical performance of water allocations – describing how often water has been available historically.

The next Minister's 5 year Performance Report will provide information related to plan outcomes, risks and assess the effectiveness of the plan.

3.9 Other matters considered for the Water Plan

This section summarises other changes made in the final water plan compared to the draft Barron water plan. These changes do not impact existing users or change the policy intent of the plan. This includes changes to provide improved clarity in the wording of provisions, to uphold the policy intent of the plan, update terminology, update to maps based on improved information and to remove inconsistencies in the nature and application of provisions across the plan area.

The following changes were incorporated in the water plan:

- Section 27 has been amended to include additional elements of who may take water for a prescribed activity and the period over which the volumetric limits are applicable for. Section 27

has also been amended to remove 'interfered with'. This change was required to align with section 101(1) of the Water Act.

- Section 63 of the final plan has been amended to allow 'town water supply' to be a purpose stated on a groundwater licence.
- Section 67 has been amended to include reference to section 107 of the Water Act under which applications for new water licences are made.
- Schedules 1, 2 and 3 have been amended to correct the spelling of Irvinebank, Lake Morris and Peterson Creek in mapping products.
- Schedule 7 Dictionary – subcatchment area definition has been amended to remove 'from a subcatchment area zone'.

4. Further considerations for the water management protocol

This considerations report is required under the Water Act to address submissions and feedback on the draft Water Plan (Barron) 2022. The draft water management protocol was released at the same time as the draft Water Plan (Barron) 2022 and submissions were invited.

Although not required under the Act this section of the report summarises submissions and issues raised in consultation on the draft water management protocol and how issues were considered in the Barron Water Management Protocol 2023 (water management protocol).

Appendix A Statement of Changes lists all changes that have been made to the Barron Water Management Protocol.

4.1 Unallocated water – water management protocol

4.1.1 Unallocated water reserves and general requirements

Draft water management protocol provisions

The draft water management protocol detailed the volumes, location and type of unallocated water held in each subcatchment as either Indigenous, strategic or general reserve.

General reserve was available for any purpose. Strategic reserve was available for town water supply purposes. Indigenous reserve was available for a use of helping Aboriginal people and Torres Strait Islanders achieve their economic, social and cultural aspirations.

Issues raised

- Three (3) submitters requested additional general reserve, particularly for water harvesting products in the Walsh River and Mitchell River areas.
- Two (2) submitters requested that a definition for 'visible flow' be provided in section 13 of the draft water management protocol for the release of strategic reserves.

Considerations and finalised protocol provisions

An additional 17 000ML (average annual entitlement) of reserve water has been made available in the water plan. The water management protocol has been amended to specify the details of this additional water, including location, volume and type for each purpose (see

Table 2).

Table 2 Availability of unallocated water for surface water

Subcatchment	Zone and location	Reserve		
		Volume (ML)	Type	Purpose
A	Zone C Lake Placid	4 000	Water Licence Nominal entitlement	Strategic
A	Excludes Zones A, B and C of the Mareeba–Dimbulah Water Supply Scheme	450	Water licence Average annual volume	Indigenous
B	Excludes location upstream of Lake Morris	300		
C	Tinaroo Zone Excludes take from Tinaroo Falls Dam ponded area	450		
D	Excludes take from Zone E of the Mareeba–Dimbulah Water Supply Scheme	150		
E	Excludes take from zone E of the Mareeba–Dimbulah Water Supply Scheme	1 250		
F				
G				
E	Excludes take from zone E of the Mareeba–Dimbulah Water Supply Scheme	1 250	Water licence Average annual volume	General
F				
G				
E	Any location	17 000	Water Licence Average annual volume Water harvesting with a flow condition of at least 2 615ML/day at GS 919311A, or an equivalent flow condition at an alternative department gauging station.	To be determined
F				

Average annual volume, of water, means the volume of the water expressed as long-term modelled average over the simulation period for the water. This definition has been included in Attachment 1 Dictionary of the water management protocol.

The flow condition of at least 2 615ML/day at GS 919311A (Walsh River at Flatrock) (or an alternative flow condition at department gauging station) for subcatchments E and F is necessary to protect:

- low flows
- water holes
- existing entitlements.

Waterholes along the Walsh River are generally small however their persistence is important for refugia species. Protection through maintaining low flows, environmental flow objectives relating to days of low flow periods, and adequate flow conditions through unallocated water releases is considered important. A greater flow condition may be applied by the chief executive in considering other matters under section 34 of the final water plan.

The water management protocol (section 13) has been amended to require a 'flow condition' be imposed on any licence granted from the Lake Placid strategic reserve. A flow condition is a defined under the Water Act which requires a rate of flow or level of water to be specified.

4.1.2 Unallocated water release processes – Indigenous reserve

Draft water management protocol provisions

The draft water management protocol stated that the Indigenous reserves may be granted to an eligible person in that subcatchment to help an Aboriginal or Torres Strait Islander community in the plan area achieve its economic, cultural and social aspirations.

An eligible person is a native title holder under the *Native Title Act 1993* (Cwlth).

Issues raised

- Indigenous groups consulted through the water planning process were supportive of native title holders being an eligible person. There was also strong interest in being able to temporarily trade the water.
- One (1) submission supports the temporary trading of the unallocated water for Indigenous purposes however maintains that this trading should be provided with documented evidence of delivering genuine economic benefits to an Aboriginal or Torres Strait Islander community.
- One (1) submission raised multiple issues relating to Indigenous reserves including:
 - support for the intent of provisions which allow native title holders (and not native title claimants) under the *Native Title Act 1993* (Cwlth) to hold a water licence granted from the Indigenous unallocated water reserve as an eligible person.
 - request that water held in the Indigenous unallocated water reserve be able to be applied for and held by agent Registered Native Title Body Corporates (RNTBCs) and their wholly owned subsidiaries or trusts.
 - clarification that a native title holder, as an eligible person, can be granted water from the Indigenous unallocated water reserve for the benefit of the native title holding, rather than the wider Aboriginal people and Torres Strait Islander community in the plan area.
 - clarification that water cannot be released from the Indigenous reserves of unallocated water for an area where a determination has not yet been made.

Considerations and finalised protocol provisions

Reference to Traditional Owners and Custodians has been replaced with the term Aboriginal people and Torres Strait Islanders. *Aboriginal people* means people of the Aboriginal race of Australia. *Torres Strait Islander* is a person who is a descendant of an Indigenous inhabitant of the Torres Strait Islands.

The department intends on undertaking further engagement with Aboriginal people and Torres Strait Islanders regarding:

- definition of eligible person

- to establish the share of the reserve where there are multiple eligible persons
- information requirements for an application
- assessment criteria for releases of Indigenous reserves and amending a water licence (Indigenous purpose) to provide for temporary trading of water.

Once further engagement has occurred the water management protocol will be amended and subsequent Statement of Changes also provided.

4.2 Surface Water – water management protocol

4.2.1 Water trading framework – unsupplemented and supplemented surface water allocations and unsupplemented water licences

Draft water management protocol provisions

The draft water management protocol contained provisions including dealing rules for location, purpose, priority group, and daily volumetric limit changes etc., seasonal assignment rules and water sharing rules.

Issues raised

- Two (2) submitters noted the importance of flexible trading markets and that water entitlement holders see value in their water, but expressed that there were some challenges in purchasing water through the existing trade market.
- One (1) submitter requested that the rules to change a purpose from 'distribution loss' to 'any' become a permitted change dealing.

Considerations and finalised protocol provisions

Section 22(1)(c) and (2)(b) of the water management protocol, which states the dealing rules for a change to priority group for supplemented water allocations, has been amended to clarify intent.

A change of purpose from 'distribution loss' to 'any' has been maintained as an assessed dealing. An assessment of this change considers:

- potential impact on existing entitlements
- potential impact on objectives of the plan (environmental flow objectives and water allocation security objectives)
- verification the volume to be converted is available in the system
- potential changes to the zone limits as a result of the additional water (updates to the protocol zone limits may be required)
- potential updates to the approved hydrological model.

4.3 Groundwater – water management protocol

4.3.1 Atherton underground water management area

4.3.1.1 Relocating rules and seasonal assignment

Draft water management protocol provisions

The draft water management protocol contained rules for relocating water licences and seasonal water assignment within the Atherton underground water management area.

Issues raised

- Two (2) submissions requested that trade between groundwater to surface water entitlements be established.

- Three (3) submitters provided feedback relating to the monitoring bore network, including requests for additional monitoring bores and a review of pumping influences on monitoring bores located near high-use production bores.
- Two (2) submitters requested all take of groundwater be prevented within 400m of a monitoring bore.

Considerations and finalised protocol provisions

There were no changes to the water management protocol to provide rules to enable relocating from ground water to surface water. The suggested trade is very complex and would require consideration of impact on existing users and the environment through pretested trades, zone limits and volumes as well as consideration of existing water sharing rules for groundwater. There is currently insufficient technical information to support establishing a simple process to enable relocating groundwater to surface water.

Depending on the proposal, the department may assess, on a case-by-case basis, an application for a water licence (purpose of relief) i.e. take of groundwater under an existing groundwater licence, release into a watercourse, followed by pickup of water from surface water. The department will liaise with the submitters to discuss this matter further.

There were also changes to the water management protocol to prohibit the relocation of bores within 400metres of a registered bore that is used to determine announced entitlements.

4.3.1.2 Water sharing rules

Draft water management protocol provisions

The draft water management protocol contained water sharing rules for the Atherton underground water management area to enable the sharing of water resources during drier seasons/drier years. The water sharing rules applied to all licence holders.

Issues raised

- One (1) submitter requested high priority groundwater sharing rules be introduced for town water supply entitlements in the Atherton underground water management area.
- Twenty-nine (29) submissions opposed the introduction of any high priority groundwater licences.
- Two (2) submissions suggested that the water sharing rules be amended to improve fairness and representativeness of monitoring bores between zones, and to accommodate more uniform water sharing rules across the Atherton underground water management area.

Considerations and finalised protocol provisions

The department has appointed a consultant to undertake a technical review of the adequacy of the groundwater monitoring network, and water sharing rules including monitoring bore trigger levels and corresponding announced entitlements in the Atherton underground water management area.

Recommendations in relation to the water sharing rules and announced entitlement triggers have not been finalised, however will be considered as part of subsequent amendments to the protocol, if changes are necessary. The department will consult with affected parties, including all entitlement holders in the Atherton underground water management area, if any changes to the water management protocol are proposed.

No changes were made to the water management protocol to provide a high priority groundwater licence or varying applicability of the water sharing rules for different purposes. Providing priority access may lead to:

- an accelerated decline of groundwater levels
- risk of lower announced entitlement in subsequent years depending on the replenishment to the system

- risk of negative impact on existing groundwater users in the system and on unsupplemented surface water allocations.

Entitlement holders can purchase existing relocatable licences through the trading market in the Atherton underground water management area to bolster water security, and utilising surface water entitlements may also be an alternative option.

4.4 Monitoring and reporting

Draft water management protocol provisions

The draft water management protocol stated that the chief executive must measure and record:

- water quantity
- water taken
- underground water levels
- prices for water permanently traded and seasonally assigned
- the number of permanent trades and seasonal assignments
- nominal volume of water permanently traded and seasonally assigned.

Issues raised

- Two (2) submitters requested that additional monitoring of high flow events be undertaken within the Walsh River system to allow peak flow and water harvesting volumes to be identified.
- One (1) submitter requested additional information relating to water quality, land degradation, stock and domestic take, overland flow development and climate change be collected.
- One (1) submitter requested the department monitor the impacts of climate change on reliability in the Mareeba–Dimbulah Water Supply Scheme area.
- One (1) submitter requested that monitoring and reporting arrangements for cultural outcomes that promote accountability and foster learning be put in place.

Considerations and finalised protocol provisions

No amendments were made to the final water management protocol in relation to monitoring and reporting.

The department continues to measure and record monitoring information across the plan area in both ground and surface water through monitoring bores and gauging stations. The monitoring network schedule is fit for purpose and provides a base level of information for the department needs. The adequacy of the water monitoring network is periodically reviewed.

The water monitoring section of the water management protocol states clear, specific and measurable attributes and reflects the information recorded through the monitoring network and the information the department records in relation to prices and number of trades.

The effects of climate change on water availability was considered as part of development of the draft water plan. See section 3.8 of this report.

The Minister's next 5 year Performance Report will provide information on the risks to achieving plan outcomes including information on authorised take for stock and domestic (where known), overland flow development etc.

5. Requests related to entitlements

5.1 Submissions on entitlements subject to the water entitlement notice

- One submission was received regarding the water entitlement notice.

Following additional engagement with the department, the submitter was satisfied the concerns raised in the submission had been addressed. This submission was subsequently withdrawn.

5.2 Other requests specific to individual licences

- One submission was received which requested the plan address the historical conversion of a water licence. The submitter raised concern that the conversion was not the same as other conversions in the plan area.

The licence that is the subject of this submission was amended in 2011, in accordance with the then Water Resource (Barron) Plan 2002.

For this licence, the conversion rate was not applied as the licence stated a volumetric limitation in the conditions. The volumetric limit was the stated volume which was applied to this entitlement in accordance with the Water Resource (Barron) Plan 2002. The department considers that due process was followed and no changes will be made to this licence.

6. Out of scope matters

6.1.1 Resource Operations Licence – Mareeba–Dimbulah Water Supply Scheme

- One (1) submission was received regarding storage level triggers for environmental management rules stated in the Resource Operations Licence for the Mareeba–Dimbulah Water Supply Scheme.

The Water Act provides a framework for the amendment of a resource operations licence where the holder of a resource operations licence may apply to amend their licence under section 184 of the Water Act.

No changes have been made to the final water plan.

6.1.2 Feedback on how consultation was undertaken

- Seven (7) submitters provided feedback regarding the consultation phase of the plan development. Three (3) of these submissions provided feedback including a preference for longer consultation periods for the draft water plan, additional consultation prior to the release of draft plans and co-ordinated feedback for multiple plan areas.
- One (1) submitter provided feedback regarding Indigenous consultation.

Section 46 of the Water Act provides a framework for public consultation for the development of a draft water plan. The consultation for the development of the final plan is consistent with this framework. More detail regarding the consultation process that was undertaken to develop the draft and final water plan can be found in chapter 2 of this report.

6.1.3 Water Act framework

- One (1) submission was received which requested more flexibility in the Water Act and subordinate legislation to safeguard against irregular and extreme flooding events.

The water plan review process is unable to amend the Water Act.

6.1.4 Native Title Act 1993 (Commonwealth)

- One (1) submitter requested that future act processes under the *Native Title Act 1993* (Commonwealth) be complied with.

The making of the water plan has been undertaken in accordance with the *Native Title Act 1993* and the [Queensland Government Native Title work procedures](#).

6.1.5 North Johnstone Diversion

- Two (2) submitters supported the North Johnstone Diversion.

The North Johnstone Diversion is within the Water Plan (Wet Tropics) 2013.

6.1.6 Tablelands Regional Water Assessment

- One (1) submission supported future water plan amendments to incorporate the outcomes of the Tablelands Rural Water Assessment.

The department acknowledges interest for additional water sources for new infrastructure in the region and will continue to work closely with stakeholders through the Tablelands Regional Water Assessment program to find the best solution to suit water needs in the Tablelands.

Once complete, the Tablelands Regional Water Assessment will set out how existing infrastructure, new infrastructure and non-infrastructure solutions can be used to maximise water supply in the Tablelands region and drive economic growth. Preferred options considered through this assessment process will need to be compatible with regulatory frameworks relevant to water resources.

No change has been made to the final plan as detailed business cases and the Tablelands Regional Water Assessment are not sufficiently advanced to accurately inform the nature of these options during the life of the replacement water plan.

7. Next steps

Water Plan (Barron) 2023

The Water Plan (Barron) 2023 is now subordinate legislation under the Water Act and supersedes the Water Plan (Barron) 2002. The Water Plan (Barron) 2023 is available on the Office of the Queensland Parliamentary Counsel website and has a 10-year life under the *Statutory Instruments Act 1992*.

Barron Water Management Protocol 2023

The Barron Water Management Protocol 2023 (water management protocol) has also been finalised and a Statement of Changes is available in Attachment B of this report.

Although there were some amendments to the water management protocol, the department will continue to work with water users, key industry groups, local government and Aboriginal and Torres Strait Islanders to address implementation issues with the water management protocol.

The department intends on undertaking further engagement with Aboriginal people and Torres Strait Islanders to inform further changes to the water management protocol regarding the definition of eligible person, to establish the share of the reserve where there are multiple eligible persons, information requirements for an application, assessment criteria for releases of Indigenous reserves and assessment criteria to amend a Water Licence for Indigenous purpose to provide for trading.

In relation to the Atherton underground water management area the department has also appointed a consultant to undertake a technical review of the adequacy of the groundwater monitoring network, and water sharing rules including monitoring bore trigger levels and corresponding announced entitlements. Whilst recommendations have not been finalised, subsequent amendments to the protocol will be considered. The department will consult with affected parties, including all entitlement holders in the Atherton underground water management area, if any changes to the water management protocol are proposed.

A Statement of Changes will be published if any further changes to the water management protocol occur.

Barron Water Entitlement Notice

The Barron Water Entitlement Notice (water entitlement notice) was published in the Queensland Government Gazette at the same time as the final water plan.

In implementing the requirements of the water entitlement notice, the department will:

- Repeal nine (9) water licences with water take for stock and domestic purposes authorised to continue under section 29 of the final water plan.
- Amend 12 water licences to state a purpose consistent with the water plan.

Monitoring, Evaluation and Reporting Strategy

The department will now focus on development of a Monitoring, Evaluation and Reporting Strategy to support assessment of the effectiveness of this plan and its implementation (consistent with section 22 of the final water plan).

For further information about the water plan, water management protocol or the water entitlement notice, please contact the Department of Regional Development Manufacturing and Water by phone 1800 822 100 or on email waterservicesnorth@rdmw.qld.gov.au.

Appendices

Appendix A Statement of Changes

A Statement of Changes is required under section 69 of the Water Act if the chief executive amends a water management protocol. The Statement of Changes serves to inform affected water users and other interested parties about the changes that have been made to the water management protocol.

A change to the Barron Water Management Protocol 2023 is a change to:

- New provisions in chapter 2 Unallocated Water to state:
 - the volume, location, and reserve type of unallocated water including strategic, general and Indigenous reserves. It also states the volume, location and conditions for the reserve with no defined purpose.
 - general requirements for granting unallocated water including the requirement for a flow condition for taking strategic reserve water from Lake Placid.
 - the processes for releasing water from the Indigenous reserve generally including;
 - section 14 has been amended from 'achieve economic and social aspirations' to 'achieve economic, social or cultural aspirations'.
 - section 16 has been amended to replace Traditional Owners and Custodian with the terms Aboriginal people and Torres Strait Islanders.
- Chapter 3 states the dealing rules for water allocations in the Mareeba–Dimbulah Water Supply Scheme. Changes to this chapter include:
 - administrative changes to update reference to replacement water plan
 - additional considerations for permitted changes to a priority group of a water allocation from medium priority to high priority and from high priority to medium priority
 - amendments to water allocation dealing rules to be consistent with section 158 of the Water Act and part 5, division 3 of the Water Regulation 2016.
- Chapter 4 states the dealing rules, seasonal water assignment rules and water sharing rules for unsupplemented surface water. Changes to this chapter include:
 - administrative changes to update reference to replacement water plan and subcatchment areas, and correct heading for Table 2.
 - Table 2 - updated maximum annual volumetric limits for permitted change to CB water allocation zone
 - section 38 amendment to permitted change for daily volumetric limit
 - section 39 includes addition of nominal volume to volumetric limits in the consideration of subdivision and amalgamation of water licences
 - section 44 includes new criteria for consideration of seasonal water assignments of water allocations
 - clarification of section 46 for when to ease seasonal restriction, which reflects long standing practice
 - sections 50 and 51 – references to transfer were amended to relocate to be consistent with Water Act
 - changes to water allocation dealing rules to be consistent with section 158 of the Water Act and part 5, division 3 of the Water Regulation 2016.

- Chapter 5 applies to groundwater and states for the rules for relocation, seasonal water assignment rules and water sharing rules in the Atherton underground water management area. Changes in this chapter include:
 - section 54,55 and 56 - references to relocate rather than transfer which is consistent with the Water Act
 - section 57 - amended to specify additional rules for relocating a bore within 400m of a registered bore that is used to determine announce entitlements
 - section 59 - clarification added and amendments to specify additional rules for seasonal water assignments to be approved for low risk seasonal water assignments and restrict seasonal assignment if the proposed water bore is located within 400metres of a registered bore that is used to determine announced entitlements
 - section 61 and Table 7 - clarifications to operational rules for determining Announced entitlements and clarifications of water levels to determine Announced entitlements
 - section 62 - amendments to provide for decisions of Announced entitlements to be made on the first business day of each water year and reviews when required on the first business day of the month after commencement of the water year
 - section 63 - amendment to provide for notifications of Announced entitlements to be made within two business days of being decided and until the Announced entitlement for the current water year takes effect, the announced entitlement for the current water year takes effect, the Announced entitlement from the previous water year remains in effect.
- Chapter 6 states the monitoring requirements and ongoing assessment requirements. Changes to this chapter include:
 - Administrative changes to update references to replacement water plan
 - Section 65 - amended to include measurement and recording of sale price of seasonal assignments.
- Attachment 1 Dictionary
 - a definition of Average annual volume has been added. Average annual volume, of water, means the volume of the water expressed as a long-term modelled average over the simulation period for the water.
 - amendment of the definition of Existing authorised bore - For sections 57 and 60 of this protocol, means a bore that is authorised under a development permit, water licence or water plan.
- Attachment 2 Availability of unallocated water – Amendments have been made for an addition 17 000ML of unallocated water in subcatchments E and F.

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