Cape York Water Plan

Minister’s Considerations Report

June 2019
Acknowledgement of the Traditional Owners of the Cape York plan area

The Department of Natural Resources, Mines and Energy (the department) acknowledges and pays respect to the Traditional Owners in the Cape York area of Queensland.

The department acknowledges that the Traditional Owners of this region have deep cultural connections to their lands and waters and that there is a need to recognise Traditional Owner knowledge and cultural values in water planning.
Foreword

I am pleased to release this report about the consultation undertaken by the Queensland Government to inform development of the Water Plan (Cape York) 2019, as well as the water management protocol and the water entitlement notice which will implement the new water plan.

For the first time, the Cape York Peninsula region has a water management framework that is consistent with the rest of the State which provides for existing and future water use, and provides sufficient water for the environment.

It was informed through comprehensive technical assessments that include, a cultural heritage and Indigenous community values assessment, hydrological modelling, socioeconomic analysis and ecological knowledge.

Extensive consultation with all sectors throughout the development of the water plan has helped to ensure that it sustainably balances the needs of all communities and water users living in the plan area and downstream. Critical in these considerations were the issues raised in the 33 submissions received during the consultation period on the draft water plan and the feedback received during consultation meetings and public meetings held across Cape York. I would particularly like to thank those who took part in the Northern and Western Cape Water Consultation Group, Southern Cape Water consultation Group and the Regional Cape Water Consultation Group.

The water plan recognises the close cultural connection that Aboriginal people and Torres Strait Islanders have with the land and water resources. It empowers Traditional Owners to make decisions about the region’s water resources to meet the economic, social and cultural needs of Aboriginal people and Torres Strait Islanders consistent with the objectives of the Cape York Peninsula Heritage Act 2007.

I thank everybody who has participated in the consultation process, provided feedback on the draft proposals and contributed to the development of the Water Plan (Cape York) 2019 and supporting instruments.

Hon. Dr Anthony Lynham MP
Minister for Natural Resources, Mines and Energy
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1 Introduction

1.1 Purpose of this report

This report has been prepared by the Minister for Natural Resources, Mines and Energy (the Minister) and the Chief Executive of the Department of Natural Resources, Mines and Energy (the department) in accordance with section 48(2) of the Water Act 2000 (the Water Act).

The report states the considerations made in finalising the Water Plan (Cape York) 2019 (the water plan) and the Cape York Water Management Protocol 2019 (the protocol). It outlines the consultation process undertaken by the department in developing the water plan as well as summarises issues raised in submissions on the draft water plan and water management protocol and how those issues were addressed in finalising these.

Submissions on the draft water entitlement notice have been considered and incorporated where appropriate into the water plan and the protocol, however actual changes to entitlements will not be addressed in this report. This is because the water entitlement notice will not be gazetted until the water plan has been tabled for 14 parliamentary sitting days. This is to ensure that water entitlements amended, granted, repealed or replaced under the water entitlement notice have a stable legislative framework to operate under.

1.2 Overview of the Cape York water plan area

The Cape York water plan area comprises 15 different catchments across the Cape York Peninsula region in Northern Queensland, covering approximately 106 805 square kilometres, 11 different local government areas and incorporating regional centres and towns such as Cooktown, Pormpuraaw and Weipa (Figure 1).

The catchments drain into the Great Barrier Reef on the eastern coast, into the Gulf of Carpentaria on the western coast and into the Torres Strait in the north-west catchments. The plan area also includes two underground water management areas, with six underground water licence zones, however underground water resources of the Great Artesian Basin are not managed under this plan.

Cape York has large areas of relatively-undisturbed landscapes and high biodiversity value, with Traditional Owners maintaining strong ties and connections to land and water. Many of the catchments have near-natural flow regimes and river systems in pristine condition. Mean rainfall varies across the area from 800 millimetres (mm) around Lakeland to more than 3000 mm near Lockhart River.

Water in the plan areas supports a number of industries including agriculture, grazing, tourism, mining and town water supply.
Figure 1 Extent of Cape York Water Plan area
1.3 Intent of the final water plan and water management protocol

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 not connected to water managed under the *Water Plan (Great Artesian Basin and Other Regional Aquifers) 2017 (GABORA)* and overland flow water.
- **Underground water**: other than underground water managed under GABORA.

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 unallocated water reserves to meet new and emerging demands including a reserve for Aboriginal people and Torres Strait Islanders;
- converting area-based water licences to volumetric water licences;
- converting water licences to water allocations;
- 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 in low risk areas;
- enhancing monitoring and reporting of water resources in Cape York.

1.4 Key timeframes for developing the final water plan and water management protocol

The water planning process formally commenced in May 2016 when the Statement of Proposals (SOP) was released for public comment. At the same time, a moratorium was published, preventing new applications to take or interfere with water in a watercourse, lake or spring; and underground water, but allowing applications to change existing entitlements which did not increase the volume of water taken or interfered with under an existing entitlement.

Forty-one submissions were received on the SOP from a wide range of interest groups including Aboriginal and Torres Strait Islander Trusts and corporations, Traditional Owners, irrigators, local governments, industry bodies, mining proponents and conservation groups. Issues raised by submitters were considered in the development of the draft water plan and draft water management protocol.

On 4 June 2018 the draft water plan, draft water management protocol, and draft water entitlement notice were released for comment. These documents were accompanied by hydrological, ecological, cultural and socioeconomic technical assessments. A Statement of Intent was also released, which provided a plain English explanation about the content of the documents and provided information about how to make a submission. The moratorium was amended on the same day to prohibit new overland flow development for purposes other than stock or domestic use.

The submission period for the draft water plan, draft water management protocol, and draft water entitlement notice closed on 31 August 2018. Thirty-Three submissions were received and considered in finalising the water plan and water management protocol. The submissions will also be considered in preparing a final water entitlement notice, which is proposed to be gazetted in late 2019.

Table 1 provides a summary of the key timeframes for developing the water plan.
Table 1 – Milestones for developing the final water plan and associated planning documents

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestone</th>
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<tbody>
<tr>
<td>March 2014</td>
<td>• Pre-planning work commences with preliminary consultation with key stakeholders</td>
</tr>
<tr>
<td></td>
<td>• Commencement of technical assessments and data gathering including, cultural heritage and Indigenous community values; environmental and river ecology; hydrology and existing water use information; and socioeconomic values</td>
</tr>
<tr>
<td>6 May 2016</td>
<td>• Moratorium Notice takes effect</td>
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<tr>
<td></td>
<td>• SOP released for public review</td>
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<tr>
<td></td>
<td>• Formal commencement of stakeholder consultation</td>
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<tr>
<td>June - July 2016</td>
<td>• 3 public information sessions in Weipa, Cooktown and Lakeland</td>
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<tr>
<td></td>
<td>• Over 30 one-on-one meetings with local governments, Aboriginal and Torres Strait Islander Land Trusts and corporations, NRM groups, Traditional Owners, Cook Shire Council and other stakeholders.</td>
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<tr>
<td>October – November 2016</td>
<td>• Three water consultation groups established</td>
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<tr>
<td></td>
<td>• First round of meetings with each group occur</td>
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<tr>
<td>6 December 2016</td>
<td>• Commencement of new provisions in the Water Act relating to water planning</td>
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<tr>
<td>March – April 2017</td>
<td>• Second round of water consultation group meetings</td>
</tr>
<tr>
<td>August 2017</td>
<td>• Third round of water consultation group meetings</td>
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<tr>
<td>4 June 2018</td>
<td>• Draft water plan, draft water management protocol, draft water entitlement notice and supporting documents including the statement of intent released for public comment</td>
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<tr>
<td>June 2018</td>
<td>• Fourth round of water consultation group meetings</td>
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<tr>
<td>4 June to 31 August 2018</td>
<td>• 4 public information sessions held in Cooktown and Lakeland</td>
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<tr>
<td></td>
<td>• Over 18 one-on-one meetings held across the Cape (Injinoo, Mapoon, Weipa, Aurukun, Pormpuraaw, Coen, Lockhart River, Hope Vale, Laura, Lakeland)</td>
</tr>
<tr>
<td></td>
<td>• 4 local government meetings</td>
</tr>
<tr>
<td>31 August 2018</td>
<td>• Submission period closes</td>
</tr>
<tr>
<td>November 2018</td>
<td>• Last round of water consultation group meetings</td>
</tr>
<tr>
<td>18 April 2019</td>
<td>• Final water plan approved by Governor in Council</td>
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<tr>
<td>June 2019</td>
<td>• Final water plan gazetted</td>
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<tr>
<td></td>
<td>• Amendment of Water Regulation 2016</td>
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<tr>
<td></td>
<td>• Final water management protocol released</td>
</tr>
<tr>
<td></td>
<td>• Minister’s consideration report released</td>
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<tr>
<td>October 2019</td>
<td>• Publication of Withdrawal of Moratorium Notice</td>
</tr>
<tr>
<td></td>
<td>• Final water entitlement notice gazetted</td>
</tr>
<tr>
<td></td>
<td>• Implementation of water management protocol commences i.e. water trading rules</td>
</tr>
</tbody>
</table>

The final water plan and water management protocol are available on the department’s website at www.business.qld.gov.au.
2 Consultation

Traditional Owners, local government, communities, stakeholders and peak body interest groups have been actively involved in the development of a water planning framework for Cape York.

Three major stages of consultation have informed development of the water plan and associated planning documents. As shown in figure 2 these stages include, preliminary informal consultation with key stakeholders, public release of the statement of proposal (SOP) (formal start of the planning process) for consultation and submissions, and public release of the statement of intent (SOI) (released with the draft water plan and associated planning documents) for consultation and submissions.
Figure 2 Water planning process and key consultation stages
2.1 Consultation on the Statement of Proposals

Extensive community engagement was undertaken following release of the SOP for public comment, to gather local knowledge of the water management and allocation issues that are important to all communities in the plan area. As part of this process, community information sessions were held at Weipa on 1st June 2016, Cooktown on 15th June 2016 and Lakeland on 16 June 2016. Over 30 one-on-one meetings were held with local governments, Aboriginal and Torres Strait Islander Land Trusts and corporations, NRM groups, Traditional Owners and other stakeholders.

Forty-one (41) submissions were received on the SOP from a wide range of interest groups including Aboriginal and Torres Strait Islander Land Trusts and corporations, Traditional Owners, irrigators, local governments, industry bodies, mining proponents and conservation groups.

Key issues raised in submissions on the SOP included:

- ensuring that the planning process was completed as soon as possible
- ensuring that communities were kept informed while the plan was being developed
- provisions for reliable town water supplies
- protecting the security of existing entitlements
- undertaking ongoing water monitoring to better understand water resources and make evidence based decisions about water allocation and management; and
- ensuring the plan’s outcomes and decisions were based on strong science.

Two water consultation groups and a regional water consultation group were established through the SOP process as detailed below. The purpose of these groups was to represent community interests and values, to have input and inform development the Cape York Water Plan.

1. Southern Cape Water Consultation Group contained approximately 17 members from the Normanby, Jeannie and Endeavour catchments. Meetings were held in Cooktown on: 1 November 2016, 10 April 2017 and 14 August 2017

2. Northern and Western Cape Water Consultation Group contained about 18 members and covered the remaining catchments in the plan area. Meetings were held in Weipa on: 18 October 2016, 7 March 2017 and 17 August 2017

3. Regional Cape Water Consultation Group contained around 15 members of bodies and groups which work across Cape York. Meetings were held in Cairns on: 3 November 2016, 12 April 2017 and 21 August 2017

The meetings held with each of the consultation groups covered the following:

- overview of the water planning process and reviewing key issues raised in submissions
- gathering information about local knowledge, important values and uses of water
- findings from the technical assessments and initial management strategies proposed
- how the technical assessments were brought together to develop the draft water plan, the outcomes, and the final strategies proposed.

Other consultation undertaken on the SOP that informed the development of the draft water plan and supporting instruments included:

- Key stakeholder bodies and interest group briefings and information sessions.
- Liaison with other State and Federal Government departments.
2.2 Consultation on the draft water plan and associated planning instruments

The draft water plan, draft protocol, draft water entitlement notice and SOI were released on 4 June 2018 for consultation and submissions. The department undertook a range of communication and consultation actions to ensure all stakeholders and the broader community were informed, including:

- Public notices placed in relevant newspapers including Kori news, Western Cape Bulletin, Cooktown Gazette, The Advertiser and The Cairns Post.
- External department website and social media.
- Letters sent to all landholders with a water licence attached to their property that were subject to the draft water entitlement notice.
- Letters sent to local governments and members of parliament whose electorates are within the relevant region.
- Over 18 one-on-one meetings held with Aboriginal and Torres Strait Island councils, Aboriginal and Torres Strait Islander corporations, NRM groups, Traditional Owners and other stakeholders (many of these were on country meetings).
- The draft water plan, water management protocol and water entitlement notice were made available on the department’s website.

Four public meetings and scheduled one-on-one information sessions were held at Cooktown on 19 June and 25 July and at Lakeland on 20 June and 26 July. In total, over 60 people attended the public meetings. During these meetings the provided information about the draft water plan and supporting instruments as well as information to assist attendees to prepare written submissions.

In addition to the above, meetings were held with the water consultation groups:

- Southern Cape Water Consultation Group on the 18 June and 21 November 2018
- Northern and Western Cape Water Consultation Group on the 28 November 2018
- Regional Cape Water Consultation Group 19 June and 22 November 2018

At the meetings held in June the draft water plan and draft protocol provisions were discussed. Following advice from members of the Northern and Western Cape Water Consultation Group, the meeting scheduled for June was replaced by community level meetings where the draft documents were explained. The meetings held in November, after the submission period had closed, focused on the issues raised in submissions and how the department would consider those in finalising the water plan and water management protocol.

Further information sessions were also held in Brisbane with external stakeholder groups and peak industry bodies, Queensland Government agencies, and other Cape York jurisdictions.

Thirty-three (33) submissions were received on the draft water plan, draft protocol and draft water entitlement notice from a wide range of interest groups including Aboriginal and Torres Strait Islander Land Trusts and corporations, Traditional Owners, irrigators, local government, industry bodies, mining proponents and conservation groups. Submissions on the draft water plan were considered by the Minister while submissions on the water management protocol and water entitlement notice were considered by the chief executive.

In order to deal with particular submissions received on the draft water entitlement notice (WEN) an independent referral panel was established in accordance with the requirements of the Water Act. This referral panel provided recommendations on issues raised in properly made submissions made by an affected person on the draft water entitlement notice, which will be considered in finalising the water entitlement notice. Submissions on the draft WEN that were received by persons who were not affected persons as defined under the Water Act cannot be considered in finalising the WEN. As the
WEN is to make changes to existing entitlements to implement a water plan then submissions can only be dealt with where they are made by the holder of a water entitlement mentioned in the WEN.

2.3 Aboriginal and Torres Strait Islander consultation

To ensure the interests of local Aboriginal people and Torres Strait Islanders were captured and considered during the water planning process, the department employed a private contractor with strong experience in Indigenous consultation to assist with community engagement. Meetings have occurred on-country and on traditional lands. This approach has resulted in consistent, inclusive water planning and management processes that support Aboriginal peoples’ and Torres Strait Islanders’ social, economic and cultural objectives through input into the water planning process.

Engagement occurred with a range of stakeholders including Traditional Owners, Aboriginal and Torres Strait Islander Land Trusts, Land and Sea Rangers, councils, Registered Native Title Body Corporates, and other Aboriginal and Torres Strait Islander Corporations.

Meetings with these key stakeholders occurred across Cape York, including at Lockhart River, Mapoon, Cooktown, Hope Vale, Laura, Coen, Pormpuraaw, New Mapoon, Bamaga, Injinaoo, Seisia, Weipa, Aurukun, and also in Cairns. Many locations were visited on multiple occasions.

Traditional Owners were also represented on both the Southern Cape Water Consultation Group and the Northern and Western Cape Water Consultation Group. It should be noted that these representatives only spoke for their own traditional county, which provided valuable guidance and understanding of how Traditional Owners valued land and water resources.

The Native Title Representative Body for Cape York is the Cape York Land Council Aboriginal Corporation. A representative from this organisation was involved in the Regional Cape Water Consultation Group.

Of the forty one (41) submissions received on the SOP eleven (11) were from Aboriginal and/or Torres Strait Islander stakeholders. Of the thirty three (33) submissions received on the draft planning documents six (6) were from Aboriginal and/or Torres Strait Islander stakeholders.

Following release of the SOP, at least 32 Aboriginal and/or Torres Strait Islander stakeholder groups were consulted with about the proposed water plan.

Excluding public meetings and Water Consultation Group meetings, more than 24 meetings were held with Aboriginal and/or Torres Strait Islander stakeholders following release of the draft water plan (most of these were on country meetings).

3 Submissions

This section summarises key issues raised and how the issues were considered and addressed in finalising the water plan and water management protocol.

The draft water plan, draft water management protocol and draft water entitlement notice were released for public consultation on 4 June 2018. Submissions closed on 31 August 2018 with 33 submissions received.

A range of issues were raised in the submissions that are summarised and discussed in the following sections of this report.

Some issues raised in submissions were outside the scope of the water plan and water management protocol, for example non-compliance, statutory authorisations under the Water Act, government funding, and changes to legislation such as the Native Title Act 1994, the Fisheries Act 1994, or the Planning Act 2016.

Note that this report only deals with submissions raised on the draft water plan and draft water management protocol. The water entitlement notice will be released at a later date, and any feedback
and submissions based on the content of the draft water entitlement notice will be considered in
developing a final water entitlement notice.

3.1 Support for the draft water plan and management protocol
Support for the draft water plan or the planning process was expressed in eleven (11) submissions. 
These submissions expressed general support for the water plan, including the purpose, outcomes, 
management proposals and the opportunity to comment on the draft water plan. These submissions 
also provided specific support for:

- 5 ML per annum for prescribed activities
- 5 year reporting cycle
- Water licence rules and processes
- The provision of unallocated water
- Conversion of area based to volumetric entitlements at 12 megalitres per hectare

3.2 Issues raised
The issues and concerns raised in submissions covered a wide range of topics including:

- Plan purposes, outcomes.
- Measures for achieving plan outcomes.
- Objectives, performance indicators and strategies.
- Plan area and water to which the plan applies.
- Unallocated water.
- Water allocations, water licences and trading.
- Water Sharing Rules.
- Other water plan and water management protocol issues.

More detail on the issues raised in submissions, how the issues were dealt with, including changes 
made to the final water plan are described below.

3.3 Plan purpose and outcomes
Draft plan provisions
The overarching aims of a water plan are shaped by the purposes of the plan.

The water plan outcomes set out the more specific objectives while the management strategies aim 
to deliver on those plan outcomes.

Under the Water Act, in force at the time of release of the draft water plan a water plan was required to 
"state the desired economic, social and environmental outcomes of the management and allocation of 
water to which the plan applies". The Water Act was amended in October 2018 to include a 
requirement that a water plan state cultural outcomes for benefiting an Aboriginal Party or Torres Strait 
Islander party. The draft water plan included cultural outcomes as a precursor to this anticipated 
amendment, and address these Water Act requirements.

Any decisions made about water managed under the water plan must promote the plan outcomes.

The proposed purposes of the draft water plan broadly relate to:

- Defining the availability of water and regulating the take and interference of water to which the 
  plan applies
- Providing a framework for sustainably managing water and establishing water allocations
• Providing a framework for reversing where practicable, the degradation of the natural ecosystem
• Providing access to water resources to help Aboriginal peoples and Torres Strait Islanders achieve their economic and social aspirations.

Issues raised

Three (3) submitters raised issues on the draft plan’s purposes while ten (10) submitters raised issues or made comments on the plan’s proposed outcomes.

Some submitters requested that one of the plan’s proposed purposes be changed to “prevent degradation” instead of “reverse degradation”.

One (1) submitter wanted the plan to include a purpose that recognises the special connection of Indigenous peoples to water. Another submitter wanted the plan’s purpose to acknowledge the non-natural state of ‘working catchments’ rather than attempting to apply a pre-development baseline, in relation to reversing degradation where practicable.

A number of issues were raised by submitters in relation to the plan’s proposed outcomes including:

• A new economic outcome to specifically state “maximise the availability of water supporting economic activity and agricultural growth and development”.
• More detail on how the cultural outcomes will be achieved.
• Aboriginal people to agree on the outcomes and to be consulted on how the outcomes should be evaluated.
• Outcomes need to state how the flows are going to be maintained for cultural, social and spiritual values of Aboriginal people.
• Non-indigenous culture heritage needs to be included in the cultural outcomes.
• Concern that there was no environmental outcome or measures in place to protect wetlands.
• Acknowledgement of the importance of flows to the sustainability of species in the Gulf of Carpentaria.
• Amendment to section 18(a)(ii) to include reference to “non-indigenous cultural values”.
• Amendment to section 18(a)(ii) to include “recreational environmental values”.
• Consideration of impacts to all wetlands within the Cape York water plan area not just those listed in the Directory of Important Wetlands of Australia (DIWA).

Consideration and finalised plan provisions

Some minor amendments have been made to the final water plan purposes and the economic, environmental and social outcomes.

The plan’s purpose has been amended to include “prevention of degradation” in addition to reversing degradation of natural ecosystems caused by the taking of and interference with water to which this plan applies. The purposes of the plan are supported by the stated plan outcomes and management strategies.

The following amendments have been made to the plans outcomes based on feedback from submissions:

• a new economic outcome and a new social outcome relating to the maintenance of a flow regime to support the suitability of water for particular activities or processes.
• including reference to “non-indigenous cultural values” in the social outcomes.
• including reference to “wetlands” in the environmental outcomes.
All of the plan’s proposed outcomes, including cultural, have been developed through engagement with the local water consultation groups and the key values were identified through a cultural heritage assessment. The water plan’s proposed strategies ensure decisions made in regards to allocation and management of water take into account the economic, social, environmental, and cultural outcomes of the plan.

The department will continue to work with Aboriginal people and Torres Strait Islanders to determine how these outcomes will be evaluated as well as appropriate monitoring and data collection opportunities.

### 3.4 Measures for achieving plan outcomes

#### Draft plan provisions

The water plan’s **measures** provide a way to determine how effective the **management strategies** have been in achieving the plan’s outcomes. In this way measures work with the management strategies to achieve the plan’s **outcomes**.

The draft water plan provides strategies to ensure that decisions made in regards to the allocation and management of water are consistent with the environmental flow objectives and water allocation security objectives set by the plan. All decisions about water managed in the plan area must meet the plan outcomes – general, social, economic, environmental and cultural.

Measures in the draft water plan include, but are not limited to, the chief executive ensuring that:

- All water allocations are measured by 30 June 2020 and all water licences are to be measured by 31 December 2022
- Develop a monitoring, evaluation and reporting strategy for the outcomes stated in the plan by June 2020
- Authorise the use of existing overland flow works as stated in the water management protocol
- Information about the number and volume of water licences and water allocations traded is collected and analysed
- Develop a report on how certain plan outcomes have been achieved, informed by engagement with Aboriginal people and Torres Strait Islanders.

The monitoring, evaluation and reporting strategy for the Cape York plan will guide the implementation of and the assessment of the effectiveness of the water plan. Catchments will be risk-assessed and prioritised for monitoring and targeted work programs.

In addition to measuring an individual’s take of water under water licences and water allocations, stream flows and underground water levels are recorded and analysed through data gathered by gauging stations and departmental monitoring bores. These are key inputs to measuring and achieving the plan’s outcomes.

Within the Cape York plan area, there are currently 17 open gauging stations and 12 bores in the monitoring network. Surface water and underground water is regularly monitored and recorded at these sites. Figure 3 below shows the location of these monitoring sites.
Figure 3 Monitoring Network within the Cape York Water Plan Area
In addition to the gauging station network, the department has approximately 60 spot-gauging sites in the Cape York plan area, where additional point in time water quality and stream flow data are collected.

The draft water management protocol outlines requirements for monitoring, data collection and reporting that are needed to support performance assessment of the water plan. It also outlines the type of data and what data is to be collected by the chief executive. This includes data on:

- Underground water level and quality in the Cook and Cape York underground water management areas
- Groundwater dependent ecosystems and springs
- Surface water flow
- Waterholes and riffles in the Endeavour water management area
- Natural ecosystems such as ecological assets
- Water entitlements and use

**Issues raised**

Several submitters raised issues regarding the water plan’s framework for sustainable management. Four (4) submitters requested additional measures to further advance sustainable management of water and four (4) stated that the plan does not provide a framework for sustainably managing water.

A number of submitters wanted all take to be quantified, metered and monitored, not just those entitlements that are tradable. One (1) submitter did not support metering of stock and domestic take.

One (1) submitter did not agree with the measure in section 23, and stated that Aboriginal people need to agree on the outcomes before the chief executive engages with them to evaluate.

A number of issues and comments were made about monitoring provisions in the water plan and water management protocol including:

- That there should be continuous monitoring of the impact of taking water.
- General support of monitoring and keeping information on natural ecosystems such as, ecological assets, publically available.
- Support for monitoring for waterholes and riffles and as well as the increased monitoring of groundwater dependent ecosystems and springs.
- Clarity about how the department will monitor impacts and what baseline data will be used to maintain environmental and cultural values.
- Requirement for 11 new empirical gauging stations and re-establishment of 9 discontinued gauging stations.
- Underground water monitoring across all underground water management areas needs to be more extensive, at least 10 monitoring bores in each water licence zone, and include more parameters to be tested to understand the connection between underground water and surface water.
- Existing monitoring bores at Lakeland and Upper Laura catchments are insufficient in number and distribution.
- Additional monitoring is needed at Lakeland for spring discharge, stream discharge, measuring wet season discharge, dam water levels and quantifying all water usage.
- Lack of support for publication of water entitlement information and use such as, volumes taken, future consumptive demands and water use efficiency of individual entitlements.

**Consideration and finalised plan provisions**

*Submissions about measures*
No changes have been made to the measures in the final water plan in response to submissions. However, the department has made amendments to two measures to enable effective implementation of strategies as stated below;

- the measure related to measurement of water allocations has been changed to state that all water entitlements, as directed by the chief executive are to be measured by 31 December 2022. All new entitlements will require measurement before water is taken.
- The measure related to authorising existing overland flow works has been amended to state that existing overland flow works are authorised under the protocol within 5 years of the plan commencing. This is to enable works not yet completed under the amended moratorium to be completed.

If any further measures are required their inclusion will be informed by the Minister’s report on the water plan that must be completed within 5 years of the commencement of the water plan.

Submissions about monitoring

No changes have been made in regards to submissions about monitoring in the draft water plan and water management protocol.

This is in line with requirements under section 21(2) of the water plan, where the department will prepare a monitoring, evaluation and reporting strategy by 30 June 2020 to support assessment of the effectiveness of the plan and its implementation. This is a strong commitment to continuously improve our science and knowledge.

Two new monitoring bores were constructed in Lakeland in June 2018. Each bore has two pipes, one that accesses the shallower basalt aquifers and one that accesses the deeper basalt aquifers. The two new shallow monitoring bores were equipped in October 2018 with data loggers and water level telemetry. Data collected is accessible on the departmental water monitoring information portal website. This data will provide additional information over time and will be used to inform the development of an underground water model.

Submissions about publication of water entitlement information

No changes have been made in regards to not providing this information as this requirement is consistent with water plans across the State. This information is collected and made publicly available to make it easier for water trading, leasing and purchasing to occur. The department does not publish personal information about entitlement holders or information that is commercial in confidence.

3.5 Objectives, performance indicators, strategies and nodes

Draft plan provisions

Objectives and performance indicators (PIs) work together with the strategies in order to achieve the water plan’s outcomes. The objectives come under two main categories:

- Environmental Flow Objectives (EFOs)
- Water Allocation Security Objectives (WASOs)

Hydrologic models were developed for the catchments across the water plan area to provide technical input into the water planning process, including the EFOs and WASOs. The Source Rivers modelling platform, Australia’s national hydrological modelling platform, was used to develop a daily flow model for each catchment. Gauging station data inputted into the model was extended using calibrated Sacramento rainfall-runoff models.

EFOs are statistically-derived values for performance indicators which are produced by the hydrological model. Performance indicators and EFOs work together to define the long-term level of protection of environmental flows in areas where flows have critical links to environmental assets. EFOs aim to protect the natural flow regimes and the health of natural ecosystems from decisions...
made under the plan by minimising changes to natural flow conditions at specified nodes or locations. The EFOs and PIs have been designed to maintain flows of water that support waterholes as refugia, continually flowing streams, floodplain ecosystems and river-forming processes.

The draft water plan defined six surface water nodes, two in the Normanby catchment, two in the Endeavour, one in the Jeannie and one in the Wenlock. A node is a point on a watercourse from the hydrologic model that is used for assessing management strategies and decisions against the environmental flow objectives. Future development can only occur if the EFOs are met at these nodes. The location of nodes reflects where risks have been identified from current or future surface water use and where management of water is required, and with consideration for where measurement can occur. While it may not be possible for physical measurement of flows at end of system nodes, these nodes provide for testing impacts using the Source Rivers hydrology model.

Assessment nodes are also used in the hydrologic model to describe different points represented in the model such as water inflow, stream flow measurement gauges, losses from the river systems (e.g. evaporation and infiltration into groundwater) and take of water by water users. The six defined surface water nodes in the draft water plan were selected from these assessment nodes from which plan environmental flow objectives could be defined in the water plan. The water plan includes provisions that allow for future plan amendments to amend an existing water plan node or add a new water plan node. This provides flexibility in the plan to adapt to emerging demands and risks.

The draft water plan defined two water allocation groups in the Endeavour catchment, where all existing entitlements except those for stock or domestic purposes will be converted to water allocations. A WASO provides a measure of how allocations would have been expected to perform using simulated historical data, assuming full use of existing water entitlements and unallocated water reserves.

The WASOs and performance indicators defined in the draft water plan are:

- For water allocation group 1—an annual volume probability of at least 80 per cent
- For water allocation group 2—an annual volume probability of at least 50 per cent

As part of the strategies for achieving water plan outcomes the draft water plan states that the Source Rivers computer program is to be used to assess the impact of a decision on EFOs and WASOs. Section 27 (3) of the draft water plan provides for an alternative assessment method to be used as long as it can accurately assess consistency with EFOs, WASOs and plan outcomes.

In order to ensure that existing and new water allocations and licences are consistent with the plan’s objectives the chief executive must also place certain elements on the entitlement that describe the purpose, location, volumetric limit, and the maximum rate of take. The entitlements can also be conditioned, including to state when water can be taken. Limiting the location or zone, overall volume, frequency and timing of water taken provides protection to other entitlements and the environment.

All existing take, including the conditions under which water is taken under the entitlement, were modelled to ensure that the impacts of existing water take on environmental flows, environmental assets and processes could be accurately assessed.

**Issues raised**

A number of issues were raised by submitters on various aspects of the water plan’s objectives, performance indicators and strategies as well as the associated hydrological modelling.

**Hydrological modelling and data**

Eight (8) submitters expressed concern about the significant scientific and hydrologic knowledge gaps and the lack of empirical stream flow data used to inform the model as well as the affects this would have on assessing impacts of decisions about surface water, particularly in the Laura catchment.
A number of submitters stated that the Source Rivers modelling program is not appropriate for long-term monitoring or adaptive management and requested that it be reviewed, with some requesting that the Ecological Limits of Hydrologic Alteration (ELOHA) tool kit be used instead.

Four (4) submitters recommended the use of an alternative modelling framework (the Ecological Limits of Hydrologic Alteration framework – ELOHA) for setting and maintaining cultural and environmental flows.

Other issues raised about the model include:

- Further information about the model be publically available such as data inputs, scenarios run and what is deemed ‘acceptable change’ and ‘significant change’ in relation to assessing the impact of decisions on flows

**Nodes**

A number of submitters raised issues and made comments in relation to nodes and gauging stations in the draft plan.

Five (5) submitters requested the inclusion of new gauging stations and nodes across the plan area, as they believe that the current number (six stated in the draft plan) is insufficient. The submitters also requested that a number of discontinued gauging stations be reinstated, including at node C (Mclvor River at Elderslie). They also requested that many of the existing gauges be included as nodes and believe that the proposed end of system nodes (node D on the Endeavour River and node E on the Annan River) are not practical locations to measure changes in freshwater flow due to the influence of salt water. These submitters requested clarification on whether any new nodes would be added below Lakeland or in the Endeavour catchment and proposed that the 5 existing departmental monitoring bores in Lakeland should be used as nodes.

**EFOs, Pls, WASOs**

Several submitters expressed concern that the objectives and performance indicators in the draft water plan did not provide sufficient environmental flows to support environmental water requirements, cultural flows, or the fishing industry, specifically the production of prawns in the western parts of Cape.

Five (5) submitters believed that current levels of water use meant that river flows in the Endeavour catchment and Lakeland area would not be able to meet the proposed EFOs in the draft water plan. These submitters asked what would happen where this occurs, with several submitters asking how EFOs and Pls would be enforced and if this would involve a reduction in water that can be taken under a water licence and allocation. These submitters also asked if water licences and allocations are reduced would they be treated the same.

Four (4) submitters requested that section 63 of the draft water plan be amended to clearly state the connection between flow conditions on entitlements and EFOs.

Five (5) submitters recommended the use of a Normalised Percentage Change metric for all environmental flow parameters, instead of the metrics used in the draft plan. Four (4) of these submitters requested additional low flow metrics to be defined and quantified by base-flow recession curves through the dry season. They also stated that the objectives should be clear and measurable indicators of environmental outcomes.

**Environmental Flow Conditions**

A number of issues were raised by submitters regarding the specification and conditioning of water licences in relation to environmental outcomes and objectives including:

- Requested clarification on if the department plans to condition water licences so that they meet EFOs and Pls and what happens if they do not meet these.
• Requested that environmental flow conditions be placed on all new water granted to preserve the base-flow regime
• Section 29 of the draft water management protocol be amended to ensure that all water licences, including those granted for town water supply, be conditioned with environmental flow conditions.
• Requested that the department also consider environmental matters when deciding rate of take on water licences
• Requested environmental flow release conditions be placed on existing and new dams and overland flow storages.

Strategies for achieving outcomes

Five (5) submissions were raised around the strategies for achieved outcomes of the plan:

• One (1) submitter requested section 26 of the water plan to be broadened to include cultural outcomes.
• Four (4) submitters requested changes to the assessment criteria in section 27 to include collection of multiple years of empirical data, to be inputted into the model, before making decisions.
• Four (4) submitters wanted water rights or licences/allocations specifically for the environment.

Consideration and finalised plan provisions

No significant changes have been made to the final water plan as a result of the issues and comments made by submitters. However some minor changes have been made: specifically

• An additional node in the Normanby catchment
• Requirement for pass flow conditions on water licences to interfere with water for a purpose of storing water;
• Amendments to the considerations for Strategic and CYPHA water

The reasoning behind not adopting some of the changes requested in submissions explored further below.

Hydrologic modelling and data

The Queensland Government uses a risk-based eco-hydrological approach for assessing flow-related impacts to ecosystem components, processes and services. It has similarities with ELOHA, and a number of similar environmental flow frameworks, which are based on known relationships between flow alteration and ecological responses using a ‘per centage change’ metric for EFOs/PIs. This approach is very similar to the Normalized Per centage Change metric proposed by some submitters.

The water plan requires the development of a monitoring, evaluation and reporting strategy to assess how the plan is achieving its outcomes. A water plan is an adaptive management process and amendments to the plan can occur at any stage should new information emerge that changes the level of risk to an ecological value or water user. Empirical field data collected under the monitoring, evaluation and reporting strategy will be used for updating the model and used by the chief executive to assess the impact of future water use decisions on ecological values.

The Source Rivers modelling platform is a long term planning assessment tool suitable for the scale of assessments required to establish and implement a water plan. It is not used for long term monitoring. The basic model structure can be used in the future with additional monitoring information and to investigate certain adaptive management scenarios.

The Source Rivers model and inputs for the draft water plan were provided, under a licence agreement, free of charge to individual submitters who requested it.
Environmental flow objectives and performance indicators

In preparing the environmental assessment report, the Department of Environment and Science developed a suite of EFOs and PIs that are based on current and future flow threats that are linked to the critical flow requirements of ecological assets in the plan area. For Cape York the eWater Source Rivers modelling platform (Australia’s national hydrological modelling platform) was used to develop EFOs. This model is a risk-based eco-hydrological approach for assessing flow-related impacts to ecosystem components, processes and services. It has affinities with ELOHA, and a number of similar environmental flow frameworks, which are based on known relationships between flow alteration and ecological responses. The plan’s provisions and strategies, including the EFOs and WASOs, have been developed and set to recognise the continued use of all existing entitlements.

A key step in determining the EFOs and testing their ability to protect environmental flows is scenario testing. In the modelling, a series of assessment nodes were established within the fifteen catchments, and scenarios were run for pre-development, full entitlement use, and full entitlement use plus unallocated water volumes. The EFOs were tested against a range of possible scenarios including; trading water allocations, future releases of unallocated water and the impacts of climate change. It was found that they protected the environmental flows while providing opportunities for trading and for future water use. From the assessment nodes in the model, six water plan nodes were selected in the draft water plan for monitoring and managing water use, with consideration of risks associated with current and future water use and locations of environmental importance.

The EFO and PI metrics used in the draft water plan serve to protect key attributes of the flow regime associated with the ecological assets. They reflect the current level of understanding of the response of the ecology to flow alteration, given the intrinsic high level of uncertainty in this part of Queensland.

The EFOs and PIs with reference to dry periods are based on the longest no flow spells observed under pre-development, and state the total period of time that the daily flow is 5 ML or less for more than 200 or 40 consecutive days relevant to a specified per cent of the time in the simulation period. These objectives do not set minimum environmental flow standards, rather they ensure that the longest no flow periods experienced under pre-development are not extended. The 200 and 40 continuous day thresholds are not arbitrary, rather reflect the longest spells modelled under pre-development. In the absence of waterhole bathymetry and persistence values, this is a conservative approach which will ensure that these systems will not experience dry spells longer than those under pre-development.

The monitoring, evaluation and reporting strategy is being developed to assess the effectiveness of the water plan and its implementation. Empirical field data collected under the monitoring, evaluation and reporting strategy will be used to amend the plan’s outcomes and strategies if required.

As a result of issues raised an additional node has been added into the final water plan with relevant EFOs and PIs, refer to below section.

Nodes and gauging stations

The nodes proposed in the draft plan represent areas where threats to environmental assets were determined due to the high levels of demand for water in these areas.

As a result of issues raised in submissions and specifically the request that more nodes be added, the department has reviewed and assessed the need for additional nodes in the plan area. One additional node will be included in the final water plan. This node is situated in the Normanby catchment, at the existing departmental gauging station, the Normanby River at Battle Camp. This is a high risk catchment and this additional node will assist in the assessment of future management decisions for consistency with the ecological outcomes stated in the water plan. Additional modelling was undertaken to provide the relevant EFOs and PIs at the new node.

Although submitters requested that significantly more nodes be added at various locations throughout the plan area, the seven nodes included in the final water plan sufficiently capture the cumulative
impacts of existing and future entitlements. Nodes specified in the plan are not the only location at which monitoring occurs. Additional gauging stations and monitoring bores, other than water plan nodes, are monitored across the Cape. In addition to the gauging station network, the department has approximately 60 spot-gauging sites in the plan area, where additional point in time water quality and stream flow data are collected.

The water plan can be amended at any time to include an additional node, if and when the level of risk warrants it and or when additional hydrologic and ecological information becomes available. The inclusion of an additional node would proceed an identified requirement that the level of risk in a catchment requires additional assessment of proposed management strategies to mitigate the risk. A monitoring, evaluation and reporting strategy will be developed to identify the monitoring requirements to assess the effectiveness of the water plan and its implementation. The scope of this strategy may include identifying the requirement for additional nodes or changes to the existing monitoring network to assess the effectiveness of the plan in meeting its stated outcomes.

In relation to issues raised about monitoring bores in Lakeland being used as nodes, there will be no change to the final water plan. In order for a node to be defined in the water plan an EFO would need to be able to be tested at the node. Because there are significant knowledge gaps in hydrological and ecological information for underground water systems in the plan area, EFOs and therefore underground water nodes are not currently able to be defined.

Two new monitoring bores were constructed in Lakeland in June 2018. Each bore has two pipes, one that accesses the shallower basalt aquifer and one that accesses the deeper basalt aquifer. The shallow monitoring bores were equipped in October 2018 with data loggers and water level telemetry. Data collected is accessible on the departmental water monitoring website.

As new data and information becomes available through monitoring, reporting and evaluation more accurate underground water models can be developed.

*Environmental flow conditions*

The final water plan states that the chief executive may impose any condition on a water license to take water or a water licence to interfere with water if the chief executive is satisfied is necessary to ensure the purposes and water plan outcomes of this plan are achieved. This includes a new requirement that a pass flow condition is to be included on a new water licence to interfere with the flow of water in a watercourse by impounding the flow of water. This pass flow condition will states the minimum rate of flow at which water interfered with under the licence must be allowed to pass freely in the watercourse at, or downstream, of the location of the interference.

Section 29 (2) of the draft water management protocol will maintain that a water licence may be granted without the stated minimum flow condition if the taking of water would not impact on downstream users, the environment and is for town water supply. Town water supply is a critical consumptive water use, and is necessary to ensure the well-being of communities.

*Strategies for achieving outcomes*

Water plans in Queensland seek to balance the needs between consumptive and non-consumptive water use, including providing for environmental and cultural flows. Under the legislative framework in Queensland, legal water rights or licences are not specifically provided for the environment. However, water plans in Queensland use other approaches to provide water for the environment, such as modelling environmental water requirements, limiting the total consumptive use of water, conditioning entitlements to limit local impacts, and EFOs and PIs. All future decisions, including the allocation of new water and conditioning of water allocations and licences, are done with consideration of the water plan outcomes as well as the defined EFOs and PIs. This will ensure that future decisions made under the water plan will protect environmental flow regimes that contribute to the health of natural ecosystems and ensure the plan’s environmental outcomes are achieved.
If at any stage during the life of the plan it identified that the water plan is no longer advancing the sustainable management of Queensland’s water, the Minister may amend or replace the water plan so that the water plan remains consistent with the intent of a water plan. The Water Act also states that the Minister must publish a report every 5 years about the effectiveness of the plan and its implementation. This report will identify if the strategies are meeting, or not meeting the achievement of outcomes stated in the water plan. This report is made available on the department’s website.

The strategies stated under section 26 and 27 of the draft water plan will be maintained. These provide for decisions to be consistent with EFOs and WASOs, using the Source Rivers model or another accurate assessment method.

In addition, the strategies used in the water planning framework for Cape York to meet the plan outcomes include:

- imposing appropriate conditions on water licences to protect downstream users and the environment
- limiting groundwater and overland flow water take in catchments where any additional take of water is considered to pose a risk to existing water users and the environment
- stating unallocated water reserve volumes which have been determined following consideration of environmental flow requirements, and existing water users
- placing water sharing rules on water allocations in the Endeavour catchment to protect waterhole levels
- stating considerations relating to environmental flows when releasing water from the general, strategic or CYPHA reserve.

3.5 Plan area and water to which the plan applies

Draft plan provisions

The draft water plan defines the plan area, catchments, water to which the plan applies and water management areas. Schedule 1 of the draft water plan shows the water plan area and node locations, schedule 2 shows the fifteen (15) catchments and schedules 3 and 4 show the water management and under underground water management areas, respectively. The water plan also provides for a trading framework for water allocations and water licences and therefore defines trading zones. Schedule 5 shows the water allocation zones and schedule 6 shows the water licence zones.

Provisions in the draft water plan can apply at the level of; plan area, catchment area, management area or zone.

Issues raised

Five (5) submitters raised issues with the scale of the catchments defined in the draft water plan. These submitters did not support the bundling of discrete catchments into larger catchment regions for the purposes of determining unallocated water volumes. Four (4) other submitters expressed that they did not believe that cumulative effects of water development activities are sufficiently addressed at the catchment scale.

Consideration and finalised provisions

Plan area and catchment boundaries

The 15 catchments defined in the draft water plan were formally announced in May 2016 with the release of the SOP. The catchment boundaries align with basin boundaries defined by the Australian Water Resources Management Committee in 1997 and have been maintained to ensure consistency across planning instruments. The plan area also aligns with adjoining water plan area boundaries of the Wet Tropics and Mitchell, and is consistent with departmental spatial information.
Given the size of the plan area, level of development and potential development and availability of hydrological and ecological information across the plan area adopting catchment boundaries as presented in the draft water plan provides the best fit. As new information becomes available through monitoring, reporting and evaluation of the water plan more detailed assessments can be undertaken on a sub-catchment level. This may lead to amendments to the water plan that apply at the subcatchment level or the inclusion of new water management areas.

No change has been made to the final water plan area or catchment boundaries as a result of issues raised in submissions.

3.6 Unallocated water

Draft provisions

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 environmental values.

Section 32 in the draft water plan identified the total volume of unallocated water available and the different reserve types. The draft water plan also stated considerations the chief executive must take into account in dealing with unallocated water.

The water management protocol details the volumes of unallocated water held in each catchment as either Cape York Peninsula Heritage Area (CYPHA) reserve, strategic reserve, or general reserve as detailed in table 1 below.

Table 2: Unallocated water reserve volumes

<table>
<thead>
<tr>
<th>Catchment</th>
<th>Volume (ML) by Reserve type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strategic</td>
</tr>
<tr>
<td>Archer</td>
<td>89000</td>
</tr>
<tr>
<td>Coleman</td>
<td>56000</td>
</tr>
<tr>
<td>Ducie</td>
<td>46000</td>
</tr>
<tr>
<td>Embley</td>
<td>8000</td>
</tr>
<tr>
<td>Endeavour</td>
<td>16000</td>
</tr>
<tr>
<td>Holroyd</td>
<td>68500</td>
</tr>
<tr>
<td>Jacky Jacky</td>
<td>1500</td>
</tr>
<tr>
<td>Jardine</td>
<td>49000</td>
</tr>
<tr>
<td>Jeannie</td>
<td>0</td>
</tr>
<tr>
<td>Lockhart</td>
<td>6300</td>
</tr>
<tr>
<td>Normanby</td>
<td>16000</td>
</tr>
<tr>
<td>Olive–Pascoe</td>
<td>48000</td>
</tr>
<tr>
<td>Stewart</td>
<td>5000</td>
</tr>
<tr>
<td>Watson</td>
<td>0</td>
</tr>
<tr>
<td>Wenlock</td>
<td>76000</td>
</tr>
</tbody>
</table>

The CYPHA reserve can be made available to an ‘eligible person’ to help an Aboriginal or Torres Strait Islander community in the Cape York Peninsula Region achieve its economic and social aspirations. The strategic reserves can be made available for coordinated projects, projects of regional significance or for granting to a local government for town water supply purposes. Where on commencement of the water management protocol there is no CYPHA reserve available in the catchment (applies to the Jeannie and Watson catchments only) the water plan allows for an ‘eligible person’ to seek access to strategic reserve water for a project that would be of economic and social
benefit to Aboriginal people or Torres Strait Islanders in the catchment. The general reserve can be made available for any purpose.

The strategic reserve volume was made considering future needs for town water supply, coordinated projects (as defined in the *State Development and Public Works Organisation Act 1971*), regionally significant projects and projects that meet the outcomes of the *Cape York Peninsula Heritage Act 2007*. The remaining water was apportioned between the general reserve and CYPHA reserve based on the proportion of land area with Aboriginal people or Torres Strait Islander interests and consideration of existing entitlements.

The volumes proposed for each catchment were set to maintain at least 97.5 per cent of median annual freshwater flows (MAF). In catchments where current entitlement volumes exceeded 2.5 per cent of MAF, no water was set aside under the CYPHA or general reserves. This approach was considered to yield a conservative estimate of the proportion of flows that could be taken for consumptive use with minimal impact on environmental flows, cultural needs and existing entitlements.

An independent peer review was completed to consider this approach. This review confirmed, together with appropriate localised flow conditions on entitlements, and specific environmental flow objectives, that maintaining at least 97.5 per cent of MAF was a reasonable, appropriate and precautionary approach to the sustainable management and allocation of water in Cape York. This review also acknowledged that there are large science knowledge gaps, current low levels of water demand, and high uncertainty in regards to future water resource development.

The process for releasing unallocated water from the general reserve and for a ‘State’ purpose under the strategic reserve is detailed in the *Water Regulation 2016* (the Water Regulation). The draft protocol contains:

- The process for making unallocated water available from the CYPHA reserve and to ‘eligible persons’ from the strategic reserve
- Additional considerations in addition to those specified in the Water Regulation, for making general reserve available
- Additional considerations on-top of those specified in the Water Regulation, for making strategic reserve available

**Issues raised**

A large number of submitters raised issues and made comments about unallocated water provided for in the draft water plan as well as the process for release outlined in draft water management protocol.

One (1) submitter expressed support for the approach to maintain at least 97.5 per cent of MAF. Five (5) submitters stated that 2.5 per cent of MAF resulted in too small a volume for consumptive use. Seven (7) submitters believe that allocating 2.5 per cent of MAF for consumptive use is not supported by scientific data or principles, is not sustainable, and also wanted the impacts to ecological and cultural values from taking this volume provided. Some of these submitters stated this approach is not sustainable specifically for aquatic ecosystems in the Endeavour catchment. A number of these submitters expressed that 2.5 per cent of median annual end of system flows were insufficient to support environmental flows. Others suggested that extraction should occur in high flow events (such as floods), be limited in dry season and that base flow should not be extracted.

Two (2) submitters expressed support for the volume in unallocated water reserves, while seven (7) submitters believe that the volumes are too high and pose a risk to hydrological, ecological and environmental values in the plan area and to the Great Barrier Reef. Eight (8) submitters stated that the volume of unallocated water is too low compared to southern parts of the State and other parts of Australia. Several of these submitters were concerned with the low volumes of general reserve in the McIvor River, Endeavour River, and Lakeland areas.
Other issues raised about provisions in the draft water plan, the draft water management protocol, or about CYPHA in relation to unallocated water are summarised below.

**Unallocated water – draft water plan**

- Five (5) requested that section 33(1) of the draft water plan be amended to include cultural aspirations as a purpose for granting unallocated water from the CYPHA reserve.
- Two (2) requested that the definition of an eligible person be expanded to include Native Title claimants and/or Aboriginal people or Torres Strait Islander corporations.
- One (1) requested the definition of state purpose be amended to include ‘existing agricultural regions that have demonstrated economic, social, environmental values’.
- One (1) requested that the Cook Shire Council area get special consideration for additional water.
- One (1) submitter has concern there was no unallocated water available for the Portland Roads area (e.g. if someone wanted to start a tourist resort).
- Several submitters had uncertainty regarding processes to release unallocated water.
- Five (5) submitters wanted clarification on what allowance is made for future water infrastructure as well as consideration of projects associated with the National Water Infrastructure Development Fund.
- Four (4) requested that unallocated water reserves be split into consumptive and non-consumptive uses. The water plan should only manage consumptive uses and Aboriginal people and Torres Strait Islanders should be custodians of all non-consumptive uses of water.

**Unallocated water– draft water management protocol**

- One (1) requested that the water be apportioned based on potentially agricultural suitable land, not Indigenous land interest.
- One (1) submitter stated that opportunities for Aboriginal people and Torres Strait Islanders to access unallocated water should be proportional to that opportunity provided to non-indigenous residents.
- Three (3) submitters requested that all eligible persons be given the same opportunity to access unallocated water across the Cape York plan area.
- Some submitters commented that the information required for accessing water from the general reserve is burdensome, while other submitters requested that the same land suitability provisions that apply to granting unallocated water from the general reserve, apply to the CYPHA and Strategic reserves.
- Some submitters commented that the requirements for accessing unallocated water should be consistently applied.
- One (1) submitter requested clarification on how water taken from the unallocated water reserve would be assessed against environmental and cultural outcomes and what conditions would be applied.
- Seven (7) submitters expressed that water quality impacts should be considered.
- Several submitters requested specific conditions be placed on all new unallocated water granted, for example to prohibit take during the June to December period.
- One (1) submitter requested 150 000 ML be made available under the strategic reserve.
- One (1) submitter asked that 100 000 ML be made available for agriculture in the Normanby catchment.
- One (1) submitter believed that 20 000 ML should be made available in both the Jeannie and the Watson CYPHA reserves.
CYPHA reserve

- One (1) submitter stated they don’t agree with the majority of water being given under this reserve.
- Three (3) submitters were supportive of the CYPHA reserve, but concerned about the adverse impacts of using the total volumes reserved.
- Three (3) submitters requested volumes of water be made available in the CYPHA reserve for the Jeannie and Watson catchments.
- Three (3) submitters did not support section 11(2)(b) of the protocol that allowed unused CYPHA to be transferred to the general reserve.
- One (1) submitter requested the CYPHA formula under section 19 of the protocol be amended to enable eligible persons determined in future access to the water.
- Seven (7) submitters expressed support for the volume of CYPHA unallocated water reserve
- Three (3) submitters believe that the volume for CYPHA unallocated water reserve is too high.
- One (1) submitter requested that a Regional CYPHA manager be established to manage water where no eligible person has been determined, and to raise awareness with eligible persons about their licence.

Consideration and finalised provisions

Water plan – unallocated water purpose and definitions

No changes have been made to the final water plan regarding the purpose that unallocated water can be granted from the CYPHA reserve and the definition of an ‘eligible person’ or ‘state purpose’ for the reasons detailed below.

The purpose for which unallocated water may be granted from the CYPHA reserve has not changed as this purpose is consistent with the requirements under section 27 of the Cape York Peninsula Heritage Act 2007. Additionally, the Water Act provides a general authorisation for Aboriginal people and Torres Strait Islanders to take or interfere with water for cultural purposes and traditional activities. A water licence is not required for these activities, and the volume cannot be limited by a water plan.

The definition for ‘eligible person’ is consistent with the purpose and intent of the CYPHA reserve. A CYPHA water entitlement can only be granted to a legally recognised and registered entity, for example; a landowner under the Aboriginal Land Act 1991, Torres Strait Islander Land Act 1991 or a native title holder under the Native Title Act 1993 (for example a Registered Native Title Body Corporate). Native Title claimants are not registered entities, they are individual people, and the determination may or may not rule that they have determined native title. The department has amended the CYPHA formula under the water management protocol to ensure water will remain in CYPHA reserves for new eligible persons.

Unallocated water held as state purpose (as defined in the water plan) is intended for projects to provide economic growth and employment opportunities to the region or state. A proposed agricultural development could access water from the strategic reserve if it was deemed a coordinated project or a project of regional significance. These projects normally require several approvals from other state departments, to ensure that the proposed development does not have a detrimental impact. To support the cultural outcomes of the water plan, water users and developers seeking water to support development proposals are expected to approach Aboriginal people and Torres Strait Islanders that hold CYPHA water licences to negotiate access to water.

Local councils can access the strategic reserve for town water supply purposes.

Water plan – total unallocated water volume and reserves

No change has been made to the final water plan. The total unallocated water volume was determined based on maintaining 97.5 per cent of median annual end of system freshwater flows. The median annual end of system freshwater flow of 97.5 per cent has been established to maintain
environmental, cultural, and social flows, to maintain environmental flows to the Great Barrier Reef and to support the fishing industry in the Gulf of Carpentaria. The remaining 2.5 per cent median annual flow represents a sustainable level of water access, and was supported by the best available science including hydrological and ecological modelling. This approach was peer-reviewed and supported by an independent expert in flow ecology.

The Cape York SOI, released in June 2018, outlined the principles used for determining the unallocated water volumes held in reserve. The draft and final water plan propose a total of 516,350 megalitres of unallocated water, consistent with the approach to maintain 97.5 per cent of median annual flows. This conservative and precautionary approach is to be used in conjunction with the other management strategies in the water plan and water management protocol, including that:

- Decisions about granting water licences must be consistent with the environmental flow objectives
- Any granted water licence must be conditioned to ensure that the purposes and water plan outcomes are achieved; and
- Minimum conditions, including any requirements for pass flow conditions must be included on a new water licence granted from a reserve.

This reserve volume allows for some development of water resources across the plan area, while protecting environmental flows, cultural outcomes and existing water users or industries such as, commercial fishing and tourism that rely on sufficient end of system flows.

The water plan has set the reserves across general, strategic and CYPHA to recognise the range of varied and competing interests for water in the plan area. To ensure that a diverse range of sustainable social and economic opportunities can be considered the reserves do not allocate water for particular projects. Water made available from the general or strategic reserve may be used for irrigation, industrial purposes or for a particular project. For example, a proposed tourism venture at Portland Roads, in the Lockhart Catchment, could access water from the general reserve, or from the strategic reserve if it was assessed to be a project for a State purpose. These projects include coordinated projects, projects of regional significance or town water supply purposes.

The CYPHA reserve empowers Aboriginal people and Torres Strait Islanders in the decision making about water use in Cape York. This water is in addition to the authorisations provided under the Water Act for Aboriginal people and Torres Strait Islanders to take or interfere with water for cultural purposes or traditional activities. The holder of a water licence granted from the CYPHA reserve has the option to retain the licence and not use it, therefore maintaining additional environmental and cultural flows, use the water for their own social or economic projects, or assign the water licence to a third party, providing social and economic opportunities for Traditional Owners consistent with the Cape York Peninsula Heritage Act 2007. Creating an unallocated water reserve for non-consumptive purposes is not consistent with the legislative framework provided under the Water Act.

The final water plan does not include an unallocated water volume for new water infrastructure being considered under the National Water Infrastructure Development Fund in the Normanby catchment or otherwise. However, if a proposed development, can demonstrate that it is consistent with the plan outcomes, and meets the EFOs and WASOs, then the Minister may consider to amend the water plan to allow for the development. The Lakeland Feasibility Study was released in April 2019 and the proposed option under the study is a storage on the Palmer River, which is within the Mitchell Water Plan area.

*Water management protocol – reserve volumes and catchments*

No change has been made to the final water management protocol in relation to the unallocated water volumes apportioned for the strategic, general or CYPHA reserves.

Unallocated water volumes in the plan area are separated into three different reserve types and into catchment areas. The volume of unallocated water for each catchment has been set to maintain 97.5
per cent of median annual freshwater flows. The volumes held in each type of reserve and catchment have been defined based on a number of considerations, including existing entitlement volume, future demand and proportion of land owned or covered by interests of Aboriginal people and Torres Strait Islanders. Reserving water under the plan for the purpose of helping indigenous communities in the area achieve their economic and social aspirations is a requirement under section 27 of the Cape York Peninsula Heritage Act 2007. Prior to the water planning process, the majority of water entitlements granted in the area have not been granted to Aboriginal people or Torres Strait Islanders, despite representing more than half of the population in Cape York, their significant land ownership and connection to land and water.

Where current existing entitlements exceed 2.5 per cent of median annual flows, no reserve has been made available for the general or CYPHA reserves. This occurs in the Jeannie and Watson catchments where existing entitlements associated with mining activities will revert back to the state at the completion of the mining projects. This water can then be redistributed through unallocated water reserve rules. Until this occurs, eligible persons in these catchments can access unallocated water held as strategic reserve if the project is for the economic or social benefit of Aboriginal people or Torres Strait Islanders.

Table 3 explains how the volume for each type of reserve and catchment area were determined.

*Table 3 - Considerations for determining the volume of water in each type of reserve*

<table>
<thead>
<tr>
<th>Reserve type</th>
<th>Consideration in determining volumes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>➢ Existing entitlements ➢ Proportion of non-Indigenous freehold land ➢ Potential future demand</td>
<td>In some cases the volume in the general and CYPHA reserve is 0ML where the total volume of current entitlements is greater than 2.5 per cent of median annual flows. (e.g. Jeannie catchment) Total volumes were rounded.</td>
</tr>
<tr>
<td>CYPHA</td>
<td>➢ Existing entitlements ➢ Proportion of the land owned by Aboriginal people and Torres Strait Islanders ➢ Proportion of the land covered by Aboriginal people and Torres Strait Islanders interests</td>
<td>Due to uncertainty associated with future demand, the strategic reserve volume has not been split into catchments, nor are there volumetric limits for each catchment.</td>
</tr>
<tr>
<td>Strategic</td>
<td>➢ Known potential demand (inc. future needs for town water supply, coordinated projects and regionally significant projects.)</td>
<td></td>
</tr>
</tbody>
</table>

Water licences granted from the CYPHA reserve can be assigned to a third party through a long or short term contractual arrangement. Anyone can enter into a contract with the CYPHA licence holder to access additional water, subject to departmental assessment of the impacts.

The final water plan also establishes a water licence and water allocation trading framework, which is another way, in addition to the unallocated water, for new or existing industries to access water without impacting on the environment or affecting other water users.

*Water management protocol– releasing unallocated water from reserves*

Changes have been made to the final water management protocol in relation to the assessment process associated with granting water from the CYPHA and strategic reserves. The amendments include:

- Minimum criteria for deciding to grant unallocated water from the strategic reserve, including the availability of water and the impacts of the proposed taking will have on existing water users and the environment;
• Minimum criteria when deciding to amend or assign a CYPHA licence to allow water to be taken at a specific location, including the availability of water and the impacts of the proposed taking will have on existing water users and the environment.

There are distinct differences in the processes for releasing water from the three reserves, and not all considerations and conditions or assessment criteria are appropriate to all. The final water management protocol will be amended to consider the natural ecosystem and existing authorisations when releasing water from State reserve. The same considerations will be applied to assessing the amendment of a CYPHA licence.

The water released from the strategic reserve is for specific purposes and projects, which will require specific information to be provided about the project and other approvals. For example, a co-ordinated project will require approvals under other applicable legislation, such as an Environmental Impact Statement which will holistically assess the project. A project of regional significance is required to address the matters stated in the water plan, including all of the plan outcomes.

The initial grant of water from the CYPHA reserve is only to an eligible person who has legally recognised land ownership/interest. The licensee can then decide if, and how the water is used either by themselves, or a third party. Before water is used or assigned under the CYPHA water licence, the holder must make an application to amend the licence to specify the location where the water will be taken. This application will be assessed, and appropriate conditions applied to minimise potential impacts on other users and the environment. Before proponents of a coordinated project or regionally significant project can apply for strategic reserve they will be first required to negotiate access to water with any eligible person who holds a water licence granted from the CYPHA reserve in the catchment where the project is proposed. This ensures that Aboriginal people and Torres Strait Islanders have opportunities to manage water in the plan area and to directly benefit from projects and achieve their economic and social aspirations.

In addition to the above, changes made to the final water management protocol as a result of issues and comments raised about the CYPHA reserve include:

• Amendment of the CYPHA formula to ensure water will remain in the reserve for future determinations of eligible persons in a catchment
• Removal of section 11(2)(b) in conjunction with the above change
• Minor amendments to the considerations about CYPHA assignments to make it clearer what land an assignment can be used on.

Other changes have been made to provide more specific guidance on dealings with CYPHA licences to ensure plan outcomes continue to be achieved.

3.7 Water allocations, water licences and trading

Draft provisions

The draft water plan and protocol set out a seasonal and permanent water trading framework for water allocations and water licences in the plan area.

Twenty five (25) surface water licences in the Endeavour catchment were proposed to be converted to tradeable water allocations under the draft water entitlement notice. Schedule 5 of the draft water plan defined the water allocation trading zones for proposed water allocations within the Endeavour catchment. The water allocations were assigned into two water allocation groups that reflect the modelled reliability of accessing water under the allocations. Chapter 3 of the draft protocol proposed rules for trading water allocations seasonally or permanently within a zone and between zones.

Schedule 6 of the draft water plan defined water licence trading zones in priority areas of the Normanby and Jeannie catchments and the Cook underground water management area (UMA). Part or all of a water licence can be permanently relocated or seasonally assigned within a zone subject to assessment.
Outside of water licence trading zones, water licences can be seasonally assigned subject to assessment.

The draft water plan and protocol also set out trading provisions for CYPHA water licences. These trading provisions enable the licence to be assigned to a third party for a period of time by negotiation, and is subject to assessment. A CYPHA licence cannot be permanently traded, to ensure that the water entitlement continues to be owned by eligible persons for future generations.

**Issues raised**

Issues were raised by submitters in relation to the conversion of water licences to water allocations, water allocations generally, and the trading of water licences and water allocations.

One (1) submitter expressed support for trading of water licences and allocations. They supported the water allocation trading framework in the Endeavour catchment, the permanent and seasonal trading of underground water in the Cook UMA, as well as water licence trading in the Normanby and Jeannie catchments. Several submitters were generally supportive of seasonal trading.

Several submitters raised concerns related to water licences being converted to water allocations in the Endeavour catchment, water allocations generally and the water licence and allocation trading framework. The issues are summarised below:

- Do not support the conversion of licences to allocations.
- Water allocations should stay attached to land and not be able to be sold permanently.
- Concern about the price of water allocations and the potential threat to water security if one group or interested party gain a monopoly on water.
- Land owners in the Endeavour catchment who do not have a water licence will not get a water allocation.
- Concern about water quality impacts in the Endeavour catchment arising from water allocation trading and the level of agricultural development.
- Concern that trading of water licences in the McIvor River area of the Jeannie catchment does not offer enough security for existing development in the Jeannie.
- Want to be able to trade between underground water and surface water.

Some submitters expressed that all existing water rights and entitlements should be preserved irrespective of their use. Other submitters requested that unused water entitlements in the Jeannie catchment to be reallocated to eligible persons. Several submitters requested that existing entitlements in the Endeavour and Normanby have their volumes reduced.

Nine (9) submitters raised issues about the trading of CYPHA water licences, which are summarised below:

- Don’t agree with the CYPHA proposal.
- Support that the CYPHA entitlements are tradeable.
- Support for the considerations under section 62.
- Concerns with some of the wording under section 62.
- Don’t agree that CYPHA trading will achieve purpose of the reserve.
- Concern about allowing permanent trading of CYPHA licences.
- Concern about not allowing permanent trading of CYPHA licences.
- That the trading of CYPHA licences should also be supported by an Environmental Offset Scheme to encourage flows to be retained for environmental and cultural outcomes.
- Do not agree that CYPHA licence holders should have a veto right when approached to assign water.
Consideration and finalised provisions

No changes have been made to the final water plan in response to issues and comments raised in submissions regarding water allocations, water licences and trading. However, the department has made amendments to CYPHA licence dealings to include additional provisions, and to provide further clarity and a streamlined process for processing these types of dealings.

The final water plan recognises all existing entitlements and rights to take water whether or not the water is being used. The final water plan does not propose any reduction to existing entitlement volumes nor does it proposed to reallocate entitlements that are not currently being used.

Not all landowners in the plan area require an entitlement to take water as the Water Act provides for some general authorisations such as taking riparian surface water for stock and domestic purposes. Prior to the moratorium, all landowners in the plan area, including the Endeavour catchment, were able to make an application for a water licence. Only those landowners with existing water licences in the Endeavour are being converted to water allocations. New water allocations are not being granted where there is no existing licence.

If a land owner does not currently hold a water licence the final water plan provides a number of opportunities to access water, including through:

- taking up to 50 ML overland flow water in all catchments other than the Normanby catchment
- water licence and water allocation trading
- negotiating with eligible people who hold a CYPHA water licence or
- accessing unallocated water from the general or strategic reserve

Additionally, the final water plan retains the provision that allows for up to a total of 5 ML per annum of water to be taken by a person for all prescribed activities (as prescribed in schedule 3 of the Water Regulation) in all catchments, except from underground water within the Lakeland water licence zones.

The Queensland government is a party to the National Water Initiative and one of the requirements of this Intergovernmental Agreement is to separate water entitlements from land and make them tradeable. In Queensland, these types of water entitlements are called water allocations.

Water allocations are assets that are separate to land and may be owned and traded by non-landholders. The conversion of existing water licences to water allocations is an administrative arrangement. Water allocations are a standalone asset that can be bought, sold and mortgaged against, similar to a land title. For this reason it is not possible for part or all of a water allocation to stay attached to land. However, the movement of a water allocation to another location or zone is restricted by trading rules specified in a water management protocol. These entitlements are a market based mechanism for water management and the prices of trades are determined by the value placed on water by buyers and sellers.

At this stage water allocations are only being created in the Endeavour catchment because there is known demand for water and enough gauging station data to support detailed hydrological assessments. Licences to take underground water in the Endeavour catchment will not be converted to water allocations at this time.

The water allocation and water licence trading framework outlined in the final water plan and water management protocol ensures that a balance can be achieved between emerging development pressures, and supporting Aboriginal people and Torres Strait Islanders to achieve their economic and social aspirations in Cape York. It encourages water-use efficiency, provides certainty for the water industry and helps create a stable and more attractive business environment. Having a trading framework in place enables new industries to acquire water without jeopardising the environment, or affecting other water users. The Water Act works in conjunction with other legislation that specifically relates to water quality, such as the Environmental Protection Act 1994. Entitlements granted under
the Water Act do not exempt an entitlement holder from meeting other legislative requirements or obtaining any other authority that may be required such as development or land clearing permits.

The final water plan and water management protocol enable seasonal and permanent water trading in Normanby, Endeavour and Jeannie catchments, including the McIvor River area.

There is insufficient scientific data currently available to develop robust and appropriate rules for the trading of entitlements between underground water and surface water in the plan area, however this may be reviewed in the future when additional data is available.

The trading of CYPHA licences as proposed in the draft water management protocol has been retained.

3.8 Water sharing rules

Draft provisions

The draft water management protocol proposed water sharing rules within the water allocation zones to minimise changes to flows of water, including natural variability of flows, in the plan area that support waterholes as refugia. The draft water management protocol also proposed rules relating to the trading of water licences that prohibits the trading of water to a waterhole or spring.

Due to the strongly seasonal nature of catchments within Cape York, refugial waterholes provide critical habitat for aquatic and terrestrial biota during periods of low or no flow. Protection of the flow regimes to these waterholes, and maintenance of persistence times and connectivity are essential to maintaining the role and function of these features.

Extraction of water for consumptive use can reduce the permanency, connectivity, and habitat quality of waterholes. Waterholes within permanent water allocation trading zones are of particular risk as additional extraction can occur following trading.

The water sharing rules attempt to maintain a balance between consumptive, social, cultural and environmental water demands.

Issues raised

Five (5) submissions were received about the monitoring of waterholes and the water sharing rules:

- Five (5) raised issues about the monitoring of waterholes and about including additional critical waterholes in the Upper Normanby, Laura River, and McIvor River areas.
- Four (4) raised issues with the proposed water sharing rules in the draft water management protocol being insufficient, and suggested that the rules do not adequately provide for minimising changes in environmental flows to waterholes in the Endeavour catchment, particularly in the dry season. They requested that the rules be changed to provide for minimum environmental flows that support waterholes and are underpinned by local gauging and ecosystem function data.

Consideration and finalised provisions

The water sharing rules in the final water management protocol have been amended following consideration of submissions and department inspections. While the intent and policy behind the water sharing rules has not changed, they have been amended to improve transparency and to make it clearer when the water sharing rules are triggered.

The water sharing rules have been amended to now apply to both class 1 and class 2 water allocations, other than water allocations with a purpose of urban. The timing of the water sharing rules has not changed, however where available and appropriate, the cessation and commencement of taking water has been linked to a gauging station.
As stated in the environmental assessment report, there is currently a lack of information on waterholes throughout the plan area (i.e. location, bathymetry, persistence characteristics, interaction with underground water etc.). The monitoring, evaluation and reporting strategy will address this key knowledge gap by identifying priority areas for waterhole monitoring programs to ensure plan outcomes are still being met. As additional information is collected, this can inform any future water management protocol amendment including changes to or additional water sharing rules.

The rules in the water management protocol relating to the prevention of trading water licences to a waterhole or spring have been retained.

3.9 Other water plan and water management protocol issues

Dams, instream storages and interference

The draft water plan states that conditions may be placed on all new water allocations and licences to take water. For example, this could include a pass flow condition.

It proposes that applications for instream storages be permitted as long as they do not interfere with flow in or from a lake, waterhole or spring.

Additionally the draft plan contains provisions that allow for interference with water for stock or domestic purposes up to 20ML storage capacity in the Endeavour, Jeannie or Normanby and a 250ML in all other catchments.

Five (5) submitters raised concerns about two new dams that are yet to be constructed stating they believed environmental flow conditions had not been imposed on the licences. Four (4) of these submitters also requested that all dams in Lakeland and the rest of the plan area have conditions that allow for fish passage and for flow to pass downstream.

One (1) submitter requested that the permitted storage capacity allowed for interference with water for stock or domestic purposes be reconsidered due to high evaporation rates and sediment loads associated with holding large bodies of water instream.

Another submitter was opposed to any building of in-stream storages in the plan area.

The final water plan has been amended to clearly specify the minimum terms and conditions that are to be applied to licences to interfere with water, including a pass flow condition.

The chief executive must assess the application according to the rules in the water plan and may grant, grant in part, with or without conditions, or refuse an application. The chief executive can include conditions on new entitlements granted under the Water Act. This includes a condition to allow water to pass downstream of an in-stream storage.

Fish passage is outside the scope of the Water Act and is managed under the Fisheries Act 1994 and Planning Act 2016.

No change has been made to the final water plan in regards to interference with water for stock or domestic purposes.

Underground water management

The draft water plan applies to underground water in the plan area that is not managed under the Water Plan (Great Artesian Basin and Other Regional Aquifers) 2017.

The draft water plan provides for limitations on the take and interference with underground water in the underground water management areas defined in schedule 4.

Six (6) submitters raised issues in regards to underground water management, with several requesting that any future underground water take be allocated conservatively and one (1) submitter requesting easier access to Great Artesian Basin water.
The taking of underground water from Great Artesian Basin aquifers is managed under the Water Plan (Great Artesian Basin and Other Regional Aquifers) 2017.

The final water plan has not been changed as a result of submissions on this issue.

All applications relating to underground water will be appropriately assessed and conditioned to ensure the take and use of the water is consistent with the plan’s outcomes, and the rules in the water management protocol.

**Stock and domestic**

The draft water plan:

- required all non-riparian water users taking water for stock or domestic purposes to have a water licence
- removed the regulatory provisions relating to the stock or domestic users in the Duck Farm underground water area, by incorporating this area into the new Cook underground water management area
- allowed underground water to be taken for stock or domestic use without an entitlement.

Three (3) submitters raised issues and made comments on matters relating to the management of stock or domestic take as follows:

- Do not support the licensing of non-riparian stock or domestic take in the plan area.
- Do not support any changes that reduces water entitlement holders’ confidence in the reliability of water supplies particularly for stock or domestic purposes.
- Support for the removal of requirement for stock or domestic licenses in the historic Duck Farm underground water area.

The final water plan has been amended to require non-riparian stock and domestic water users in the Normanby, Jeannie and Endeavour catchments to have a water licence. Outside of these catchments all non-riparian water users taking water for stock and domestic purposes will not require a water licence.

None of the changes proposed in the final water plan reduce confidence in the reliability of water for stock or domestic use. Existing water licences that are no longer required for this purpose have been replaced with an authorisation under the Water Act.

**Overland flow water**

Section 101 of the Water Act allows a plan to limit the way overland flow water is taken in a plan area. In all catchments except the Normanby, the draft water plan proposes to permit the take of overland flow water without a water licence if:

- the take is for a stock or domestic purpose
- the take is for prescribed activities, up to a total combined volume of 5ML
- the works are existing and have been authorised under the water management protocol, or
- the works are to be used for another purpose and the capacity of the works is less than 50 ML

No new storages of any size may be constructed without a water licence in the Normanby catchment unless the take is authorised under the water management protocol, or the storage is for stock or domestic purposes or prescribed activities. This is because there are already a large number of existing overland flow storages taking water in this catchment, and any new storages could affect the security of existing water users with overland flow works and reduce inflows into watercourses.

The draft water management protocol stated a process to authorise all existing overland flow storages at the commencement of the water plan which have a capacity of greater than 50 ML for all catchments except the Normanby catchment. In the Normanby catchment, all existing overland flow
storages, regardless of size, will be subject to the authorisation process under the water management protocol.

A number of issues and comments were received about overland flow regulation under the water plan and water management protocol. Four (4) submitters were supportive of new overland flow regulation, while five (5) submitters were not.

There was also a divergence of opinion on the capacity of works placed on overland flow dams. Some submitters expressed that they wanted more restrictions placed on the capacity of works and number of overland flow dams, while in contrast other submitters did not support the regulation of overland flow in the Normanby catchment, or the perceived reduction in capacity of works from 250ML in neighbouring water plans to 50ML in the Cape.

Two (2) submitters raised comments about their own overland flow works, with one requesting that their works be allowed to be completed under the final water plan and another notifying that they are constructing an overland flow dam of less than 50ML in the Endeavour catchment.

One (1) submitter requested clarity on the difference between overland flow and the water captured in a rainwater tank.

One (1) submitter stated in regards to granting licences under the process in the protocol for existing overland flow works, that if harvest volumes are to be reduced when considering the cumulative impact of taking overland flow water in the catchment, then compensation for past investments in works construction and use must be provided.

An amendment has been made to the final water plan to enable overland flow works, notified under the moratorium, to be completed and authorised under the final water plan provided development approval is obtained.

With regards to the limitations placed on the capacity of overland flow works, no changes have been made to the final water plan.

To ensure plan outcomes, EFOs and WASOs can be achieved, higher levels of certainty on all future water resource development in the plan area is required. While overland flow development is highest in the Normanby catchment, particularly around the Lakeland agricultural area, there are opportunities for increased overland flow development in the western catchments such as the Coleman, Holroyd and Archer as the topography supports larger storages.

During development of the draft plan a desktop assessment identified that the majority of works in the plan area are less than 50 ML, with a significant increase in size after that, particularly in the Normanby catchment. The catchment currently has the greatest level of overland flow development and continued unregulated take of overland flow poses a risk to existing water users and the environment. Therefore, the 50 ML capacity limit for overland flow in all catchments except the Normanby in the final water plan, ensures security for existing water users.

It was also not considered appropriate to implement a 250 ML capacity, similar to what is provided for in adjoining catchments such as the Mitchell and Gulf, because of the existing level of overland flow works and the risk it poses to the environmental, social and culture outcomes of this plan.

Overland flow water does not include water collected from a roof into a rainwater tank. Water collected in a rainwater tank is not managed under the water plan.

The final water plan will be amended to allow the take of overland flow water if the chief executive received notification of the works on or before the 31 July 2018. Under the moratorium the department received 7 notifications that works to take overland flow had commenced. When the plan is finalised, these works will be allowed to continue, provided they meet the requirements under the plan and water management protocol. This does not remove requirements that may need to be met under other legislation.
The submitter who notified after 31 July 2018 about a storage in the Endeavour will be able to complete the construction of the dam once the plan commences and the moratorium is removed as the storage is less than 50 ML and located in the Endeavour catchment.

The final water management protocol is being amended to include an additional consideration of the historical authorised take under the notified overland flow works.

The water management protocol states a water entitlement notice must be issued if the chief executive decides to grant a water licence, which will provide proposed licence holders an opportunity to comment on the details of the proposed licence.

**Water resource development and effect on the environment**

The draft water plan set out a number of approaches that recognise and support the environment including:

- Environmental outcomes that aim to maintain and support freshwater ecosystems, ecosystems dependent on underground water, and environmental values and water quality objectives that support the Great Barrier Reef and the Gulf of Carpentaria.
- EFOS and PIs for six nodes incorporating measures for monitoring dry periods, flood-plain inundation and river-forming flows.
- Measures for achieving plan outcomes such as the development of a monitoring evaluation and reporting strategy by 2020, including Lakeland water licence zones to support assessment of springs and the underground water regime in those areas.

In implementing the draft water plan, the draft water management protocol provides water sharing rules and trading rules that consider the flows required to maintain waterholes and minimise impacts on watercourses, lakes and springs.

A number of submitters raised concern about the level of surface water take in the Normanby and Endeavour catchments as well as the level of underground water take in Lakeland area and the effects that this could have on the downstream environment, aquatic ecosystem, aquifers, springs and GDEs. Concern was also expressed that the draft water plan did not contain any specific measures to protect GDEs.

Some submitters requested that overall entitlement volumes be reduced in catchments where take exceeds 2.5 per cent of median annual end of system flow, while other submitters suggested licences should be repealed and replaced with allocations for the environment.

No change to the final water plan is proposed as a result of issues raised in submissions on these issues.

The draft water plan and technical assessments recognise all existing entitlements, including unallocated water reserves. In considering the recommendations of the environmental assessment and the risk assessment the Department of Environment and Science has developed a suite of EFOS and PIs that are based on current and future flow threats that are linked to the critical flow requirements of ecological assets in the plan area. EFOS and PIs work together to ensure the flow needs of an ecological asset are met while providing for water trading and future water use requirements. The management strategies contained in the final plan for the Normanby and Endeavour catchments are considered suitable for meeting the plan outcomes.

A monitoring, evaluation and reporting strategy will also be developed to assess how the plan is achieving its outcomes. A water plan is an adaptive management process and amendments to the plan can occur at any stage should new information emerge that changes the level of risk to an ecological value or water user. The final water plan retains the measure to develop a monitoring, evaluation and reporting strategy to support the assessment of springs and the underground water regime in Lakeland.
Environmental assessment report

The strategies for managing and allocating water in a water plan are designed to maintain ecosystems and their values. This is achieved through providing for the necessary water requirements to sustain ecosystems, whether they depend on surface water or underground water. The environmental assessment process uses knowledge of the specific water requirements of ecosystems to model the risks of different water management options. This modelling informs the development of the final water plan.

Several submitters raised issues regarding aspects of the environmental assessment report that informed the water plan. The issues raised are summarised below:

- Stated it is scientifically invalid to claim that there are 0 km² of springs and surface expressions in the Laura-Normanby catchment. The mapping of springs and GDEs urgently needs reviewed and ground-truthing as there are a lot of errors and omissions.
- Concern that the gallery rainforests of the Normanby are not recognised as important.
- Concern that the four species of Sawfish may be threatened by the plan.
- Ecological modelling was based on limited field data.

No change was made to the final water plan as a result of issues raised in submissions.

The location and extent of springs and surface expressions was based on GDE mapping undertaken in 2017 by the Department of Environment and Science. The mapping can be updated if local information on underground water surface expressions is available.

The environmental flow objective metrics used in the draft plan serve to protect key attributes of the flow regime associated with the ecological assets. This reflects the current level of understanding of the response of the ecological flow alteration given the intrinsic high level of uncertainty in this part of Queensland.

The Environmental Assessment Report focuses on the critical flow and underground water dependencies of key selected ecological assets. These assets are broadly representative of potential ecosystem response and may be a species, a group of species, an ecological function, an ecosystem, or a place of value. The four species of sawfish mentioned by the submitter are assumed to have the same ecological responses as the species considered in the Environmental Assessment and have been considered accordingly. Therefore, the outcomes, EFOs and PIs in the final water plan account for the flow requirements of the sawfish.

A monitoring, evaluation and reporting strategy will also be developed to assess how the plan is achieving its outcomes. A water plan is an adaptive management process and amendments to the plan can occur at any stage should new information emerge that changes the level of risk to an ecological value or water user.

Consultation

Section 46 of the Water Act sets out the public consultation requirements for a draft water plan.

Some submitters felt there was a lack of consultation with key stakeholders, while one (1) submitter requested the department should continue to proactively inform water users of their rights and obligations under the new framework once the final water plan has commenced.

No change has been made to the final water plan as a result of comments made in submissions.

The final water plan reflects extensive consultation across Cape York with a specific focus on consultation with Traditional Owners on-country. Consultation on the draft water plan involved 11 rounds of one-on-one meetings with Traditional Owners and other key stakeholders, four public meetings and four meetings with local governments in the plan area. The department has also convened five meetings with each of the three water consultation groups who represented a broad range of groups and interests.

More detail on the consultation process that was undertaken to develop the final water plan and supporting documents can be found in section 2 of this report.
Mining water use

The draft water plan contained a measure stating that a monitoring, evaluation and reporting strategy must be developed by 30 June 2020 and required that all water entitlements, as directed by the chief executive are to be measured by 31 December 2022. All new entitlements will require measurement before water is taken.

In order to support current and future economic development the draft water plan stated economic outcomes, EFOs and WASOs. It also defined volumes of unallocated water reserves that provide for future consumptive use without compromising the security of existing users or environmental values.

Several submitters requested clarification on how the department plans to monitor the use of water in the mining sector. One (1) submitter was concerned that the draft water plan jeopardises a proposed mining venture in the Jeannie.

One (1) submitter expressed concern that the water licence granted to Cape Flattery for mining prevents other users, particularly agricultural development, from accessing water.

The final water plan has been amended to state that all water entitlements, as directed by the chief executive are to be measured by 31 December 2022. All new entitlements will require measurement before water is taken. The final water plan still requires a monitoring, evaluation and reporting strategy to be developed by 30 June 2020.

Water use for mines, such as how on-site mine water infrastructure and contaminants are dealt with, is primarily dealt with under the Environmental Protection Act 1994 via an Environmental Authority. The Water Act can manage water use on mines by conditioning when a mine can take water, how a mine can take water or how a mine can build infrastructure to interfere with water in a watercourse, as well as measuring, monitoring and reporting requirements.

Chapter 5 of the Water Act provides a framework for conducting investigations and inspections to monitor and enforce compliance with the Water Act, including water use under a water entitlement.

No change to the final water plan is proposed regarding the volumes defined in the unallocated water reserve. A volume of 516,350 ML of unallocated water is available for future use. This is considered appropriate to meet future demands during the life of the water plan. Mining ventures may be able to access water under the strategic reserve where they cannot obtain an assignment from a CYPHA water licence holder.

The technical assessments that informed development of the water plan recognise all existing entitlements. The plan aims to balance the competing needs of all economic users, and social, cultural and environmental needs. The water licence issued to Cape Flattery has been conditioned to ensure that the water returns to the State at the conclusion of the project. When this occurs, the volume can then be redistributed through the unallocated water reserve rules and made available for consumptive purposes.

Special agreements acts

The special agreement acts refer to the Alcan Queensland Pty. Limited Agreement Act 1965 and the Commonwealth Aluminium Corporation Pty. Limited Agreement Act 1957. These acts are separate to and in addition to the Water Act. The draft water plan did not provide any details on these special agreement acts.

Several submitters raised issues about the special agreement acts as follows:

- Questioned if the water rights available under the special agreement acts were merged into the water plan.
- Concern that the volume of water for Rio Tinto Alcan under the special agreement acts was in addition to the volumes of unallocated water.
- Desire that the water rights under the special agreement acts must be preserved.
- Questioned the extent that Traditional Custodians have a say on the special agreement acts.

The water plan cannot regulate or manage the volumes provided under the special agreement acts as they are outside of the scope of the Water Act.
The Water Act provides a pathway to transition the water rights available under the special agreement acts to contemporary water licensing arrangements. The department will continue to work with Rio Tinto Alcan to transition these special agreement act rights. Where the water rights have transitioned under the Water Act, these licences will be managed under the water plan.

Additional wording in the explanatory notes accompanying the water plan has been added to clarify the special agreement act rights are separate from the plan.

Veto rights for any stakeholders in respect of the special agreement acts is outside of the scope of the water plan.

Water quality

The draft water plan does not state water quality targets.

Some submitters queried why the water plan did not contain specific measures to ensure ANZECC water quality guidelines were met. Other submitters were concerned that the draft water plan encouraged development that could lead to degradation of the Great Barrier Reef.

Several submitters recommended water quality modelling and analysis be conducted to assess the impact associated with an increase in water take and possible increase in the amount of land developed.

The final water plan has been amended to include two additional outcomes relating to maintaining a flow regime that supports the suitability of water for particular activities or processes.

The Water Act works in conjunction with other legislation that specifically relates to water quality, such as the Environmental Protection Act 1994. Entitlements granted under the Water Act do not exempt an entitlement holder from meeting other legislative requirements or obtaining any other authority that may be required such as development or land clearing permits.

Constructing authorities

The draft water plan does not provide limitations on the volume of water taken by constructing authorities.

Two (2) submitters requested clarification on water security for road network development and maintenance.

No change has been made to the final plan as a result of submissions.

The Water Act provides an authority to constructing authorities to take water for road construction provided they comply with the minimum requirements and provide written notification in advance of their projects. Notification is required for taking surface water, underground water, or overland flow water in the plan area. The Water Regulation states the taking of water by a constructing authority must be done in accordance with the "Exemption requirements for constructing authorities for the take of water without a water entitlement". This exemption requirement was updated in August 2018 and a 50ML maximum permissible volume was introduced.

Development approval may be required for works that take water associated with the authority given to constructing authorities.

4 Out of scope

Relationship with other legislation and policy

The draft water plan does not provide any specific links to the Cape York Regional Plan.

Four (4) submitters stated that the draft water plan should include provisions to support the Cape York Regional Plan such as, limiting the volume of water taken for consumptive use in Strategic Environmental Areas and Designated Precincts and placing conditions on existing entitlements to ensure flow regimes in these areas are preserved.

Some submitters requested clarification on how the water plan relates to other state legislation and comment that duplication in process should be limited.

No change has been made to the final water plan.

It is out of scope of the water plan to address an aspect of assessment, requirements, or limitations under other legislation.
Authorisations or entitlements required under the Water Act do not exempt an applicant from meeting other legislative requirements or obtaining any other authority that may be required such as development or land clearing permits.

**Off stream stock water points**

The draft water plan does not provide limitations on off-stream stock water points.

Three (3) submitters requested that all landowners install off-stream stock water points.

No change has been made to the final water plan as this issue is out of scope.

**Details of water allocation holders**

The draft water entitlement notice provides details of all the water allocation holders and the entitlements to be granted.

Several submitters requested that records of all water allocation holders be made publically available.

No change has been made to the final water plan as this issue is out of scope.

Information on current water licence volumes and locations are provided on an open data portal. The names and contact details of water allocation holders are not provided due to privacy laws.

Upon request, the department can conduct searches on the location of water allocations in a specific zone.

**Water use efficiency**

The draft water plan does not support one type of development or agriculture over another.

Four submitters stated water use efficiency could be increased by adjusting crop types, reducing evaporation using aquifer storage and recovery, floodwater harvesting.

No change to the final water plan is proposed as mandating water use efficiency on existing entitlements is out of scope.

The chief executive will consider water use efficiency when making decisions about unallocated water reserves.

**Water charges**

Several submitters made comments about water charges including, that the perceived high price of water will stifle the local economy, that the Government will tax water use and impose levies on dam owners.

Measuring all water use enables water users to better manage their water and to be assured that they receive their authorised share of the resource. The water plan does not propose to charge water users a fee for water use per megalitre.

No changes have been made to the final water plan as these issues are out of scope.

Water licence holders are required to pay an annual licence fee of $82; this fee increases annually.

There are no annual fees associated with water allocations.

The water trading market is in its infancy in the plan area therefore the value of water cannot be determined at this stage.

**Compliance**

The draft water plan states an economic outcome that maintains the probability of being able to take water under an authorisation.

Five (5) submitters were concerned that existing dams and bores in the Lakeland area are non-compliant.

No change has been made to the final water plan as compliance is out of scope of the water plan.

Chapter 5 of the Water Act provides a framework for conducting investigations and inspections to monitor and enforce compliance with the Water Act or the Planning Act 2016 in relation to the construction or installation of works for taking or interfering with water. Anybody can make a complaint to the department about the suspected unlawful take or use of water. Allegations about unlawful activities are taken seriously and investigated by the department. The person making a complaint can
choose to remain anonymous, or provide the department with their contact details to enable the
department to contact them and explain how the complaint was dealt with.

**Regulation of bores**

One (1) submitter requested that drillers should notify the department and an assessment of the
underground water systems should be undertaken.

No change has been made to the final water plan as this is out of scope.

Under section 983L of the Water Act a driller must give a copy of the information about each water
bore to the chief executive within 60 business days from when drilling started.

**In-stream storages**

One (1) submitter requested that Government should contribute to the costs of building water
infrastructure.

No change has been made to the final water plan as this issues is out of scope.

**Overland flow dams**

Several submitters stated that PO1-PO4, PO7 and PO8 of the State Code 10 (of the State
Development Assessment Provisions) should apply to overland flow dams.

The use and application of State Code 10 is outside of scope of the water plan. This is under the
jurisdiction of the *Planning Act 2016*.

### 5 Additional considerations provided by the department

A number of changes have been made to the final water plan and water management protocol as a
result of further review by the department. These changes do not impact existing users or change the
policy intent of the plan. This include 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 applications of provisions across the plan
area.

The following changes were incorporated in the water plan:

- inclusion of a new economic outcome which provides a flow regime that supports the
  suitability of water for industries dependent on water resources in the plan area
- inclusion of a new social outcome which maintains a flow regime that supports the suitability of
  water for water-related aesthetic, cultural and recreational values
- inclusion of mandatory elements for water licences which interfere with water in a
  watercourse, such as storages and diversions
- removal of the measure requiring the chief executive to prepare a report assessing the
  achievement of plan outcomes within 5 years. As stated in the Water Regulation the Minister’s
  5 year report evaluates the water plans’ effectiveness in achieving its outcomes
- clarification on the limitations on the take of overland flow water to authorise the works under
  the moratorium.

The following changes were incorporated in the water management protocol:

- streamlined processes and considerations for dealings with strategic, general and CYPHA
  unallocated water reserves
- additional dealings specified for CYPHA water licences
- clearer water sharing rules for maintaining flow in waterholes