

Mataranka Tindall Water Advisory Committee: Meeting 15 Minutes

Date: Thursday 28 September 2023

Time: 10.00 am to 5.30 pm

Location: Conference Room, 32 Giles Street, Katherine

Present	
Name	Position and representation
Clair O'Brien	Member, Pastoral and regenerative agriculture
David Ciaravolo	Member, Recreational fishing interest
Julian Martin	Member, Irrigated agriculture interests
Rebecca Mohr-Bell	Chair, Independent
Rohan Sullivan	Member, Pastoral interest
Vincent Lange	Member, Irrigated agriculture and Aboriginal economic development interests
Dept Environment, Parks and Water Security staff:	
Abbe Damrow	A/Executive Director Water Resources (EDWR)
Michelle Rodrigo	Senior Manager, Water Engagement (MWE)
Simon Cruickshank	Director Water Planning (DWP)

Apologies	
Name	Position
Sarah Kerin	Member, Tourism and environmental interests (ex-officio)
Andrew Turner	Proxy for member Sarah Kerin, Tourism and environmental interest
Jenny Davis	Member, Environmental interests
Judy McFarlane	Member, Regional community interests

1. Meeting opening and attendance

Meeting commenced at 10.00 am

1.1 Welcome, attendance and acknowledgement of country

Chair introduced Abbe Damrow, Acting Executive Director Water Resources (EDWR).

EDWR welcomed everyone to the meeting and acknowledged country and traditional elders, past and present.

EDWR acknowledged that the Minister had recently received resignations from three members of the committee. She stated that it is important that the interests of Aboriginal people continue to be recognised in the preparation of water allocation plans.

EDWR spoke about the meeting purpose, which is to discuss and hopefully endorse the draft plan before it is released for public comment and for the committee to provide advice on communication strategies and key messages. Public comment will include face to face presentations to stakeholder groups and working with the Northern Land Council to hold road shows/community meetings.

The Chair welcomed everyone to the meeting and recorded apologies for meeting 15 from Sarah Kerin, Jenny Davis and Judy McFarlane. Jenny Davis's written comments on the draft water allocation plan were noted and these have been shared with all committee members. Simon Cruickshank will be contacting Sarah and Judy to brief them on this meeting and receive further comments.

The Committee's Terms of Reference requires attendance by the Chairperson plus half the membership for a quorum. A quorum is reached with the members present.

The agenda was confirmed with the addition of a meeting evaluation at the close of business using the template provided.

1.2 Conflicts of interest and confidentiality

None declared at meeting commencement.

Interest was declared by a member later in the day during a discussion on extraction in the North Mataranka management zone. This member refrained from commenting during this discussion.

1.3 Previous minutes

Committee noted the Draft Minutes of Meeting #14 (July 2022) and the observers comments received on the first draft of the minutes (Sept 2022).

Action 15.1: The detailed statement provided by a member representing Aboriginal water interests at Meeting #14 in July 2022 will be included in full in those minutes before they are published.

Action 15.2: Once updated as per Action 15.1, the minutes are to be published to the [DEPWS WAC webpage](#)

Recommendation 15.1: The Department provides a draft of meeting minutes to members within two weeks of the meeting date for review. Members have one week to review draft minutes and provide comments or approval back to the department.

Recommendation 15.2: Where a discussion item arises that is potentially outside the scope of this committee, the Chair will ensure that the issue is acknowledged in the minutes before steering the discussion back to the meeting agenda or the core business of the committee described in its Terms of Reference.

1.4 Action register

The Chair noted that the majority of the items on the action register are complete, and that outstanding items will be addressed at this meeting.

Previous actions			
No.	Action	Action Officer	Status at meeting 15
13.1	The Chair will resend members a copy of the Controller's response to her email regarding the AWR	Chair	Complete Reported in meeting 14 minutes
13.2	Provide members with a copy of the CSIRO paper	DEPWS Secretariat	Complete Reported in meeting 14 minutes
13.3	Report back at meeting 14 whether it is feasible to prepare an eco-hydrological model in time for the draft plan	DEPWS ED Water Resources	Complete Response provided during meeting 14 (see minutes s1.09) – external modelling not available till late 2023; internal modelling completed and considered in the draft WAP presented at meeting 15
13.4	ED Water Resources will circulate or provide additional information about what considerations are made in renewing a licence	DEPWS ED Water Resources	Complete Addressed in session during meeting 14
13.5	Water Planner to check whether Minyerri is in the plan area	DEPWS Water Planner	Complete Confirmation provided (meeting 14) that Minyerri is not taking water from the Tindall Limestone Aquifer
13.6	Progress a paper on operationalising a precautionary principle in defining the estimated sustainable yield and circulate a discussion paper to the committee for discussion at the next meeting	DEPWS Water Planner and Chair	Complete Topic was discussed in session during meeting 14 in lieu of preparation of a paper
11.9	Run agreed model scenarios and provide a report	DEPWS Water Assessment & Water Planning	Complete Numerous model scenarios run - outcomes summarised in draft Mataranka Background Report
11.10	Provide a summary of the previous work done by the Committee and key decisions	DEPWS Water Planning	Complete
Outputs and actions from workshop held during Meeting 14:			Status at Meeting 15
Further information required before setting an ESY: <ol style="list-style-type: none"> Further refining the water requirements of environmental and cultural values in each management zone based on the currently available science and information. Confirmation of the impact extraction in South Mataranka may have on North Mataranka and Larrimah management zones. Modelling of scenarios to determine: 			<ol style="list-style-type: none"> Available knowledge incorporated into draft plan Outcomes of 7 extraction scenarios and an assessment of impact against 5 metrics are provided in the draft Background Report at section 6.3.3

<p>a. The level of extraction that would meet the acceptable limits of change for environmental and cultural values in South Mataranka</p> <p>b. The impact on flows at Eley Homestead and Red Rock based on b and c above</p> <p>c. The impact of setting an ESY of 15GL and 25GL/yr for the Larrimah management zone on environmental and cultural values across the whole plan area (with extraction in South Mataranka set at its recommended ESY).</p> <p>Next steps (Subject to internal confirmation) Water Resources to:</p> <ol style="list-style-type: none"> 1. Provide the WAC with an updated environmental and cultural values report. 2. Propose ESY values for each management zone and all zones combined that considers environmental and cultural flow requirements. 3. Develop and circulate out of session first draft of water allocation plan and implementation plan. WAC members to prepare comments. 4. WAC to meet face to face to review plan and implementation plan and set adaptive management triggers and responsibilities. 5. Finalise and circulate out of session 2nd draft of plan, implementation plan and the background document. 6. Endorse a 2nd draft of plan, implementation plan and the background document out of session or face to face if required. <p>Timing of steps 1-6 to be verified after Water Resources internal consultation.</p>	<p>3. As above, refer section 6.3.3 of draft Background Report</p> <p>Status:</p> <ol style="list-style-type: none"> 1. Information on environmental and cultural values is incorporated into sections 4 and 5 of the draft Background Report. 2. ESY values proposed for each zone consider current available knowledge of water requirements, including SREBA and departmental eco-hydrological studies. Further work needed on both environmental and cultural water requirements, to be progressed during plan implementation. 3. Complete – draft plan provided to committee for discussion and feedback at meeting 15. 4. Underway – WAC providing feedback at meeting 15. 5. Consider revisions to the draft plan as required. 6. Consider revisions to the draft plan as required.
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Actions arising Meeting #15		
No.	Action	Action Officer
15.1	The detailed statement provided by a member representing Aboriginal water interests at Meeting #14 in July 2022 will be included in full in those minutes before they are published.	DEPWS Water Engagement
15.2	Once updated as per Action 15.1, the minutes are to be published to the DEPWS WAC webpage	DEPWS Water Engagement
15.3	The Department will prepare some additional information on the key topics identified during this meeting for consideration by the committee at the next meeting (teleconference).	DEPWS Water Planning
15.4	The Department will develop some fact sheets to address the key messages in the plan and clear, simple explanations of the more complex and contentious elements identified by the committee.	DEPWS Water Planning & Engagement

2. Matters for noting and discussion

Agenda Item 2.1 (Consideration of draft Mataranka water allocation plan) and Item 2.2 (Consideration of draft Background Report) combined

Papers provided for this discussion item were tabled and noted:

- Paper 1: Draft Mataranka Water Allocation Plan 2023-2033 and core documents
- Paper 2: Revised objectives and outcomes in the plan
- Paper 3: Development of the estimated sustainable yield in the plan
- Written comments on draft plan provided by Dr Jenny Davis
- Draft plan documents –(1) background report (2) water allocation plan and (3) implementation actions

Presentation of key elements of the draft Background Report:

The Director Water Planning (DWP) explained the plan contained three core documents - the plan, the background report and the implementation actions.

DWP presented maps of the Mataranka water management zones and the Tindall Limestone Aquifer. The aquifer is 50-200m deep and exposed to the surface where the overlying cretaceous rock layer has been eroded away by the Roper River and Elsey Creek. Below the Tindall Limestone there are other formations some of which are less productive aquifers and these are not considered in the plan.

Referring to a cross-section of the aquifer system, DWP explains that the water table slopes from the northwest and from the southeast towards the Roper River. Where the water table meets the ground surface is where groundwater discharge to the river occurs, via springs and seepages. The Roper River east of Elsey Homestead is the lowest point within the aquifer system. The plan is based on maintaining flows at this point, which will in turn maintain groundwater levels upstream and throughout the aquifer system. . The cross-section also shows how the depth to water table varies across the plan area, and that there are other geological formations with separate aquifers of poorer quality water which have very low use and are not part of this water allocation plan. The modelled natural water balance for this plan considers only the groundwater present in the Cretaceous layer and the Tindall Limestone.

DWP showed rainfall data from the Bureau of Meteorology and advised that analysis of long-term data sets shows that rainfall throughout the plan area is highly variable, but has steadily increasing since the early 1900s. Since 1960, the data shows decadal periods of distinct climatic variability - the mid-1970s were very dry as was mid-1980s to mid-1990s (around 700 mm/yr), whereas the mid-1970s to mid-1980s were wet (around 1000mm/yr) and the early 2000s were very wet (over 1100mm/yr). Since 2012 the climate has returned to a drier rainfall phase (approx. 800mm/yr). This decadal rainfall pattern is also evident in the minimum annual flow rates in the Roper River at the Elsey Homestead gauging station, the most downstream point for groundwater discharge.

Annual minimum flow data at Elsey Homestead shows a similar decadal pattern to rainfall. Dry season flows in the Roper River are almost entirely dependent upon groundwater discharge from the springs discharge zone in the plan area; other sources like the Waterhouse River, Flying Fox and Moroak creeks, Strangways Creek and the Wilton River typically stop flowing by the end of the dry. Flow at the end of the dry season roughly doubles between Bitter Springs and Elsey Homestead (end of the discharge area), and then halves between Elsey Homestead and Roper Bar/Ngukurr because of evapotranspiration and no further spring discharges to the river. In the 1960s minimum annual flow was below 1.5 cubic metres per second (cumecs). Over time, groundwater discharge to the river has increased and since 2000, minimum annual flows have typically been over 3.5 cumecs. This is measured, not modelled, data from physical flow gauging sites that have been recording flows since the 1960s. In the lower Roper, downstream of the plan area, it is not uncommon for the river to stop flowing during dry periods.

DWP presented graphs displaying groundwater data for each management zone displaying a similar pattern to rainfall and flows. Groundwater levels in North and South Mataranka have steadily increased since the 1960s, with periods of lower groundwater levels aligning with climatic variability. Groundwater levels are increasing in all three management zones. The graphs show seasonal variability in North and South Mataranka - it rains, groundwater level rises and the excess water discharges to the river. Discharge is higher in high rainfall periods, but very quickly after the wet season finishes, groundwater levels recede, irrespective of extraction. The same pattern was evident before groundwater extraction started... it is a natural process. When there are multiple years of low rainfall, there is less recharge of the aquifer in anyone year resulting in decreasing minimum groundwater levels over time.

Bore data in Larrimah shows groundwater levels steadily increasing over time with groundwater levels today over 6m higher than in the 1960s. In Larrimah recharge does not occur annually, its episodic. Each recharge event corresponds with an increase in groundwater level but there is no discharge to rivers and little groundwater extraction occurring, so storage continues to increase over time. This reaction to recharge is typical of arid systems. Another graph shows recharge in North and South Mataranka with seasonal rises and falls in groundwater levels. Where excess groundwater spills to the Roper River, groundwater levels fall again – this is known as a top end ‘fill and spill’ system.

In summary, rainfall, groundwater levels and groundwater discharge have been increasing since the 1960s but the trend is quite variable. Licensed use of groundwater from the Tindall Limestone Aquifer has only occurred since about 2013. The main point is that changes in the system are driven by natural climatic variability, not by groundwater extraction that has occurred to date. It is important that ecological values, and presumably the cultural values, associated with this system are recognised in the context of this natural variability. The job of the water allocation plan is to allocate water, recognising that well before any extraction was occurring climatic variability was having a significant impact on the system.

In managing allocations, the plan has a fairly small level of influence because it is climatic drivers, not allocation, that is influencing the trends observed in the data. The plan needs to consider the decadal climate influences over time. The management arrangements in the plan are designed to manage for current climate, but also for the possibility of a return to very dry conditions. This includes provisions for a review of the plan if water use exceeds 70% of the ESY or exceeds 70% of allocation to a beneficial use, to assess whether the groundwater resource is responding as predicted in the modelling conducted at the commencement of the plan.

Discussion arising:

Members queried whether modelling has compared discharge in historically dry periods with predicted discharge under the proposed levels of allocation. DWP clarified that this work (scenario modelling) has been undertaken and the results are summarised in the draft background report. The model uses the last 60 years of climate data (which includes a very dry period in the 1960s) to simulate the next 60 years and predicts how the system will perform under different levels of extraction in the future.

DWP summarises the technical understanding of the system – climate driven, highly variable, decadal trends, system acts accordingly. Members acknowledge that in very dry periods such as the 1960s, the system would naturally be under extreme stress, regardless of extraction levels.

Members advised that it is important to be clear about how the plan protects environmental values (objective 1) by preventing a level of extraction that could force the system out of its natural pattern, or exacerbate dry conditions. DWP highlights that this is captured in the principles described for announced allocations in the draft plan document.

A member suggests that broader impacts of water extraction, for example land clearing, should be acknowledged, on the basis that water licensing is effectively enabling these other impacts. DWP clarifies that a water allocation plan is governed by legislation (Water Act) which doesn't regulate for broader impacts, but there are other legislative processes that control land clearing activity. Committee acknowledges the connections between these impacts.

Potential salinity impacts as a result of groundwater extraction are discussed. DWP acknowledges that this is a potential risk for ecological values.

A member notes a change in vegetation along some stream margins – areas that were once grasslands are now melaleuca woodlands, presumably as a result of higher water tables.

Presentation of natural water balance information:

DWP presented a diagram of the natural water balance which shows the relationship between storage, inputs and losses, as groundwater storage changes over time as a result of inflows and outflows. 'Inflows' may be recharge caused by rain or inputs from other aquifers (underground flow from other aquifers), whereas 'outflows' are evapotranspiration, groundwater flow and discharge to the Roper River.

DWP explained the groundwater storage values for each of the water management zones (North Mataranka, South Mataranka and Larrimah). Recharge is greatest in the South Mataranka zone and least in the Larrimah zone. Groundwater discharge from South Mataranka is twice the volume from the North Mataranka zone. Inflows are greater than outflows, so storage is increasing over time, which is consistent with increasing groundwater level trends.

Discussion arising:

DWP explains the complexity associated with reporting natural water balance volumes and the technical reasons why the values don't always add up. The Committee discusses how this can be more clearly presented in the plan so the confusion doesn't undermine confidence in the science – find a balance between technical correctness and comprehension. Committee suggests revising the diagram (supported by explanatory text) and clarify that the natural water balance does not solely determine the ESY.

Presentation of information on ecological values and protection measures in the plan:

The first priority of the plan is to ensure the majority of water is retained and maintained for non-consumptive uses, including to maintain environmental water values. Ecosystems that require access to groundwater to meet all or some of their water requirements are called groundwater dependent ecosystems (GDE). These include terrestrial ecosystems such as vegetation that relies on access by plant roots to groundwater, aquatic ecosystems that rely on surface expression of groundwater, such as springs, wetlands and base flow in rivers and subterranean ecosystems such as caves and aquifers where organisms known as stygofauna inhabit the groundwater.

The Department has undertaken remote sensing and field validation exercises to map terrestrial GDEs in the plan area. This methodology has been applied to the Western Davenport and Georgina Wiso plan areas. There is little Tindall Limestone dependent vegetation (terrestrial GDEs) in the Larrimah zone because the aquifer is too deep for roots to access, however, North and South Mataranka contain extensive GDEs where the water table is much shallower.

The GDE probability map allows the plan to operate from a risk management perspective – extraction in areas of shallow groundwater creates a greater risk for GDEs than extraction in areas where groundwater is deeper and likely beyond the root zone. For licensing, greater analysis will be required for developments in shallower/higher risk areas, but it is unlikely that applicants in Larrimah, for example, would be required to do detailed investigations given the likelihood of GDE occurrence is very low.

The Strategic Regional Environmental Baseline Assessment defines an area of outstanding environmental value called the Roper Discharge Zone. These ecological assets are also recognised as having significant cultural value. The protection of values in the Roper discharge zone is a key priority of the plan, and management mechanisms in the plan are focussed on preventing impacts of extraction in the area. The plan places more rigorous requirements on licence applicants and water users in close proximity to this sensitive area to demonstrate how potential impacts will be mitigated. The plan also recognises recent stygofauna research.

Modelling has been undertaken to identify flow conditions that represent good versus poor conditions for the health and recruitment of a number of indicator species, cabbage palms, sawfish, barramundi and the gulf snapping turtle.

The limits of change principles in the plan are designed in the context of climate variability and require that water extraction should not result in naturally occurring wet or very wet periods becoming dry, dry periods becoming very dry, or an increase in the natural frequency of very dry years. These limits will be applied through the annual announced allocations process. The model will be used to predict the difference between expected natural and altered flows at the end of the dry season, and entitlements can be cut back if a limit or threshold is likely to be breached.

Discussion arising:

The Committee noted some concerns about the equitable application of annual announced allocations (AAA) and the 'use it or lose it' policy. DWP provided an example of how AAA was applied in Katherine which considered the status of unused water. Committee discussed the need for water policies to be enforced without political interference. The department described that the independence of the new Water Controller will ensure the regulatory framework for water management is applied appropriately. The Committee noted the concerns of some members regarding potential higher level influence or political interference which might undermine the implementation of the 'safety net' features (eg. AAAs) in the plan. The Committee discussed the limitations of their ability to address these broader issues, and the importance of having a robust plan in place rather than no plan at all. This Committee needs to be confident that its recommendations are in the best interests of the region. The Committee can have a role in building awareness in the community about how the plan and the management mechanisms work, and in holding government to account for conducting plan reviews. The Committee advised that details of management mechanisms such as AAAs need to be explicit in the plan, including how these measures will protect natural values and how tools like AAAs will be applied where entitlements are under-utilised.

The Committee notes that the plan in its current form is heavily reliant on the proper application of supporting water policies such as 'use it or lose it' and AAAs, and want assurance from government that these policies will be effectively applied to this water allocation plan.

The EDWR described the function of the Independent Controller of Water Resources, who is responsible for applying water policies and requirements in a water allocation plan when making water decisions, independent of government, within a regulatory framework. If changes need to be made to that regulatory framework to improve the function of the Water Controller, this should be done under the Territory Water Plan and legislative reform. These matters are separate to the purpose of the Mataranka water advisory committee. Members noted the importance of having a plan in place for the Controller to consider, so the committee should provide the best advice it can on the draft plan to get it to a position where they can support it.

A member highlighted that the plan and committee must build awareness among water users that entitlements are maximums ie. the most water that users can get in the best year of this plan, and that entitlements can and will be cut relative to environmental conditions under the 'rules' in this plan. If the committee is to be comfortable with the proposed ESY coupled with management tools like AAAs, then the details of these management tools need to be explicit in the plan and licence holders need to be fully aware of what that means for access to water year on year. If the committee considers water security and reliability of access to water is more important for licenced users, then a more conservative ESY would be required.

Members discussed the merits of a staged/incremental release of water from the consumptive pool aligned with annual water needs of licence holders. EDWR explained the existing staged licensing policy which is already applied to several larger volume licences where entitlements are increase as the licence holder meets certain conditions. A member suggested that this staged approach should be considered for the Larrimah zone in relation to a staged consumptive pool, rather than individual licences.

Presentation of measures for protecting non-consumptive values:

DWP explained that the plan proposes rules that allow for the protection of the ecological values and cultural values in times of climatic variation. The challenge is writing a water plan that respects the fact that the system is highly variable. The main driver for changes in the system is the climate, not extraction.

DWP explains the proposed flow threshold 'rules' for 1 Nov at Elsey Homestead (wet, average and dry bands derived from climate and flow data). AAAs will apply when the system is nearing a minimum flow threshold (i.e. bottom of the climate/flow band). The principle is to avoid moving from a wet to average band, or from the average to dry band as a result of extraction. DWP refers the Committee to the scenario modelling results in the draft background report for how this 'rule' potentially impacts reliability of water supply under different extraction scenarios ie. how often AAA reductions would be required under each scenario. For the proposed ESY, if the next 50 years has a climate similar to the last 50 years, licence holders would get 100% of entitlements in 8 out of 10 years, and something less than 100% in the other 2 years.

The Committee highlighted the importance of being explicit about the expected reliability of supply under the proposed ESY – the plan needs to be clear that full entitlements are not guaranteed every year.

The Committee notes that the proposed package of flow thresholds and flow bands is well-developed and appropriate for the highly variable climate in this area, but suggests that some further testing of scenarios might be needed to check for possible perverse outcomes from the application of the rules.

DWP clarifies that AAA is a policy, but the plan provides that actual thresholds that are applied in a particular plan area/management zone.

Lunch break

Presentation of proposed estimated sustainable yield:

Under the *Water Act*, water is prioritised for environmental and cultural uses before any other beneficial use, this water is called the non-consumptive pool. The estimated sustainable yield (ESY) sets the amount of water available for other beneficial uses, this is called the consumptive pool. The consumptive pool beneficial uses are stock and domestic, public water supply, industry, agriculture, mining, petroleum and consumptive cultural use (social and recreational use of water such as watering of sports ovals). With the exception of stock and domestic, all consumptive beneficial uses must be licensed.

DWP highlighted that the plan uses several tools to protect the system, including the ESY settings, AAAs and other mechanisms like limiting entitlements and extraction in the Roper Discharge Zone environmental protection area (proposed for designation under section 36 of the *Environmental Protection Act*. This designation is a Cabinet consideration (not yet made), but should it occur, the draft plan proposes that no licences can be granted or amended if this results in additional licenced entitlements within the protection area.

Discussion arising:

The Committee talked at length about the potential implications of the environmental protection area for licenced users that already operate inside the protection area. EDWR clarifies that the proposed protection area is about limiting the impact of extraction in the area closest to the river where extraction can have the greatest impact on known conservation values. Designation of this area as an environmental protection area is also a recommendation of the SREBA report. DWP stated that there is little evidence of any ecological degradation as a result of current usage (which is about half of current entitlements) within the proposed environmental protection area. Current modelling suggests that impacts are also minimal under full use of entitlements, but we know that extraction is likely to have a greater and more immediate (ie. detected in altered flows in 1-2 years) within the protection area.

EDWR advised that it would be reasonable to expect that any licence decisions that needs to be made prior to the declaration of the plan or the designation of the environmental protection area, would carefully consider these proposed arrangements as part of the full package of matters that are typically considered.

Committee advises that the plan must be clear about the intent of the environmental protection area by clarifying the management goal in relation to allowable extraction (as opposed to entitlements) in the plan document. The plan should be explicit about its desired management outcome ie. a cap at current (as at date of plan declaration) entitlements, or an intention to reduce overall extraction in this area.

A member queried whether it was likely the TOs would be encouraged by the proposed protection measures for this area, but this could not be confirmed as there was no TO representation at the meeting.

MWE reminded the committee that it endorsed a very similar management approach in 2019, then called a 'groundwater discharge protection area'. The department has, however, identified that there is no legal basis within the *Water Act* for this, so regulatory protections will be facilitated through the *Environment Protection Act*. EDWR confirmed that the process for designation of this area has begun.

Committee agrees that the plan needs to include some scenarios about how the environmental protection measures might be applied. A member notes that if designation of the protection area in combination with extraction rules in the plan can achieve appropriate protections for conservation values as well as industry outcomes, this should be supported.

Committee recommends the inclusion of some scenarios about how the environmental protection measures might be applied in the licensing framework, and factsheets to explain the intent of these measures to clarify how total entitlements within this area may be permanently reduced over time where the 'use it or lose it' policy is applied.

Committee commends the intent of the protection area, and acknowledges that the final boundary alignment may look different to the current map (from SREBA) to make it more practical to implement.

Presentation of how the proposed ESY is shared between beneficial uses:

The ESY needs to be considered in combination with the management arrangements designed to protect the ecological and cultural values. The recommended ESY has been determined after prioritising water for non-consumptive uses of environment and culture. It is less than half the volume of what could be allocated under the *NT Water Allocation Planning Framework*. It strikes a balance between all of the proposed water sharing objectives of the plan. DWP explains that the proposed ESY and management arrangements provides the best opportunity for provisioning water for Aboriginal economic development.

DWP explains a table of allocations to consumptive beneficial uses under the proposed ESY and how water is allocated to the Aboriginal water reserve (AWR), Given the level of existing licence entitlements, there is insufficient water to full provision the AWR. Under the proposed ESY, the AWR in North and South Mataranka would be considered nominal, with zero actual water available in the North and a small proportion available in South Mataranka. The Larrimah zone would be fully provisioned. Under the plan, as the unused water policy is applied over time, the volume of water returned to the consumptive pool would enable the AWRs in North and South Mataranka to be furnished. This means that the volume of water in the consumptive pool remains unchanged, but is available for development through the AWR.

Discussion arising:

The committee discussed the ways that water could be returned to the consumptive pool, including through relinquished licences and the recovery of unused water.

The committee discussed the licensing rules around access to and use of the AWR.

The committee asked for clarification about how the ESY was established, particularly in relation to recharge data, and requested additional information from the department on the rationale behind the proposed ESY values.

The committee raises concerns about the use of mean, rather than median recharge values, to inform the water balance and ESY settings, and notes that medians are used in other parts of water resource management due to the variable nature of rainfall/climate. Members noted that the committee has previously provided advice to the department to use medians not means. DWP explains that the recharge values represent averaged recharge values per year from the last 50 years. Members' questions were taken on notice - DWP will follow up with the modelling team and prepare some further information for the committee.

The committee needs a clear presentation of the natural water balance and explanation of how these values underpin the ESY and what proportion of recharge (a variable value) the ESY (a fixed value) represents in a typical wet, average or dry year. The committee requests that wet, average and dry scenarios be developed to explain how the management rules are applied in each year, how the ESY relates to recharge and how flow is impacted by use of the ESY for each scenario.

Committee notes that the TOs have consistently raised concerns about the changes they have observed in the river, but flow monitoring and rainfall data seem to tell a different story. This is probably why the TOs feel like they are not being listened to. Members shared observations of how the river has been altered substantially by large floods in more recent times, washing out the channels. Water managers need to think about how the observations of local people can be better incorporated into the management of a whole system.

The department is concerned that the community in general is quick assume that any degradation of the system/landscape is the result of groundwater extraction, but the data for rainfall, groundwater levels and river flows does not show a system in decline. There are potentially many different land management factors that could be at play.

The MWE spoke about the types of metrics that Aboriginal people might use to assess how the river is changing (eg. exposure of in channel rocks; depth of sandy bank where turtles nest; available freshwater mussel habitat, presence of food plants on river banks) are very different to the way the department measures change with technical flow instruments. The Committee is concerned that local observations and traditional knowledge has not been adequately incorporated into committee discussions and the plan. Better consultation is needed eg. local events in Mataranka, assisted by easy to understand communication materials.

The Committee notes how challenging it is for all members, including Traditional Owner representatives, to absorb the complex material provided by the department. Members need clear and simple materials to present to their networks and local communities. The department will develop some clear communication materials to support the consultation process, but it is a challenge given the technical complexity of the science and management arrangements.

The Chair asked members to summarise their views regarding the scientific basis for the plan, its ability to meet the principles of maintaining natural variation and the adequacy of measures to manage the system within the ESY.

A range of views were shared by members in the context of releasing the draft plan for consultation:

- Traditional Owners (TOs) are not currently at the table, three have resigned from the committee. TOs should be re-engaged in the process before the draft goes to public comment. The EDWR clarified that the department is reaching out to those outgoing members to discuss their concerns and the draft plan. (Note: the resignations coincided with the distribution of the draft plan and meeting papers to the committee).

- The committee process may have been unsatisfactory for the outgoing Aboriginal representatives, but taking the draft plan out to Aboriginal communities might be the best next step for seeking views and input.
- It would be disappointing to have reached the point where a draft plan is finally available, which is based on a significant amount of scientific work by the department and input from the committee over many years, and then not support the release of the documents for community feedback.
- There is a lot of good, logical, evidence-based material in the draft plan, but more information is needed to provide confidence that the management arrangements are precautionary enough when and if the system moves into a dry phase.
- If the release of the plan is delayed any further, this could significantly push out the declaration of the plan. This only extends the status quo where licence decisions are being made without a plan and an AWR has not been created.
- the community's questions about the plan are based on values and some of these values are more directly linked to wet season flows, not the dry season flows that this plan seeks to maintain – it is possible that not all stakeholders will be satisfied that their values have been addressed in this plan.
- Should an even more precautionary ESY be considered for South Mataranka by reducing entitlements (likely to be manageable for most operators given the current low levels of use) and the AWR allocation? This may address some of the concerns of traditional owner groups. Alternatively, the plan is released in its current form for public comment, and if the community responds with resounding calls for more precautionary measures, the draft plan is then adapted accordingly.
- The committee is relatively comfortable with the proposed ESY and management arrangements for North Mataranka and Larrimah management zones.
- The size of the ESY in the South Mataranka zone and the shortfall in the AWR is a concern. The draft plan proposes to provision the AWR through the recovery of unused water, but an alternative approach would be to reduce all entitlements by an amount that aligns more closely to current use so that the AWR can be provisioned sooner.
- the proposed ESYs and management arrangements will be supported by monitoring and plan review processes – we may not get the plan right the first time.
- the plan should give further consideration to the potential impacts of climate change
- more information is needed about the impacts of extraction during periods of 3 or 4 years of consecutive failed wet seasons. The DWP clarified that the modelling undertaken to date already includes periods like this.

DWP spoke to a list of the precautionary measures in the draft plan:

- Non-consumptive water needs are prioritised and accounted for before allocations to consumptive uses.
- Proposed ESY is about half of what would be permitted under the *NT Water Allocation Planning Framework*.
- Proposed ESY limits extraction to current entitlements in North and South Mataranka zones.
- Management arrangements are designed to maintain groundwater levels and discharge (flow) within natural system variability.
- Management arrangements are designed to protect areas of highest ecological and cultural values eg. Roper Discharge Zone environmental protection area.
- Natural water balance uses the most conservative inputs ie. recharge values are the most conservative estimates available in the current scientific literature.

- Long-term public water supply needs are prioritised and account for population growth
- Model predictions are conservative ie. the model typically predicts less flow compared to what is actually measured through the monitoring program
- Model assumes 100% water use each year across all entitlements when predicting impact
- Plan undergoes statutory review after 5 years and can also be reviewed when total use reaches 70% of the ESY or when total use for an individual beneficial use reaches 70% of its allocation.

The committee recommends that the requirements for use-based reviews be strengthened to say 'should' rather than 'may', and that the reasons for additional triggers are explicitly stated in the plan. This was noted by the department.

Committee discussed the timeline for consultation on the draft plan. Need to consider limitations of consultation over the summer months. The Committee was supportive of an extended consultation period that straddles the summer downtime. WAC expects to meet again to consider public comments and how the plan has considered this feedback. It was noted that a number of licences will be coming up for renewal in the next year when there may or may not be a declared plan in place – EDWR confirmed that the Water Controller is more likely to put weight on compliance with licence conditions, rather than a draft plan.

Agenda Item 2.3 Consideration of Implementation Actions

DWP presented information on the proposed Implementation Actions:

The public should be assured that there are processes in place for the pieces of work that still need to be done to support the plan.

Aspects of the original plan objectives developed by the committee in 2019 that were more action-oriented are now included as key activities in the Implementation Action tables.

Opportunities exist for Aboriginal ranger groups to undertake monitoring activities. The establishment of Aboriginal Reference groups will also help to facilitate this.

The water monitoring program is to be expand to include more water *quality* monitoring.

Discussion arising:

Implementation Actions related to Aboriginal engagement and economic development are appropriate, but needs a firm commitment from government to support delivery. The committee noted that the current issues with Aboriginal engagement are a risk to the delivery of these activities.

Water quality monitoring – this data is collected by several organisations including Dept of Health and Power Water as well as Water Resources. Committee recommends the department looks at opportunities to integrate this data so it is available through a single database eg. Water Data Portal.

A member raised some concerns about the water accounting year being based on financial year. AAAs are notified by 1 May. The gap in these dates makes it challenging for irrigators to plan out utilisation of their annual entitlement to account for uncertainty in the duration of the wet season, in particular how much of the entitlement needs to be quarantined for the period between 1 May and 30 June (end of accounting year). A water accounting year based on calendar year would be more workable for this region. The department noted this issue and agreed to consider further.

DWP summarised Jenny Davis's written feedback to the committee, including the importance of implementing adequate ecological monitoring programs. The Committee noted Jenny's written comments.

A member requested the Background Report be amended to remove the word 'lucrative' from the description of the pastoral industry (section 2.2) as this is not how the local industry would characterise itself. Request noted by the department.

Agenda Item 2.4 (Summarise outcomes) and Item 2.5 (Discussion on key messages)

- Recognising the natural variability in the system is important context for achieving the objective of balancing the retention and preservation of the environment with the benefits of water use. Provide clear explanation and evidence for the assertion that climate variability, not extraction, is the driver of change in this system.
- Provide clear explanation about how the management arrangements set limits on extraction and maintains the natural pattern of system variability
- The environmental protection area is an important tool for protecting natural values.
- Build awareness and increase acceptance that entitlements are maximums, not minimum entitlements.
- The committee needs to have confidence in the application of water policies and considers that the plan only works if these policies are properly enforced.
- Provide clear explanation of how the natural water balance and model predictions are conservative.
- Emphasise the requirements for plan review and the additional triggers for review in public communications.
- Be explicit about the mechanisms for increasing the availability of water in the Aboriginal water reserve through the recovery of unused water.
- Committee seeks further information on modelled impacts in consecutive dry years.
- The Committee is tentatively supportive of proceeding to consultation before the end of this year, once they have seen some further detail from the department on the key concepts/issues raised at this meeting.
- Department to provide some clear examples of how the flow thresholds operate for announced allocations, and give further consideration to any possible perverse outcomes of these arrangements.
- The majority of members support the release of the plan for consultation, however, this position was not unanimous.
- There is an expectation in the community that this plan will be precautionary. With the benefit of the department's explanation today, the Committee is more aware of how the plan delivers this, but this needs to be more explicit in the plan documents and further explained in factsheets/FAQs.
- Plan needs to emphasise how the ESY and management arrangements work together to achieve appropriate protections for natural and cultural values
- Careful consideration needs to be given to differentiated access to water between existing licenced users and AWR holders, given water may not be available for the AWR in some management zones.

The committee would like to see a timeline for the process of plan declaration and asked the department to consider an extended consultation period (eg. to end Feb 2024) if consultation was to commence before Christmas.

Action 15.3: The Department will prepare some additional information on the key topics identified during this meeting for consideration by the committee at the next meeting (teleconference).

Action 15.4: The Department will develop some fact sheets to address the key messages in the plan and clear, simple explanations of the more complex and contentious elements identified by the committee.

Meeting close

Committee acknowledged the excellent work that has gone into the developed of the plan documents so far and thanked the department for being accessible and willing to field questions.

Members were reminded to complete any outstanding member paperwork so that sitting fees etc. can be paid.

Committee agreed to meet online via Teams to review the additional information which will be prepared by the department in the coming weeks.

The Committee completed the meeting evaluation checklist.

Meeting closed 5.20 pm