Community consultation

The Territory Government is now consulting on the Draft Water Allocation Plan Tindall Limestone Aquifer Mataranka. To have your say or for further information:

- Join us at a community consultation session on Wednesday, 30 November 2011 at 5pm in the Mataranka Town Hall, 120 Roper Tce, Mataranka;
- Complete the online feedback form at www.nt.gov.au/consult;
- Grab a hard copy at the NRETAS Regional Office, 32 Giles Street, Katherine;
- Send an email to water.nretas@nt.gov.au; or
- Phone 8999 4613.

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Part 1. Preliminary

1. Short title
   a) This water allocation plan may be cited as the *Water Allocation Plan for the Tindall Limestone Aquifer Mataranka* (this Plan).

2. Commencement
   a) This Plan takes effect when declared by the Minister under the *Northern Territory Water Act* (*Water Act*). The Plan will be reviewed within 5 years and ceases to have effect 10 years from its commencement or upon declaration of a new plan covering the area to which this Plan applies, whichever occurs first.

3. Purpose
   a) The purpose of this plan is to provide the Northern Territory (NT) Controller of Water Resources (*Controller*) and the Mataranka community with a transparent set of rules that will assist in the sustainable management and equitable allocation of water within the Tindall Limestone Aquifer (Mataranka).

   *Note: the Controller is an officer appointed under section 18 of the NT Water Act.*

4. Definitions
   a) Terms used in this Plan which are not common with the *Water Act*, are defined in Schedule 1.
   b) Notes are provided for explanatory purposes and do not form part of the provisions within this Plan.

Part 2. Planning context

5. Statutory relevance
   1) NT Water Act
      a) This Plan is made under section 22B of the *Water Act*. From commencement, under section 22B (4) of the *Water Act*, management of water resources to which this Plan applies is to be in accordance with this Plan.
      b) This Plan is to be read with the *Water Act* and *Water Regulations*.
      c) This Plan is made in respect of the Daly Roper Water Control District Act (the *Water Control District*) declared under section 22 of the *Water Act*.

   2) National Water Initiative
      a) As far as practicable, this Plan is made in accordance with the Territory Government’s commitments under the Intergovernmental Agreement on a National Water Initiative as signed on 25 June 2004.

   3) Natural Resource Management Plans
      a) This plan fulfils Ecological Footprints Targets 1 and 1.1 of the *Northern Territory Integrated Natural Resource Management Plan 2010 – 2015*.

      *Note: Ecological Footprint Targets 1 is “By 2030, domestic and commercial water and energy use is sustainable, with minimal environmental impact” and Ecological Footprints Target 1.1 is “by 2015, water availability and demands are understood and per capita consumption has decreased over 2010 levels.”*
6. Climate
   a) According to Knapton (2009) “the northern half of the (Roper River) catchment is classified as tropical (wet-dry tropics)”. This is where the Plan is located.
   b) Typical of the wet-dry tropical climate, the rainfall in terms of quantity and timing is highly variable within and across years. The wet season between October and April and the near absence of rainfall in the intervening dry season.
   c) Average annual rainfall 810mm and average annual evapotranspiration is about 2100mm.

7. Assumptions

1) Climatic variability
   a) This Plan recognises climatic variability and therefore that the annual and instantaneous discharge from Tindall Limestone Aquifer (Mataranka) to the Roper River will vary naturally.
   b) All analyses underpinning this Plan are based on historic climatic data between 1900 and 2008. It is assumed that future climate will exhibit similar characteristics.

2) Climate change
   a) Commonwealth Scientific and Industrial Research Organisation’s (CSIRO) Northern Australian Sustainable Yields (NASY) Project (2009) suggests for the Roper River Region that “future (~2030) climatic conditions will be similar to historical conditions, though drier than the recent past. Slightly wetter and drier conditions are expected under the wet extreme and dry extreme future climates, respectively”. To allow for this the following assumptions are made:
      i. The maximum volume amount for consumption and the licence reliabilities stated in Part 5 Clause 22 of this Plan have been determined based on historic climatic data only and do not consider the possible effect of climate change on the long term availability of water from Tindall Limestone Aquifer (Mataranka);
      ii. At such times when this Plan is reviewed as specified in Part 6 Section 28, the period of record will be extended to include the latest climatic data and may take into account the effects of predicted climate change; and
      iii. While the plan does not directly consider the possible effects of climate change, the process of announced allocations (Part 5 Clause 26) will be able to protect the environmental and Indigenous cultural values on an annual basis if there is a reduction in recharge due to climate change.

3) Protection of Indigenous environmental and cultural values
   a) This Plan assumes that provision of recharge for environmental protection will also maintain the condition of places that are valued by Indigenous people for cultural purposes;
   b) Despite subclause a), it is recognised that cultural flow requirements may not align entirely with environmental requirements and any research that becomes available that assists in the identification of cultural flow requirements will be considered during the review of the plan.

Note: CSIRO research report ‘Indigenous Water Cultural Values of the Mataranka and Roper River Area’ will be completed during the life of this plan and outcomes from the report will be considered during the review of this Plan if available at that time.

8. Description of the Tindall Limestone Aquifer (Mataranka)

1) Hydrogeology and recharge
   a) The water to which this plan applies is contained within the fractured and cavernous carbonate formation called the Tindall Limestone Aquifer. While the Tindall Limestone Aquifer underlies much of the Katherine region, this plan is concerned with the localised
part of the Tindall Limestone Aquifer around the town of Mataranka. As stated in Clause 8 (2) this is called the Tindall Limestone Aquifer (Mataranka) and is depicted in Schedule 3.

b) The majority of discharge from the Tindall Aquifer in this region occurs into the Roper River around the Mataranka Township, via springs and discharge zones as shown in Schedule 4.

2) Water to which this Plan applies

a) This Plan applies to the extent of the Tindall Limestone aquifer within the Water Allocation Planning Area shown in Schedule 3.

Note: The exact boundaries of the Plan area are held in digital electronic form and can be reduced or enlarged to display additional detail.

b) This Plan applies to management of water contained within the Tindall Limestone Aquifer within the boundary shown in Schedule 3 (the Tindall Limestone Aquifer (Mataranka)).

c) This Plan does not apply to the management of any other groundwater resources (including Jinduckin Formation, Bukalorkmi Sandstone and Antrim Plateau Volcanics) or to surface water resources supplied from the discharge of the Tindall Limestone Aquifer (Mataranka) within the planning area.

Note: It is the Government’s intention that the stated outcomes of this plan will be considered when decisions are being made on surface water extraction applications.

d) If, following the commencement of this Plan, a Water Allocation Plan is declared for a water resource connected to the Tindall Limestone Aquifer (Mataranka), it shall be, as far as practical, complimentary to the objectives and strategies stated in this Plan.

3) Modelling the behaviour of the Tindall Limestone Aquifer (Mataranka)

a) The computerised numerical models FEFLOW and MIKE 11 (the model or modelling) were used to simulate the behaviour of the Tindall Limestone Aquifer (Mataranka) and its interaction with the Roper River using historic rainfall records from 1900-2008. The model is used to:

i. Estimate the long term annual average recharge to the Tindall Limestone Aquifer (Mataranka).

ii. Predict the surface water flows for the Roper River and groundwater levels for the Tindall Limestone Aquifer (Mataranka) at specific sites for the proceeding water accounting year to determine extraction limits as described in Part 5 Section 25.

Note: In this Plan, modelling is used as the basis for determining annual and instantaneous discharge for environmental, Indigenous cultural and other instream public benefit outcomes as specified in Part 4, and the annual extraction limit as specified in Part 5 Clause 25. The model used for these annual calculations may be refined to better reflect actual conditions as required resulting from knowledge improvements at the time of the review.

The report ‘An integrated surface – groundwater model of the Roper River Catchment, Northern Territory (Parts A to C) ’ provides further detail on the creation and specifications of the model.

b) The average annual recharge to the Tindall Limestone Aquifer (Mataranka) is estimated to be 130 000 megalitres (ML), based on the period 1900 to 2008.

Note: Based on historic climatic data, stream gauging data, calculated stream flows and hydrologic modelling as described in Part 2 Clause 8.3, the long term annual average recharge was calculated at 129 030ML/year. While understanding this is the best known science, there are small margins of error in modelling so for planning purposes the volume 130 000ML is used. The ‘Tindall Limestone Aquifer (Mataranka) Water Resources Report (2010)’ provides further detail on the hydrogeology, recharge characteristics and modelling of this water source.

9. Groundwater dependent ecosystems

a) This Plan makes provision to protect groundwater dependent ecosystems that depend on Tindall Limestone Aquifer (Mataranka). Specifically, this Plan ensures that the majority of the annual recharge remains in the environment to ensure that there is minimal risk to the identified Groundwater Dependent Ecosystems (GDEs) in the Plan area.
Note: The ‘GDE Literary Review for the Mataranka Region’ provides further detail about ecosystems that depend on groundwater from the Tindall Limestone Aquifer (Mataranka) and how they were identified.

10. Regional population and employment profile
   a) The Australian Bureau of Statistics 2006 census estimates that 524 people reside in the Mataranka Region of which about 67% identified themselves as Indigenous.
   b) Employment in the Mataranka and Jilkminggan region is based on the pastoral and agricultural industry, tourism (including campgrounds and other tourism services), general and service industries, mining (including limestone mining and processing) and local, Territory and Commonwealth government agencies.

11. Consultation
   a) Prior to public exhibition, formal consultation on the development of this plan was done through the Mataranka Water Advisory Committee (MWAC), which was appointed on the 11 July 2008 under section 23 of the Water Act. The first meeting occurred on the eighth of August 2008 and the committee met several times subsequently.

   Note: Details of the complete consultation process are available in the ‘Consultation Report for the Tindall Limestone Aquifer (Mataranka) Water Allocation Plan (2010)’.

12. Benefits associated with the Tindall Limestone Aquifer (Mataranka)

1) Environmental and cultural
   a) Water from the Tindall Limestone Aquifer (Mataranka) contributes to the perennial nature of surface water flows in the Mataranka area, including the base flows to the Roper River, which is critical for maintaining:
      i) environmental health to the Roper River and the springs which are valued by the Mataranka and the wider territory population;
      ii) the condition of places that have significance to Indigenous people for cultural and subsistence purposes; and
      iii) other instream public benefit outcomes, including swimming and fishing.

2) Public water supply
   a) Water from the Tindall Limestone Aquifer (Mataranka) supplies the reticulated public system for both Mataranka and Jilkminggan townships. The reticulated system is administered by the NT Power and Water Corporation, the subsequent licensing requirement is administered by the Water Resources Branch of the Department of Natural Resources, Environment, The Arts and Sport.

3) Rural stock and domestic and other small volume groundwater uses
   a) Within this plan water for rural stock and domestic is identified as:
      i. Water from the Tindall Limestone Aquifer (Mataranka) used for domestic purposes and watering of stock on rural properties within the Plan area as authorised under section 14 the Water Act
      ii. Water from the Tindall Limestone Aquifer (Mataranka) where total annual use for all bores on a property does not exceed 5ML/year.

   Note: An exemption to the Water Act was declared for the Daly Roper Water Control District on 24 June 2009 to allow water to be extracted from this water source without a groundwater extraction licence for any purpose providing annual use per property is less than 5ML. This does not limit the taking of water for stock and domestic purposes as authorised under section 14 of the Water Act.

4) Agriculture, horticulture and industry
   a) The greatest consumptive demand for water from the Tindall Limestone Aquifer (Mataranka) is for irrigated agriculture and horticulture. Crops irrigated, or intended to be irrigated, from the Tindall Limestone Aquifer (Mataranka) include mangoes, melons, forage sorghum and peanuts.
b) Water from the Tindall Limestone Aquifer (Mataranka) is used for the irrigated watering of grassed areas for camp grounds which play a key role in the tourism industry in Mataranka, which provides the majority of economic benefits. As well as economic benefits tourism provides other values to the area with the ability to provide employment and attract people to the live in area.

c) Water from the Tindall Limestone Aquifer (Mataranka) is used at small industrial sites including limestone mining and processing.

13. Beneficial uses

a) In accordance with section 22B of the Water Act and Clause 12, this Plan allocates water within the estimated sustainable yield to the following beneficial uses:

i. environment and cultural
   
   Note: Water allocated to the beneficial use of environment and cultural, is referred to in this Plan as water for environmental, Indigenous cultural and other instream public benefit outcomes and is specified in Part 4 in terms of a percentage of the annual recharge to the aquifer.

ii. public water supply

iii. aquaculture, agriculture and industry
   
   Note: Water allocated to the beneficial use of public water supply and aquaculture, agriculture and industry is licensed as specified in Part 5 Clause 20.

iv. rural stock and domestic
   
   Note: Water allocated for the beneficial uses of rural stock and domestic is specified under Part 5 Clause 19.

14. Current licences and extraction

a) Prior to the commencement of this Plan, water extraction from this water source was permitted as outlined in Table 1.

Table 1: Permitted volumes of extraction prior to the commencement of this Plan (as reported/estimated for the 2009/2010 water accounting year)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Licensed volume (ML)</th>
<th>Estimated use (ML)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, industry, aquaculture</td>
<td>4 848</td>
<td>3 506</td>
</tr>
<tr>
<td>Public water supply</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>Rural stock and domestic</td>
<td>0</td>
<td>540</td>
</tr>
</tbody>
</table>

Note: It is understood that there is already an amount of demand for water for proposed development. It would be expected that the complete allocation of the consumptive pool will occur before the expiration of this plan.

Groundwater used for rural stock and domestic purposes does not require a water extraction licence. Small volume groundwater use (<5ML/year/property) for any other purpose does not require a water extraction licence in accordance with an exemption declared on 24 June 2009 for the Daly Roper Water Control District under Section 47 of the Water Act.

Volumes for stock and domestic bores were estimated at a total of 4.5ML/year at 4 people/house at 380 litres/person/day which is 554 800 litres or 0.55ML/year in addition to 0.5ha of lawn at 4.0ML/year using Mataranka crop water use requirements as advised by the NT Department of Resources.

If total groundwater use on a property exceeds 5ML/year then all bores on the property will need to be licensed.

15. Vision
   a) The waters of the Tindall Limestone Aquifer (Mataranka) are shared between all users in a sustainable, reliable and equitable manner.

16. Outcomes, objectives, strategies and performance indicators

Table 2: Outcomes, objectives, strategies and performance indicators

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Objectives</th>
<th>Strategies</th>
<th>Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preservation of the water quality, surface water flows and</td>
<td>Protect the Tindall Limestone Aquifer (Mataranka) GDEs by providing the</td>
<td>Initially limit the long term maximum extraction limit (the consumptive pool)</td>
<td>Amount of annual recharge from the Tindall Limestone Aquifer (Mataranka) to the Roper</td>
</tr>
<tr>
<td>groundwater levels around Mataranka, including Roper River and Rainbow</td>
<td>majority of recharge on a long term and annual basis into the Tindall</td>
<td>to 15% of the long term average recharge and limit issue of licences</td>
<td>River relative to other years and annual extraction from the Tindall Limestone</td>
</tr>
<tr>
<td>and Bitter springs, which provide environmental, Indigenous cultural</td>
<td>Limestone Aquifer. (Clause 20 and 25)</td>
<td>consistent with this. (Clause 18)</td>
<td>Aquifer.</td>
</tr>
<tr>
<td>and other instream public benefits.</td>
<td>Increase certainty of environmental water requirements. (Part 4 and Part 7)</td>
<td>Annual extraction limits to be 20% of the seasonal recharge calculated at the</td>
<td>Calibration and review of model used for calculating recharge and aquifer behaviour.</td>
</tr>
<tr>
<td></td>
<td>Protect water quality within the Tindall Limestone Aquifer (Mataranka) and</td>
<td>beginning of each dry season using modelled data. (Clause 25)</td>
<td>Completion of studies on environmental water requirements and impacts of increased</td>
</tr>
<tr>
<td></td>
<td>the Roper River against degradation through extraction or bore construction.</td>
<td>Commission further studies to improve understanding of the specific</td>
<td>limits to extraction.</td>
</tr>
<tr>
<td></td>
<td>(Clause 21)</td>
<td>environmental water requirements that maintain ecological processes in the</td>
<td>Level of water quality monitoring in the Roper River and Tindall Aquifer assessed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roper River, and the impacts of increases to the consumptive pool limits and</td>
<td>against parameters developed in the implementation strategy to this Plan.</td>
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<tr>
<td></td>
<td></td>
<td>annual extraction, to inform the plan review (Part 6)</td>
<td></td>
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<td></td>
<td></td>
<td>Provide recommendations to the Controller to provide an increase protection of</td>
<td></td>
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<td></td>
<td></td>
<td>the environment. (Clause 21)</td>
<td></td>
</tr>
<tr>
<td>Outcomes</td>
<td>Objectives</td>
<td>Strategies</td>
<td>Performance Indicators</td>
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<tr>
<td>2. Development of agriculture, sustainable commercial tourism, and other water consumptive industries that form a significant part of the Mataranka and surrounding area’s economy.</td>
<td>Allow issue of licences to extract water from the Tindall Limestone Aquifer for current and new consumptive use, with the objective of achieving the following long term licence reliability levels (Part 5 Clause 22): General category licences able to access their full licensed entitlement in a minimum 55% of years Priority category licences able to access their full licensed entitlement in a minimum 80% of years. Public water supply category licences able to access their full licensed entitlement in 100% of years. Encourage development of licence entitlements issued. (Clause 21) New or expanded commercial developments to be able to obtain access to water without impacting existing water users. (Part 5) Support the development of smaller scale water use enterprises (Clause 21)</td>
<td>Current development to be licensed and new licences granted subject to consumptive pool limits, with limits placed on issue of licences of specific reliability categories. (Clause 21) Provide sustainable growth by recommending procedures that grant licences for proposed new development in a staged manner. (Clause 21) Temporary and permanent trading to be made available subject to application. (Clause 27) 500 ML/year of the consumptive pool is set aside for allocation to new licences with entitlement less than 100ML/year per new licence, with such licences to be priority category. (Clauses 20 and 21)</td>
<td>Percentage of each beneficial use and licence reliability category being licensed and used. Announced allocations for each category of water licence. Reliability of licence volume Water trading activity.</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Objectives</td>
<td>Strategies</td>
<td>Performance Indicators</td>
</tr>
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</tr>
<tr>
<td>3. Provision of a water supply, with sufficient and reliable volume, for essential services to Mataranka and Jilkminggan towns as well as water for stock and domestic purposes to rural properties.</td>
<td>To provide access to sufficient water for rural stock and domestic use, plus additional amount should there be growth in lawful exercise of water rights under Section 14 or the Section 47 exemption. (Part 5 Clause 19) Mataranka and Jilkminggan to have access to sufficient water via dependable and secure licences from the Tindall Limestone Aquifer (Mataranka). (Part 5 Clause 20)</td>
<td>Water made available under this Plan to rural properties in accordance with Section 14 and Section 47 of the Act. (Part 5 Clause 19) Monitor for growth in requirements for rural stock and domestic and other small volume groundwater. (Part 7 Clause 30) Public water supply category licences to have first priority in allocation of water each year. (Part 5 Clause 26) No new licences will be given to take water from bores equipped to supply &gt;20L/s that are within 100m of an existing bore. (Part 5 Clause 21).</td>
<td>Estimated volume of water being extracted for rural stock and domestic and other small volume groundwater uses. Amount of restrictions, if any, in public water supply licences. Reports of contamination of bores/water or interference of normal bore operation.</td>
</tr>
<tr>
<td>4. Maintenance and support for traditional land use in the predominately Indigenous owned land surrounding the Mataranka Water Planning Area through the protection of culturally significant water dependent sites as well as providing access to water for commercial development.</td>
<td>Ensure sufficient water is available from the consumptive pool to satisfy identified requirements on Indigenous owned land. (Part 5 Clause 20) Undertake consultation and research to improve understanding of Indigenous water issues and relationships and options to address them</td>
<td>Set aside 25% of the consumptive pool for Indigenous Commercial Development. (Part 5 Clause 20) Continue partnerships with research organisations to improve knowledge of cultural water requirements. (Part 6 Clause 29)</td>
<td>Development of water reliant enterprises by Indigenous people. Volume of water rights held for or issued as licences under the Strategic Indigenous Reserve. Identification of Indigenous water dependent sites and completion of a methodology to quantify water requirements for Indigenous cultural purposes.</td>
</tr>
</tbody>
</table>
Part 4. Water for non-consumptive purposes

17. Water for environmental, Indigenous cultural and other instream public benefits

a) The amount available for environmental, Indigenous cultural and other instream public benefit outcomes for any water accounting year will be a minimum 80% of the recharge as calculated by the model based on the previous wet season’s (November 1 to April 30) recharge.

Note: The Roper River relies on recharge into the Tindall Limestone Aquifer (Mataranka) during the wet and subsequent discharge during the dry to maintain its perennial nature. The protection of this discharge is critical to maintain ecosystem function as well as to protect instream public benefit outcomes, including the social and cultural values intrinsically linked to the Roper River such as; fishing, boating, aesthetics and spiritual fulfilment. The quantity of flow needed for environmental purposes is not yet fully understood and as such, a conservative percentage of the annual recharge will be maintained for environmental purposes.

Part 5. Water for consumptive purposes

18. Consumptive pool

b) The maximum annual extraction of water for consumptive purposes (hereafter the consumptive pool) is 19 500ML/year, calculated as 15% percentage of the long term annual average modelled recharge within Tindall Limestone Aquifer (Mataranka) (130 000ML/year) as stated in Part 2 Clause 3.

19. Water for rural stock and domestic and other small volume groundwater uses

a) At the commencement of this Plan the estimated extraction of water from the Tindall Limestone Aquifer (Mataranka) for rural stock, domestic and other small volume groundwater uses (groundwater use for any purpose not exceeding 5ML/year) is 540ML/year (the rural stock and domestic demand).

b) 540ML/year is allocated from the consumptive pool for rural stock and domestic demand and this is taken into account when determining annual announced allocations under Part 5 Clause 26.

c) An increase in water required for rural stock and domestic or other small volume groundwater uses may occur as a result of increased landholdings overlying the Tindall Limestone Aquifer (Mataranka), or as a result of an increased exercise of rights to access groundwater for stock and domestic purposes under section 14 of the Act. The estimate of 540ML/year is expected to accommodate any growth during the lifetime of the Plan.

d) A revised estimate of extraction of water for rural stock, domestic or other small volume purposes will be prepared for the review of the plan. Should the allowance made here prove insufficient the plan will be adjusted as needed to accommodate it.
20. Water for licensed use

a) The maximum annual extraction of water available for licences (the licence pool) is the remaining consumptive pool once the requirements of the rural stock and domestic demand are met, being 18 960 ML/year.

b) 4 875 ML/year of the licence pool is reserved for a Strategic Indigenous Reserve (SIR). This represents 25% of the consumptive pool.

c) 500 ML/year of the licence pool is set aside for future applications with licence entitlements under 100 ML/year.

d) As stated in Part 2 Clause 13, water is allocated to beneficial uses. Upon the commencement of this Plan, groundwater extraction licences can be granted for the following beneficial uses, via processes determined by the Controller.

i. public water supply;

ii. agriculture;

iii. aquaculture; and

iv. industry.

e) In granting licences within the plan area, the Controller will take into account the rules stated in Part 5 and the requirements of the Water Act.

Note: In making a decision upon an application for an extraction licence, section 90 of the Water Act sets out what factors the Controller should take into account.
21. Consideration for granting licences

a) Under the *Water Act* the Controller must consider factors in section 90 of the *Water Act* before granting an extraction licence to a user.

b) These factors are outlined in section 90 of the *Water Act* and include “(ab) any water allocation plan applying to the area in question” and “(k) other factors the Controller considers should be taken in account or that of that the Controller is required to take into account under an other law in force in the Territory”. Understanding this, the following factors are to be considered by the Controller when granting a licence in the Mataranka Planning Area (in addition to requirements of the *Water Act*):

i. Licences to specify an annual volume.

ii. The total of all licence entitlement relating to the Tindall Limestone Aquifer (Mataranka) may not exceed the licence pool specified in clause 18.

iii. Licences entitlements to be estimated based on the water requirements of the actual or proposed water use, using either the crop water use model as stated within Schedule 5, best industry estimates or, for public water supply, that which is needed to adequately supply water for the estimated future growth in population over 10 years.

iv. Licences to specify a reliability category in accordance with clause 22.

v. Licences for the purpose of public water supply to specify public water supply reliability category.

vi. Licences to specify that the amount of water that can be extracted in a year under the licence is no more than the licence entitlement volume multiplied by the announced allocation percentage, determined each year as set out in clause 26.

vii. Licences to specify a monthly limit on extraction of 30% of the annual announced allocation unless approved by the Controller.

viii. Licences to specify the bores from which water may be taken under the licence.

ix. Licences will not usually be granted to take water from bore/s constructed within 1km of the Roper River when the bore/s are equipped to supply in excess of 20L(s).

x. Licences will not usually be granted to take water from bore/s equipped to pump in excess of 20L(s) that are within 100m of an existing operational bore.

xi. The Controller may, on application by a licensee, reduce the distance(s) specified in subclauses (ix) or (x) if studies undertaken by the licensee, and assessed as adequate and approved by the Controller, demonstrate minimum potential for impact on other users or spring discharge and location, as well as the other environmental and instream public benefit outcomes provided for in this Plan.

xii. Rules surrounding the issue of water licences for that part of the licence pool designated as a SIR will be developed in partnership with relevant agencies and Indigenous people, and documented in the implementation strategy.

c) Water extraction licensed prior to the commencement of the plan will considered by the Controller to be licensed for the same amount with priority reliability category.

*Note: It is the intention here for licences to be approved through the normal licensing process. The licence reliability category will be based upon information gathered during the licence application. It will also be a requirement of the licensing process for the applicant to submit a Property Development Plan.*
d) The following table is a recommendation on how licence applications are to be processed once the plan is declared:

**Table 3: Process for granting licences**

<table>
<thead>
<tr>
<th>Information gathered from licence application</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development</strong></td>
<td><strong>Assessed Volume (ML)</strong></td>
</tr>
<tr>
<td>As deemed by the Controller to have been completed prior to the Plan being declared</td>
<td>As assessed in Clause 21 (a)(iii)</td>
</tr>
<tr>
<td><strong>Yes</strong></td>
<td></td>
</tr>
<tr>
<td>&lt; 5</td>
<td>Exempt from licensing, no licence required (see Clause 12)</td>
</tr>
<tr>
<td>≥ 5</td>
<td>Licence may be granted sufficient to meet the requirements of that development</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td></td>
</tr>
<tr>
<td>100 – 1 000</td>
<td>Licence applications processed through provisions set out in the Water Act and this Plan</td>
</tr>
<tr>
<td>&lt; 5</td>
<td>Exempt from licensing, no licence required (Note at clause 12.3)</td>
</tr>
<tr>
<td>5 - 100</td>
<td>Licence applications processed through provisions set out in the Water Act and this Plan. If approved a licence will be issued by the Controller with volume for the assessed amount. Any increase on a previously granted licence will require the applicant to apply and be processed as per the Water Act. An application will be required to demonstrate to the satisfaction of the Controller that development has occurred to efficiently use all existing licence entitlement.</td>
</tr>
<tr>
<td>&gt; 1 000</td>
<td>As above, except that the maximum additional volume to be granted at any one time is 1 000ML per NT land portion(s) on which the water is to be used.³</td>
</tr>
</tbody>
</table>

**Note 1:** Water extracted under Clause 12 3) is excluded from reliability categories and announced allocations and can expect to be able to access their maximum annual volume in all but emergency circumstances.

**Note 2:** The aim of this process is to have 500ML reserved for prioritising users between 5 and 100ML. The first 500ML/year of approved applications will be allocated priority reliability. Once 500ML has been granted any licence will be treated as a 100 – 1 000ML licence and granted a general licence.

**Note 3:** The aim of this process is to provide an incentive to sustainable growth. Users will be required to develop the first 1 000ML before having access to an increased entitlement/allocation. A staged increase will also give a greater opportunity for any effects to the environment to be detected.
22. Licence reliability categories

a) Reliability represents the percentage of years that a licence holder can expect to access their maximum entitlement volume, assuming a similar rainfall regime to the historic period of rainfall record from 1900-2008.

b) Licences may be granted with one of the following 3 reliability categories:

Note: Until the consumptive pool is fully allocated, reliabilities will vary. The Plan estimates a minimum reliability for each licence, depending on the specified reliability category.

i. General category, having a minimum reliability of 55%.

Note: If the consumptive pool is not fully allocated, the licence reliability will be higher than 55%. If all water in the consumptive pool is fully allocated and utilised, general licence holders could expect to be able to access their maximum annual volume in all but dry years.

ii. Priority category, having a minimum reliability of 80%.

Note: If the consumptive pool is fully allocated and utilised, priority licences holders could expect to be able to access their maximum annual volume in all but very dry years.

iii. Public water supply category, having a reliability of 100%.

Note: Public water supply licence holders can expect to be able to access their maximum annual volume in all but emergency circumstances.

23. Subdivision

a) A subdivision of land subject to a water extraction licence is likely to result in the need for the licence to be varied. There may also be the need for a replacement licence or licences to be issued.

The need for variations, or replacement licences, will depend upon the details of the proposed subdivision and will therefore be assessed by the Controller on a case by case basis. The types of steps that may be necessary following subdivision include:

i. Variations of the existing licence and/or the issue of new licences, to reflect the fact that bores may now be located on legally distinct properties;

ii. Re-evaluation and redistribution of the extraction entitlements under the original licence according to the intended use of the subdivided lots; and

If a subdivision results in the need for a licensed entitlement greater than under the original licence, then an application will be necessary.

Note: In most cases these types of adjustments would be undertaken by the Controller following consultation with the original licensee. The Controller would rely upon the power to amend and modify licences under section 93 of the Act, and to the extent it is necessary to issue new licences, upon the power to do so (on own motion) under section 60.
24. **Risk**
   
a) It must be understood by all water users in the Northern Territory
   
i. that their rights to extract and use water, whether under the Act (for example for stock and domestic purposes) or under a licence, are not, and cannot be, guaranteed by the Territory;
   
ii. that they bear the risks of any reductions to water availability under their licence resulting from:
   
   (a) seasonal or long term changes in climate; and
   
   (b) periodic natural events such as drought or contamination.
   
iii. that they bear the risk of reduced water availability under a water licence arising as a result of bona fide improvements in the knowledge about the water sources capacity to sustain particular extraction levels.

*Note: To understand the purpose of the stated risk, please see the Background Document part 10 Section 21.*

25. **Annual extraction limits**
   
a) The maximum annual extraction limit (the consumptive pool) under this Plan is 19,500ML/year. This includes any extraction that is authorised to take place without a licence (see Part 5 Clause 18).
   
b) Notwithstanding (a) the extraction limit for the Tindall Limestone Aquifer (Mataranka) is dynamic and will vary from year to year in response to the amount of recharge to the water resource.
   
c) The amount available for extraction in any water accounting year (the annual extraction limit) will be the lesser of the maximum annual extraction limit and 20% of the seasonal recharge. The seasonal recharge will be calculated by modelling based on the rainfall during the previous year’s wet season (November 1 to April 30) and groundwater levels.
26. Announced allocations

*Note: Announced allocations are necessary to adjust the volume of water extraction from the Tindall Limestone Aquifer (Mataranka) to comply with varying annual extraction limits resulting from natural variations in rainfall.*

1. Accounting

a) The accounting for announced allocations begins May 1 and continues for 12 months (water accounting year).

b) The carrying over of unused announced allocations from one water accounting year to the next is not permitted.

2. General rules

a) The announced allocation is the percentage of the annual licensed volume that may be accessed (extracted or traded) each year.

b) Announced allocations shall be determined prior to the beginning of each water accounting year to ensure total extractions from the Tindall Limestone Aquifer (Mataranka) remain within the extraction limits specified in this Plan.

3. Criteria for announcing allocations

a) If the annual extraction limit is greater than or equal to the sum of all licence entitlement volumes and rural stock and domestic demand, the announced allocation for each individual licence will be 100% of the licence entitlement volume.

b) If the annual extraction limit is less than the sum of all licence entitlements and rural stock and domestic demand, but greater than or equal to the sum of licence entitlements of priority and public water supply category licences and rural stock and domestic demand, then:
   i. the announced allocation will be 100% of the licence entitlement for all priority and public water supply category licences; and
   ii. the announced allocation for general category licences will be a percentage of the licence entitlement, not exceeding 100%, as calculated by the following formula:
      \[(EL - PLV - PWS - S and D) / GLV = Allocation (%)\]
      Where:
      \[EL = Annual\ extraction\ limit\ volume\ (ML)\]
      \[PLV = Sum\ of\ priority\ category\ licence\ entitlement\ volumes\ (ML)\]
      \[PWS = Sum\ of\ public\ water\ supply\ category\ licence\ entitlement\ volumes\ (ML)\]
      \[S\ and\ D = rural\ stock\ and\ domestic\ demand\ as\ per\ clause\ 19\ (ML)\]
      \[GLV = Sum\ of\ general\ category\ licence\ entitlement\ volumes\ (ML)\]

c) If the annual extraction limit is less than the sum of licence entitlements of priority and public water supply category licences and rural stock and domestic demand, but greater than or equal to the sum of licence entitlements of public water supply category licences, then:
   i. The announced allocation will be 100% of the licence entitlement for all public water supply category licences; and
ii. The announced allocation for priority category licences will be a percentage of the maximum licence entitlement, not exceeding 100%, as calculated by the following formula:

\[(\text{EL} - \text{PWS} - \text{S and D}) / \text{PLV} = \text{Allocation (\%)}\]

Where:
- \(\text{EL}\) = Annual extraction limit volume (ML)
- \(\text{PLV}\) = Sum of priority category licence entitlement volumes (ML)
- \(\text{PWS}\) = Sum of public water supply category licence entitlement volumes (ML)
- \(\text{S and D}\) = rural stock and domestic demand as per clause 19 (ML)

iii. The announced allocation for general category licences will be zero.

d) If the annual extraction limit is less than or equal to the sum of licence entitlement for all public water supply category licences and rural stock and domestic demand:

i. the announced allocation will be 100% of the licence entitlement for all public water supply demand; and

ii. the announced allocation for all other licences will be zero.

Note: Modelling of water extraction using historical data has shown that, given a repeat of the rainfall patterns of the last 108 years, an annual extraction limit this low would never occur. However, it is not inconceivable that it might occur in the future.

e) Licensees shall be notified of the announced allocations in writing prior to the commencement of the water accounting year; a notice will be placed in a newspaper circulating in the general Mataranka community; and a report which includes reasoning for the decision, shall be available on the Departmental website.

Note: An explanation of the allocation calculation process in the form of a table is available in ‘Background Document for Water Allocation Plan for the Tindall Limestone Aquifer (Mataranka)’.

27. Water trading

1) General

a) The right to take or use water under a licence granted in accordance with this Plan is able to be traded in part or in full in accordance with the following provisions. The procedure to be followed when trading depends upon whether the trade is intended to be temporary or permanent.

2) Temporary trades

a) Temporary trades are trades of announced allocations on an annual basis. Such trades are only effective during the current water accounting year.

b) In situations involving a temporary trade to a person who already holds a water extraction licence, the Controller will issue that person with an ‘own motion’ licence (for the traded allocation) under section 60 of the Act. If the person does not already hold a licence, he or she will need to apply for a water extraction licence and the process in Part 6A of the Act will apply.

3) Permanent trades

a) Under a permanent trade a licensee’s entitlements for the remainder of his or her licence are traded to another person. The trade may relate to the entire licensed volume or a part of it.

b) An applicant for a permanent trade will need to apply for a water extraction licence and the process in Part 6A of the Act will apply.

Note: It is not expected that permanent trades will occur until the consumptive pool is completely allocated.
Part 6. Review of this plan

28. General
   a) In accordance with section 22B of the Act, the Minister must ensure that a review of this Plan (the review) is conducted at intervals not longer than 5 years. Amongst other things, the review may:
      i. consider the extent to which the Plan has achieved its outcomes and objectives;
      ii. consider the impacts of proposed increases in the consumptive pool as set out in Table 4 in clause 29(a);
      iii. be informed by public submissions as well as any Territory or regional policies or agreements coming into force after the initial declaration and with relevance to this Plan;
      iv. be informed by the outcomes of the monitoring program as well as consultation with the broader Mataranka Community;
      v. make recommendations to the Minister in relation to changes to this Plan.

29. Research and investigation
   a) The Department of Natural Resources, Environment, The Arts and Sport will use its best endeavours to ensure that following studies are to be undertaken during the term of the Plan:
      i. A report identifying Indigenous water related cultural values of the Mataranka and Roper River Area.
      ii. A report setting out a methodology to quantify water requirements for Indigenous cultural purposes.
      iii. A report providing more detailed assessment of the environmental water requirements for the Tindall Limestone Aquifer (Mataranka) and the Roper River and the potential to, and likely impacts of an, increase the consumptive pool as per the scenario’s set out in Table 4.
      iv. Calibration and review of model used for calculating recharge and aquifer behaviour.
      v. A report assessing the impacts on environmental, Indigenous cultural and other instream public benefit outcomes including that of sites identified in CSIRO’s *Indigenous Water Cultural Values of the Mataranka and Roper River Area* report by increasing the following:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Consumptive Pool Based on long term average of 129 030ML</th>
<th>Announced Allocation Percent of annual recharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>% ML</td>
<td>20 %</td>
</tr>
<tr>
<td>A</td>
<td>20 ML 26 000</td>
<td>20 %</td>
</tr>
<tr>
<td>B</td>
<td>25 ML 32 500</td>
<td>25 %</td>
</tr>
</tbody>
</table>

Table 4: Increase of the consumptive pool and percentage of the annual recharge for the consumptive pool

b) The reports are to be published on the Department’s internet webpage.
Part 7. Monitoring and implementation

30. Monitoring and reporting
   a) The monitoring and reporting of the performance indicators specified in Part 3 Clause 16 shall be undertaken by the Department of Natural Resources, Environment, the Arts and Sport as specified in Appendix 1. All annual reporting as described within Appendix 1 must be, when possible, published in conjunction with the announced allocations (Clause 26 (e)).

31. Implementation of this Plan
   a) The provisions of this Plan will be implemented after the commencement of this Plan.
   b) The Department of Natural Resources, Environment, The Arts and Sport will establish an Implementation Strategy for this Plan that outlines how the objectives and strategies of this Plan will be achieved.

Note: It is intended that a Water Allocation Plan for the Tindall Limestone Aquifer (Mataranka) Implementation Strategy will be developed as a separate process to be completed following the formal declaration of this Plan.
Schedule 1: Glossary of terms

**Announced allocation**: is the percentage of the annual licensed volume that may be accessed (extracted or traded) each year.

**Base flow**: refers to the part of total flow in a river or stream derived from groundwater discharge.

**Climatic variability**: refers to changes in discharge from the Tindall Limestone Aquifer to the Roper River within the Plan area resulting from a change in climatic conditions from normal to the area.

**Consumptive pool**: the maximum annual extraction of water for consumptive purposes.

**Cumec**: cubic meters per second - a unit of measurement used to describe flow in surface water systems; one cumec is equal to one thousand litres per second.

**Dry season** the period May 1 to October 31 during which there is no to very little rainfall.

**Extraction limit**: refers to the volumetric limit of water made available for extraction from the system.

**Licence entitlement**: the annual volume specified on a water licence, which represents the share of the consumptive pool allocated to the licence.

**Licence pool**: the maximum annual extraction of water allowed under water licences.

**Licence reliability category**: refers to a licence group for which the rules relating to annual allocation announcements are the same.

**Numerical model**: refers to a mathematical representation of a real physical system intended to mimic the behaviour of that physical system, allowing description about empirical data and prediction about untested states of the system.

**Reliability**: for a licence category is the percentage of years during the simulated period when all licences of a licence reliability category would receive a hundred percent of licensed entitlement as an announced allocation, as determined using a numerical model of the Tindall Aquifer using climatic data from 1900 to 2008, and assuming all licences are fully developed.

**Rural stock and domestic demand**: the estimated water requirements for rural stock, domestic and other small volume groundwater uses that do not require a licence, as per clause 19.

**Strategic Indigenous Reserve (SIR)**: a portion of the consumptive pool set aside for future allocation to Indigenous People for indigenous economic development.

**Water accounting year** the year beginning May 1 and continues for 12 months.

**Wet Season** the period November 1 to April 30 where vast majority of rainfall occurs. Rainfall from this period directly relates to the following dry season surface water flows.

*Note: terms defined in Part 1 of the Act, have not been repeated in this Schedule. The same definitions detailed in the Act apply to this Plan.*
Schedule 3: Water allocation plan area

Legend
- Water Allocation Planning Area
- National Park
- Cadastral Property Boundary
- Daly Basin Aquifer Formations
  - Tindall Limestone
  - Jinduckin Formation
  - Bukalorkmi Sandstone
  - Antrium Plateau Volcanics

Spatial data sources described in Appendix 4 - References
Schedule 4: Key springs and discharge areas

Map Grid of Australia (MGA) Zone 53
Universal Transverse Mercator Projection
Horizontal datum: Geocentric Datum of Australia (GDA) 1994

Legend
- Springs
- Major drainage lines
- Minor drainage lines
- Discharge Zones
- Water Allocation Planning Area
- National Park
- Cadastral Property Boundary

Spatial data sources described in Appendix 4 - References
Schedule 5: Crop water use model standard figures
The crop water use model is a tool developed by the NT Government’s Department of Resources used to standardise crop uses for licence volume estimation. The volume will be estimated by using a megalitre amount for each hectare of crop. This is to ensure that licence allocations are processed in a fair and equitable way. The volumes will vary according to crop spacing, number of plantings and water efficiency levels. They should be used as a guide only. Any assessment will be done in discussion with the applicant. These values are subject to change as the model is improved.

1) Perennial crops

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Stage of growth</th>
<th>ML/Ha/Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avocados</td>
<td>Mature</td>
<td>10.1</td>
</tr>
<tr>
<td>Bananas</td>
<td>Mature</td>
<td>21.6</td>
</tr>
<tr>
<td>Citrus</td>
<td>Mature (5+ yrs)</td>
<td>9.8</td>
</tr>
<tr>
<td>Leucaena</td>
<td>1 yr</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>2 yr</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>3 yr</td>
<td>7.4</td>
</tr>
<tr>
<td>Mahogany Trees</td>
<td>1 yr</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>2 yr</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>3 yr</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>4 yr</td>
<td>0.0</td>
</tr>
<tr>
<td>Mangoes</td>
<td>1 yr</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>2 yr</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>3 yr</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>4 yr</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>5 yr</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>6 yr</td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>Mature (7+ yrs)</td>
<td>8.8</td>
</tr>
<tr>
<td>Paw Paws</td>
<td>Mature</td>
<td>12.5</td>
</tr>
</tbody>
</table>
2) **Annual crops**

<table>
<thead>
<tr>
<th>Crop type</th>
<th>Growing time frame</th>
<th>ML/Ha/Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhodes Grass</td>
<td>March – Dec</td>
<td>12.1</td>
</tr>
<tr>
<td>Forage Sorghum/Millet</td>
<td>April – Nov</td>
<td>11.1</td>
</tr>
<tr>
<td>Lawn</td>
<td>May – Dec</td>
<td>9.6</td>
</tr>
<tr>
<td>Lawn</td>
<td>March – Nov</td>
<td>8.1</td>
</tr>
<tr>
<td>Lucerne</td>
<td>March – Nov</td>
<td>12.5</td>
</tr>
<tr>
<td>Maize</td>
<td>April – Aug</td>
<td>7.0</td>
</tr>
<tr>
<td>Melons</td>
<td>Mar– May</td>
<td>2.9</td>
</tr>
<tr>
<td>Melons</td>
<td>April – June</td>
<td>2.9</td>
</tr>
<tr>
<td>Melons</td>
<td>May – July</td>
<td>2.9</td>
</tr>
<tr>
<td>Melons</td>
<td>June – Aug</td>
<td>3.4</td>
</tr>
<tr>
<td>Melons</td>
<td>July – Sept</td>
<td>4.0</td>
</tr>
<tr>
<td>Melons</td>
<td>Aug – Oct</td>
<td>4.6</td>
</tr>
<tr>
<td>Melons</td>
<td>Sept – Nov</td>
<td>4.0</td>
</tr>
<tr>
<td>Nursery/Shadehouse</td>
<td>N/A</td>
<td>1.9 (0.1ha)</td>
</tr>
<tr>
<td>Onions</td>
<td>Apr – Aug</td>
<td>5.4</td>
</tr>
<tr>
<td>Onions</td>
<td>May– Sept</td>
<td>6.0</td>
</tr>
<tr>
<td>Peanuts</td>
<td>Mar – Aug</td>
<td>7.4</td>
</tr>
<tr>
<td>Peanuts</td>
<td>April – Sept</td>
<td>8.1</td>
</tr>
<tr>
<td>Peanuts</td>
<td>May– Oct</td>
<td>8.9</td>
</tr>
<tr>
<td>Peanuts</td>
<td>May – Nov</td>
<td>10.4</td>
</tr>
<tr>
<td>Potatoes</td>
<td>16 weeks</td>
<td>4.7</td>
</tr>
<tr>
<td>Potatoes</td>
<td>18 weeks</td>
<td>5.8</td>
</tr>
</tbody>
</table>

**Schedule 6: Location of documentation**

The maps created for this Plan may be inspected at:

Darwin Head Office  
Department of Natural Resources, Environment, The Arts and Sport  
Goyder Centre, Chung Wah Terrace  
PO Box 496, Palmerston NT 0830  
Phone: 08 8999 4892  
Fax: 08 8999 4403

Katherine Regional Office  
Department of Natural Resources, Environment, The Arts and Sport  
32 Giles Street, Katherine  
PMB 123, Katherine NT 0852  
Phone: 08 8973 8115  
Fax: 08 8973 8122
### Appendix 1: Monitoring program

The monitoring program for this Plan will be finalised in an implementation strategy to this Plan. The monitoring programs presented in the following table may be reviewed and expanded during the development of the implementation strategy.

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Related Outcomes</th>
<th>As Measured By</th>
<th>Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modelled amount of annual recharge and subsequent extraction limit from the Tindall Limestone Aquifer (Mataranka).</td>
<td>1</td>
<td>Modelled recharge over the life of the plan</td>
<td>Published online annually</td>
</tr>
<tr>
<td>Annual extraction from the Tindall Limestone Aquifer.</td>
<td>1</td>
<td>Metered extraction and estimates of other lawful extraction</td>
<td>Published online annually</td>
</tr>
<tr>
<td>Water quality in the Roper River and Tindall Aquifer.</td>
<td>1</td>
<td>Parameters to be determined</td>
<td>Published online annually</td>
</tr>
<tr>
<td>Completion of studies on environmental water requirements and impacts of increased limits to extraction.</td>
<td>1</td>
<td>Completion of environmental water requirements for the Tindall Limestone Aquifer (Mataranka) and the Roper River Report</td>
<td>Prior to Review (See Related Reports Appendix 2)</td>
</tr>
<tr>
<td>Licence entitlement granted and on issue for each beneficial use type and reliability category, compared to consumptive pool.</td>
<td>2</td>
<td>Records in water licence register</td>
<td>Published online annually</td>
</tr>
<tr>
<td>Announced allocations for each category of licence.</td>
<td>2</td>
<td>Public determinations</td>
<td>Published online annually</td>
</tr>
<tr>
<td>Water trading activity.</td>
<td>2</td>
<td>Number of trades occurred and volume traded</td>
<td>Published online annually</td>
</tr>
<tr>
<td>Estimated volume of water being extracted for rural stock and domestic and other small volume groundwater uses.</td>
<td>3</td>
<td>Estimations based on rural property development and population</td>
<td>Reports published online periodically.</td>
</tr>
<tr>
<td>Restrictions in town water supply.</td>
<td>3</td>
<td>Reported if occurs</td>
<td>Published online if occurs</td>
</tr>
<tr>
<td>Contamination or interference of bores.</td>
<td>3</td>
<td>Reports from bore users</td>
<td>Published online if occurs</td>
</tr>
<tr>
<td>Development of water reliant enterprises by Indigenous people.</td>
<td>4</td>
<td>Periodic assessment</td>
<td>Reports published online periodically.</td>
</tr>
<tr>
<td>Volume of water rights held for or issued from the SIR.</td>
<td>4</td>
<td>Records in water licence register</td>
<td>Published online if occurs</td>
</tr>
<tr>
<td>Identification of Indigenous water dependent sites and completion of a methodology to quantify water requirements for Indigenous cultural purposes.</td>
<td>4</td>
<td>Indigenous Water Cultural Values of the Mataranka and Roper River Area</td>
<td>Prior to Review (See Related Reports Appendix 2)</td>
</tr>
</tbody>
</table>
## Appendix 2: Related reports

<table>
<thead>
<tr>
<th>Report Name</th>
<th>Description</th>
<th>Author</th>
<th>Status</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tindall Limestone Aquifer (Mataranka) Water Resources Report (2010)</td>
<td>Outline of the water resource as understood during the development of the plan</td>
<td>NTG</td>
<td>Available/To be completed</td>
<td></td>
</tr>
<tr>
<td>Background Document for Water Allocation Plan for the Tindall Limestone Aquifer (Mataranka)</td>
<td>Information relating to the development of the Water Allocation Planning Process</td>
<td>NTG</td>
<td>Available/To be completed</td>
<td></td>
</tr>
<tr>
<td>Consultation Report for the Tindall Limestone Aquifer (Mataranka) Water Allocation Plan (2010)</td>
<td></td>
<td></td>
<td>To be completed in final plan</td>
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<tr>
<td>Water Allocation Plan for the Tindall Limestone Aquifer (Mataranka) Implementation Strategy</td>
<td>Information relating to the implementation of the Water Allocation Planning Plan</td>
<td>NTG</td>
<td>To be completed</td>
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<tr>
<td>Indigenous Water Cultural Values of the Mataranka and Roper River Area</td>
<td>Outlining of Indigenous water cultural values including sites of significance.</td>
<td>CSIRO</td>
<td>To be completed</td>
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<tr>
<td>Strategic Indigenous Reserve in Top End Planning Areas</td>
<td>NTG Policy for developing SIR for the Water Allocation Plans in the Northern Territory.</td>
<td>NTG</td>
<td>To be completed</td>
<td></td>
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<tr>
<td>Environmental water requirements for the Tindall Limestone Aquifer (Mataranka) and the Roper River.</td>
<td>Identification of specific environmental water requirements that maintain ecological processes in the Roper River and recommendations on consumptive pool.</td>
<td>NTG or commissioned report</td>
<td>To be completed</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3: References


Department of Resources, (2010). *Crop Irrigation Requirements template version 5.1 Ooloo Katherine and Ooloo Douglas Daly*

Faulks, J. (2001). *Roper River Catchment: An Assessment of the Physical and Ecological Condition of the Roper River and Its Major Tributaries*, Natural Resources Division Department of Lands, Planning and Environment, Katherine, NT


Data Sources (Spatial Data used in Maps and Figures)
Aquifers, Water Allocation Plan Areas, Water Control Districts:
Natural Resources Division, Dept of Natural Resources, Environment, The Arts and Sport (NRETAS)

Cadastre, Road Centrelines, Town locations:
Land Information Division, Dept Planning and Infrastructure (DPI)

Drainage Lines (Rivers, Creeks):
1:250,000 Geodata Topo 250K, Series 3
© Commonwealth of Australia (Geoscience Australia) 2006

Catchment Boundaries:
1:250,000 Australian Surface Water Management Areas
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