

Ooloo Water Advisory Committee
Meeting Record 4

18 January 2017 – 9.30am
Conference Room, 32 Giles Street, Katherine

Members Present

John Childs
Eddie Webber
Andrew O'Bree

Sam McBean

Trish Rigby

Warren de With
Lizzie Sullivan
Rob Lindsay

Chair

Community Member

Proxy for Malcom Baker

TFS Corporation, Water Extraction Licence Holder

NT Cattleman's Association representative, Water
Extraction Licence Holder

Proxy for Lorrae McArthur

Northern Land Council representative

AFANT Representative

Proxy for Mona Liddy - Traditional Owner

Maddaingya Malak Malak Ranger Program

Representative – present from 10.30am

Members Absent

Kate Peake
Simon Smith
Dick Perry
Phil Howie
Alison King
Lorrae McArthur
Mona Liddy
Malcom Baker

Peter Marks

Regional Development Australia Northern Territory

NT Farmers Association representative

Community Member, Water Extraction Licence Holder

Community Member, Water Extraction Licence holder

Aquatic Ecologist

Trish Rigby present as proxy

Lizzie Sullivan present as proxy

TFS Corporation, Water Extraction Licence Holder

Andrew O'Bree present as proxy

Horticulturist, Water Extraction Licence holder

Advisors Present

Gabby Yates

Water Planner, DENR

Observers

Pru Ducey

Minutes, DENR

1. OPENING

(John Childs)

Meeting opened at 9.30am

1.1. Apologies

Lorrae McArthur	Northern Land Council representative Trish Rigby present as proxy
Mona Liddy	Traditional Owner Elizabeth Sullivan present as proxy
Kate Peake	Regional Development Australia Northern Territory
Dick Perry	Community Member, Water Extraction Licence Holder
Phil Howie	Community Member, Water Extraction Licence holder
Alison King	Aquatic Ecologist
Malcom Baker	TFS Corporation, Water Extraction Licence Holder Andrew O'Bree present as proxy
Peter Marks	Horticulturist, Water Extraction Licence holder

1.2. Introduction from the Chair

The Chair thanked everyone for attending. To date, we have spent time getting to know the situation, information and one another. We will now be working on items to go in the Plan. Discussion topics today relate to sections of the Plan.

2. MINUTES FROM PREVIOUS MEETING

The Committee agreed the Minutes of Meeting 3 were a true and correct record.

2.1. Action Items from previous meeting

- ❖ *ACTION: Gabby Yates to provide members with information on the rules applying to the splitting of licences through land subdivision.*

Under the Water Act, groundwater extraction licences can only be issued for extraction bores. To split a licence following land subdivision, the licence must have a bore listed within each new land parcel.

- ❖ *ACTION: Gabby will keep the Committee informed about the development of the SIR policy.*

Agenda Item 5 will provide an update on the NT Strategic Reserves Policy.

- ❖ *ACTION: Gabby Yates to present a Water Budget, together with information on the Sustainable Yield and the Consumptive Pool at the next meeting.*

Agenda Item 3 will be a presentation and discussion on Climate, Sustainable Yield, Consumptive Pool and Reliability

- ❖ *ACTION: Gabby Yates to provide members with the previous final working draft developed through DRMAC (draft provided at meeting 2 was the draft that was made available for public comment is not the most recent working draft seen by previous members of DRMAC), as well as a copy of the template for Water Allocation Plans.*

Members bring a variety of experience, knowledge and memories from earlier Committees, including DRMAC. It was suggested that Committee members raise any information that they recall from their previous experiences rather than re-visiting previous draft versions of the Plan.

The Chair met with Emma Young, the Minister's Environmental Advisor. The Advisor assured John that Water Allocation Plans and the Strategic Indigenous Reserves are both very important to the Minister.

A copy of the Water Allocation Plan template was provided to Members. All Water Allocation Plans in the NT will have the same template although the information, rules etc will be different in each Plan. Guidance notes are included regarding what will be included in each section.

- ❖ *ACTION: John Childs will follow up on whether there is a review/ summary paper about the findings of 10 years of fish and flows project.*

Ongoing.

3. DISCUSSION PAPER – CLIMATE, SUSTAINABLE YIELD, CONSUMPTIVE POOL and WATER ALLOCATION RELIABILITY (Gabby Yates)

Members were provided with a Discussion Paper prior to the meeting which gave an overview of historical conditions and information about the Sustainable Yield, Consumptive Pool and Reliability.

Ooloo Dolostone Aquifer - Historical, Recent and Future Climate

The Daly region is characterised by a highly seasonal climate with 95 percent of rainfall falling during the wet season between November and May (CSIRO, 2009). Rainfall intensity is very high so there are short lag-times between rainfall and runoff, and runoff is rapid. There is also variability in rainfall from year to year.

Graphs and tables were presented showing

- annual rainfall, average annual rainfall and trends in rainfall for the period 1900 to 2015 for the Katherine and Douglas-Daly regions;
- average climate information for the Ooloo Aquifer region including average values for Rainfall and Evapotranspiration for both Katherine and Douglas Daly for the periods 1900-2015 and 1986-2015;

- annual rainfall difference from the mean for both Katherine and Douglas Daly for the period 1900-1996.

A member asked why rainfall data for the past 30 years is used when records showing a big variation are available since 1900. As licences are issued for 10 years, the Department has confidence that the last 30 years gives the best representation of current variability.

Aquifer Recharge and Discharge

Aquifer recharge and discharge are estimated using the integrated surface water and groundwater model for the Daly Basin Aquifers.

Graphs and tables were presented showing

- modelled annual recharge and to, and discharge from the Ooloo Dolostone Aquifer;
- average recharge and discharge values for the periods 1900-2015 and 1986-2015;
- annual rainfall difference from the mean for both Katherine and Douglas Daly for the period 1900-1996.

The climatic information along with the modelled recharge and discharge data for the Ooloo Dolostone Aquifer show both variability from year to year (inter-annual variability) as well as longer-term variability in rainfall and recharge conditions. Water management strategies will need to be responsive to this variability in the future.

- ❖ *ACTION: Gabby Yates will provide further information about groundwater levels so that the Committee can see how groundwater storage changes over time*

Sustainable Yield

- ❖ *ACTION: Gabby Yates to number pages in future discussion papers for ease of reference.*

The sustainable yield is the volume of groundwater that can be extracted from an aquifer on a sustained basis without impairing water quality or causing environmental damage.

In the Ooloo Dolostone Aquifer, the sustainable yield varies from year to year because of the inter-annual variability in aquifer recharge and discharge and the limits to the water that can be extracted whilst maintaining the flows in the river in line with the Erskine (2004) environmental water requirements.

- ❖ *ACTION: Gabby Yates to add the Erskine (2004) environmental water requirements rules to the terms and definitions table*

The Sustainable Yield is estimated as the change in the volume of groundwater discharge from the Ooloo Aquifer allowable in any year for the period 1967 to 2015. The Sustainable Yield has been estimated based on the annual modelled discharge from the Ooloo aquifer and the minimum measured flows in the Daly River at each of

the gauging stations Dorisvale Crossing and Mount Nancar, and the minimum modelled flows at Ooloo Crossing for each year.

Graphs were presented showing

- Ooloo Dolostone Aquifer Sustainable Yield for the Northern (upstream of Mt Nancar), Central (upstream of Ooloo Crossing) and Southern (upstream of Dorisvale Crossing) zones for the period 1967-2015;
- Percentage allowable change in river flow at Dorisvale Crossing (measured), Ooloo Crossing (modelled) and Mt Nancar (measured) for each year for the period 1967 to 2015.

Committee members asked what the average sustainable yield was for the period 1967-2015 and 1986-2015.

❖ *ACTION: Gabby Yates to present average Sustainable Yield values*

Consumptive Pool and Water Entitlements

The Consumptive Pool is the volume of water that can be allocated to consumptive beneficial uses, determined from the aquifer recharge and stream flow conditions of the 30 year period from 1986-2015. The Consumptive Pool for the Ooloo Dolostone Aquifer is 90,842ML/year. The Maximum Entitlements are equal to the Consumptive Pool. The Maximum Entitlements for the Ooloo Aquifer Southern area upstream of Dorisvale Crossing are 23,723ML/year. The Maximum Entitlements for the Ooloo Aquifer Central area upstream of Ooloo Crossing are 33,805ML/year. The Maximum Entitlements for the Ooloo Aquifer Northern area are 33,292ML/year

In some years the Consumptive Pool will be greater than the Sustainable Yield for the Aquifer. This is currently managed through an annual announced allocation process which ensures that in years when the total volumes of entitlements exceeds the Sustainable Yield, annual entitlement volumes can be reduced to ensure that extractions do not exceed the Sustainable Yield.

Annual Announced Allocations and Water Allocation Reliability

Because the volume of water that can be taken each year is variable, annual announced allocations are applied to each licence to manage the variable Sustainable Yield. Annual Announced allocations are applied to licenced entitlements according to the Security Level of each licence. The Security Level of a licence represents the order in which Annual Announced Allocations are applied to licence holders, e.g. in years when a less than 100% announced allocation is required, Low Security licence allocations are reduced first, then Medium Security licences and finally High Security licences, as is required to meet the objectives for minimum change in river flow.

Reliability is a percentage number used to represent how many years the total volume of licence entitlements would have been available in full if all entitlements were extracted at their maximum entitlement under the same aquifer recharge and river flow conditions that have been observed over the last 30 years (1986-2015).

Key Findings

- The Sustainable Yield from the Ooloo Dolostone Aquifer varies from year to year.
- Inter-annual variability in the Sustainable Yield is currently managed by applying annual announced allocations to licenced entitlements.
- Longer term trends in Sustainable Yield can be managed through the water allocation planning process which requires review of plans every five years and plan renewal every ten years. This presents the following challenges:
 - Developing appropriate monitoring to identify changing trends
 - Ensuring there are mechanisms available through water plans and licencing, to respond to changes in trends if they are identified
 - Questions for licence tenure, unused water policy, minimum water allocation reliabilities
- Reliabilities of licences in the Southern Area are low. This is also an area with an established horticultural and forestry industry.
 - Future development work is required to improve model calibration, in this area in particular. This work could cause a change in estimated licence reliabilities.
 - The environmental water requirements currently applied at Dorisvale Crossing are quite restrictive. Future work to further substantiate how the flow thresholds protect ecological as well as socio-economic values of the water source may be warranted.
 - Different Annual Announced Allocation methods are applied to licences in the Tindall Limestone Aquifer, Katherine.

Issues and Discussion points

- One committee member had concerns about the fairness of security levels - that people who applied for entitlements first got high security
- One committee member asked how reliability might change for different security levels, if the consumptive pool was lowered to 60GL.
- Department policy for water extraction licence decisions has focussed on each new licence applicant deciding whether they would accept a licence with a certain Security Level and with a certain reliability rather than setting objectives for minimum reliabilities.
- Committee members queried whether they can request further research. The Committee certainly has a role in recommending future research.
- One Committee member stated that Traditional Owners are concerned that Water Allocation Plans are being developed separately (Katherine, Ooloo) instead of on a catchment basis
- Committee members stated that a lot of water that has been allocated is not yet being used.
- The longest period we can use to determine the sustainable yield and consumptive pool is the last 50 years because the method uses a combination of modelled and observed data (measured flow at Dorisvale Crossing and Mt Nancar since 1967)
- There was discussion about water allocation reliabilities and it was noted that if the Committee wanted to adjust water allocations to meet minimum reliabilities, the options are to take water from licence holders or change how we assess how much water goes to the environment through further research and evaluation.

- From a water manager's perspective, the estimate of reliability has the potential to change each time the plan is reviewed because the period used to assess reliability is currently a moving 30 year window.
- There was discussion about what impact water allocation reliability has on future development and investment decisions.
- Committee members noted from previous meeting minutes, that there is no strong correlation between the crop grown and the security level of a water extraction licence. This probably reflects the low usage, no trading, and the relatively young age of the licences in the Ooloo Dolostone Aquifer. It may pose a risk for the future.

4. ENABLING BEST USE OF WATER – UNUSED WATER ENTITLEMENT POLICY (Gabby Yates)

Gabby Yates presented an overview of the current approach to managing unused water. The Committee discussed the following questions:

- What does the Committee think constitutes 'Unused Water' in the Daly Region?
- What does the Committee think are the prerequisites for a fair and reasonable approach to recouping unused water (for licence holders, for the community)?
- What opportunities does the Committee see for the use and allocation of returned water in the Ooloo Aquifer?

Issues and Discussion points

- Members broadly agreed that genuinely unused water needs to be returned to the consumptive pool in a fair and equitable way
- Suggested that the Water Allocation Plan could set out some criteria and guidance on the circumstances that water entitlements should be recouped, including for example a requirement for Entitlement holders to submit an updated property development and water use plan which demonstrates their continuing need for the water entitlements.
- What should the percentage of non-use be (currently 90%) for the licenced water entitlements in the Ooloo Dolostone Aquifer?
- How many licence holders received letters regarding unused water, and what is the volume of unused water?
- 24% of land over the Ooloo aquifer is Aboriginal land with no water extraction licences associated with that land
- What is the land availability for further development – i.e. does the majority of arable land overlying the Ooloo Aquifer have a water extraction licence associated with it?
- There was discussion that water could be made available for a strategic reserve by either recovering unused or reducing all licenced water entitlements by a fixed percent. One Committee member asked how a 5% reduction in all licence volumes would affect licence holders

❖ *ACTION: Gabby Yates to draft further information on unused water for the Water Allocation Plan*

5. NT STRATEGIC RESERVES POLICY UPDATE

The Department has been developing a Strategic Indigenous Reserve Policy. Previous NAILSMA and NLC submissions have been taken into consideration, as have comments received on draft Plans in the design of the draft policy.

An Options paper and Stakeholder Consultation Plan have been developed. The Options Paper will be made available for comment in Feb/March 2017.

6. NEXT MEETING

The next meeting will be in February, with the date to be advised. At the next meeting, draft sections of the plan will be provided for the committee, including options for them to consider.

- ❖ *ACTION: John Childs will check to see whether the Minister is available to attend a future meeting of the Committee.*

Meeting Closed 2.35pm