

# Western Davenport and Ti Tree Water Advisory Committee

Minutes of Meeting #02 (FINAL) – Wed 23 to Thurs 24 February 2022

## Meeting Summary

### Key Messages

Key messages are provided as an executive summary of each water advisory committee meeting. They represent a snapshot of the key issues considered by the Committee and the advice provided to government.

- The Department provided briefings on the science behind the Western Davenport water allocation plan, including the hydrogeology, the Western Davenport model and ecological mapping in the region.
- The Western Davenport model is the same as that used to inform the 2018 water allocation plan with considerable work carried out over recent years to test the model parameters (eg. running over 1000 simulations), which provides greater confidence in the model outputs. The Committee learned that the model was able to simulate actual data sets collected from several bore sites in the Central Plains with considerable accuracy. At a regional scale the model is considered fit-for-purpose for estimating groundwater availability. The paucity of bore data in the Davenport and Southern Ranges and the far eastern and western parts of the Central Plains was acknowledged, and the Committee was advised that the increased uncertainty in these areas is acceptable given these are not areas where development is proposed.
- The Committee was briefed on the allocation of water to various beneficial uses and the extent of actual water use in comparison to the amount of water under licence. This raised a number of questions with regard to the Estimated Sustainable Yield (ESY) and highlighted the importance of an adaptive management approach with well determined and understood management triggers.
- The Department briefed the Committee on the ecological importance of groundwater, springs and the use of groundwater by various trees, shrubs and ecosystems throughout the Western Davenport region. Significant work has been undertaken by the department to determine the likely extent of Groundwater Dependent Ecosystems (GDEs) and their water requirements.
- The Central Land Council provided a briefing on work being undertaken to engage with Traditional Owners on the Western Davenport water allocation planning process and to seek their input into the decision-making process. The Committee considers this work to be important to the success of the plan review and the preparation of the new plan.
- The Committee considered draft findings of the Western Davenport plan review, which led to considerable discussion on a variety of issues such as the Estimated Sustainable Yield (ESY) and confidence in its determination, as well as the difference between economic activity and economic benefit and how both are determined. The Committee discussed the need for the plan to be explicit about trade-offs and mechanisms to determine and manage risks associated with plan delivery.
- The Committee reviewed the objectives of the current Western Davenport plan. Refinements were recommended to improve the ability to measure and evaluate achievement of the plan's objectives and therefore improve accountability.
- The Department agreed to provide further briefings on a range of issues to be considered at the next two Committee meetings.
- The Committee agreed to hold its next meeting (Meeting #03) on the 27/28 April, if possible in the Western Davenport region.

## Summary of Recommendations and Actions

Recommendations from Meeting #02	
2.1	The Committee endorsed the minutes of Meeting #01 and recommended the minutes be published on the DEPWS website.
2.2	The Committee recommends that the advice provided in the review workshop be used to assist in the preparation of the new Western Davenport Water Allocation Plan.
2.3	That the Committee is given sufficient time to consider the revised version of the plan review findings in order that sound feedback/advice can be provided to finalise the review at the next meeting.
2.4	<p>The Committee recommends the Western Davenport plan objectives be revised using the following criteria:</p> <ul style="list-style-type: none"> <li>○ Reduce interdependency between objectives</li> <li>○ Reduce ambiguity in terms used</li> <li>○ Be more specific and outcome focussed to enable implementation to be tracked and measured</li> <li>○ Better define the social and economic benefits that will arise as a result of achieving the objectives.</li> <li>○ Resolve tensions between terms used in the objectives (eg. 'equitable access') and current policy settings (eg. first in first served on licence applications)</li> <li>○ More clearly defining terms like 'ecologically sustainable regional economic development' (Objective 4), or consider some over-arching principles for the new plan.</li> <li>○ Rework Objective 3 to reflect the security afforded by legislation for public water supply and stock and domestic use.</li> <li>○ Link the objectives to the adaptive management framework and make clear that achievement of the objectives depends on a commitment to the implementation and resourcing of the adaptive management process throughout the life of the plan.</li> </ul>

Actions from Meeting #02	
2.1	The department to arrange publication of the approved Meeting #01 minutes on the <a href="#">DEPWS Committee webpage</a>
2.2	The department will provide members with links to several technical reports: 1) <a href="#">2018 Western Davenport model report</a> ; 2) Independent model uncertainty analysis report (when it is published); 3) Western Davenport water quality (salinity) report (when it is published).
2.3	The department will provide the Committee with information about the role of the regolith and how that will be addressed in the next water allocation plan and the next update of the model.
2.4	The department will provide the Committee with information about how the ESY, GDEs and limits to change are considered in the model.
2.5	The department will provide examples of the outputs of the model, including how risks and uncertainty associated with the outputs are flagged.
2.6	The department will provide a list of Western Davenport monitoring bores to the Committee with a link to the NT Water Data Portal
2.7	The department to provide a breakdown of entitlements and actual water use by sector/beneficial use.
2.8	The department to provide a response to the question on notice regarding mechanisms for identifying and avoiding impacts in shallow (<5m below ground) groundwater areas.
2.9	Department to circulate the Western Davenport Mapping the Future Biodiversity Report

2.10	Department to circulate the GDE mapping methodology paper once it is published.
2.11	Department to prepare an overview paper addressing issues raised around the regolith and model outputs, which is preferably addressed as an out-of-session teleconference prior to Meeting #03.
2.12	Committee members to email any interim comments on the plan review to the water planning team before the next meeting.
2.13	The Department to make the slide presentations available to committee members.
2.14	All members to consider opportunities for engagement with their sectors and contact the department to discuss.
2.15	Members to contact the water planning team with any availability/event information that might impact a late June meeting, and the department will email suggested dates, avoiding school holidays and CLC meetings where possible.

## Meeting Record – Day 1 of 2

**Date:** Wednesday 23 February 2022

**Time:** 13:00 pm

**Venue:** Conference Room, AZRI John Hayes Building and online using MS Teams

## Day 1 Attendance and apologies

### Members attending:

Andrew Johnson	Chairperson
Jade Kudrenko	Environmental interests (Arid Lands Environmental Centre)
Annette D'Emden	Regional development and remote water supply interests
Roy Chisholm	Agribusiness interests
Stephen Morton	Ecosystem science and natural resources interests
Peter Donohoe	Aboriginal water interests (Central Land Council)
Paul McLaughlin	Irrigated agriculture interests (Desert Farms)

### Member apologies:

Barbara Shaw	Aboriginal water interests (Traditional Owner)
Paul Burke	Agribusiness interests (NT Farmers Association)

### Proxies:

Kate Peake	Agribusiness interests (proxy for Paul Burke)
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### Advisors and presenters (Department of Environment, Parks and Water Security):

Amy Dysart	Executive Director, Water Resources Division
Clare Taylor	Water Resources Planner/Assistant Director, Water Planning & Engagement
Michelle Rodrigo	Water Resources Planner, Water Planning & Engagement
Liza Schenkel	Community Engagement Officer, Water Planning & Engagement
Adrian Costar	Director of Water Assessment
Dale Cobban	Manager, Water Resources Modelling
Steve Tickell	Senior Hydrogeologist
John Wischusen	Senior Hydrogeologist
Jayne Brim Box	Senior Scientist

### Meeting Secretariat:

Isadora Salviano	Water Resources Planner, Water Planning & Engagement
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### Observers:

Several staff from the Dept of Environment, Parks and Water Security observed the meeting (in-person and via Teams) at different times during Day 1 and Day 2 of the meeting.

## 1. Opening and welcome to Day 1 (1.00 pm)

The Chair welcomed everyone to the meeting.

The Executive Director advised the Committee that an additional member is to be nominated to the committee to increase Aboriginal representation on the Committee, assist with Aboriginal engagement and the establishment of an Aboriginal Reference Group. The appointment should be settled by the next meeting.

The Executive Director clarified that the department is working to set up an Aboriginal Reference Group that will be connected with and complementary to the functions of the Water Advisory Committee.

## 2. Acknowledgement of country

*We respectfully acknowledge the past and present Traditional Custodians of the land on which we are meeting today and the land which is to be spoken about during this meeting*

## 3. Attendance, apologies and confirmation of agenda

Attendance and apologies were noted (see page 4)

Seven Committee members plus one proxy were in attendance.

Several department advisors were in attendance.

Several department staff attended the meeting to observe the committee process and information sessions, but did not participate in discussions.

The agenda was confirmed without changes.

## 4. Declaration of interest

Jade Kudrenko made a declaration of interest (in writing) related in part to the current legal action by the Arid Lands Environment Centre against the Minister of Environment and Fortune Agribusiness in the granting of the Singleton Station water licence.

The Chair accepted Ms Kudrenko's declaration and indicated that as the action was in relation to a specific licence and that the focus of this meeting was background briefing it was unlikely to create a conflict of interest.

Peter Donohoe of the Central Land Council clarified that a similar action has been taken by the CLC but that he has been advised that he has no interests to declare in relation to his participation on the Water Advisory Committee.

The Chair accepted Mr Donohoe's position.

No other declarations of interest were made.

## 5. Nominate meeting evaluators

The Chair called for volunteers to evaluate the meeting, using the checklist, at the end of Day 1 and Day 2. Steve Morton evaluated Day 1; Roy Chisholm evaluated Day 2.

## 6. Endorsement of Meeting #01 minutes

The Minutes from Meeting #01 were considered and adopted.

**RECOMMENDATION 2.1:** The Committee endorsed the minutes of Meeting #01 and recommended the minutes be published on the DEPWS website.

**ACTION 2.1:** The department to arrange publication of the approved Meeting #01 minutes on the [DEPWS Committee webpage](#)

## 7. Actions & business arising

Action	Status
1.1. Department to circulate the meeting evaluation checklist.	Complete. Provided in Meeting #02 papers
1.2 Department to include additional items in future agendas: declaration of conflict of interest, identification of member to conduct meeting assessment, correspondence, business arising action list.	Complete. Addressed in Meeting #02 agenda. To be standing items in all agendas.
1.3: Department to provide a copy of the presentation material for Item 7 along with the meeting minutes.	Complete
1.4: Department to circulate information on their adaptive management procedure and policy.	Complete. Provided with Meeting #02 papers
1.5: Department to arrange for a briefing on water monitoring activities in the Western Davenport Water Control District.	Complete. Presented at Item 10 Meeting #02, plus Meeting #02 paper
1.6: Department to arrange a briefing so that members can better understand the science and modelling used to determine the ESY and other key elements of the plan.	Complete. Presented Item 10, Meeting #02
1.7: Individual Committee members to advise the Department especially the Community Engagement Officer on how they can support communication and engagement activities.	For discussion Item 21 Meeting #02
1.8: Department to confirm the date of Meeting #02, noting the Committee's preference for 24 Feb and possibly 23 Feb if necessary.	Complete
1.9: Department to propose a date in April for Meeting #03.	Complete. Meeting #03 scheduled for 27-28 Apr.
1.10: Members to send vaccination status to the Chair, Andrew Johnson, or to the Department (as per correspondence) if they have not already done so.	Partially complete
1.11: Department to contact members to confirm bio and preferred contact details.	Complete. Confirm during Meeting #02. Members present approved publication of bios on DEPWS Water website.

## 8. Correspondence in/out

The Chair advised the Committee that he was copied into a letter from the Controller of Water to the Chair of the Central Land Council on 12 January 2022 regarding the Controller's decision to defer decisions to grant new or increased water extraction licences in the Western Davenport region until the new plan is declared by the Minister later this year.

Discussion

Members sought clarification of the status of current licence applications in relation to development of the new water allocation plan. The Executive Director clarified that:

- 3 licence applications are on hold
- these applications will be assessed under the arrangements in the new water allocation plan
- applicants have been advised of this
- the department recognises that this may impact proponent development plans

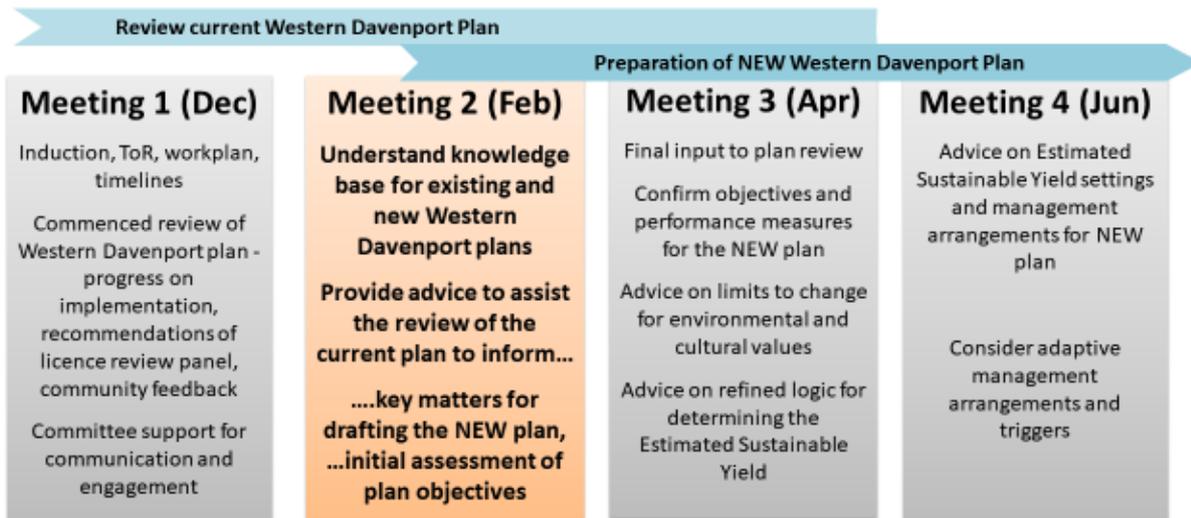
The department clarified that the Western Davenport and Ti Tree Water Advisory Committee will provide guidance on both the Ti Tree and Western Davenport water allocation plans noting that that the proposed timetable for review of each was considered at meeting #01.

**9. Run through plan for Day 1 and Day 2**

The planner presented information about:

- o the Committee’s work plan for the review of the Western Davenport Plan and preparation of the new plan

**Workplan – where are we up to?**



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- o the advice that the department is seeking from the Committee on the review of the current plan, including its overall objectives, to assist with the drafting of the new plan
- o the timeframe for finalising Committee input to the plan review – final input at Meeting #03 (April 2022); review report completed by May 2022.

Discussion

Members have a strong interest in providing advice on the arrangements for adaptive management in the new plan, with a view to improving the current plan and ensuring more effective implementation of the adaptive management process during the life of the new plan.

The planner indicated that adaptive management and associated triggers should be tailored to a specific plan area. Members suggested the adaptive management process described in the Requested Paper on adaptive management was too broad and should be tailored to the specific conditions/risks etc associated with the Western Davenport plan area.

It was noted that the Committee will discuss and provide specific advice on adaptive management (including triggers) at Meeting #04 (June 2022).

The Chair reminded the Committee that its role is to advise the department on relevant issues, including advising the Controller of Water and the Minister that all critical aspects have been considered in the preparation of the plan.

**10. Information Session: *Hydrogeological science, modelling and monitoring in the Western Davenport Water Control District***

Presenters: Adrian Costar, Director of Water Assessment Branch  
Steve Tickell, Senior Hydrogeologist  
Dale Cobban, Manager of Water Resources Modelling

The first presentation (Steve Tickell) described aquifer stratigraphy, water levels, recharge areas and water quality, focusing on the Central Plains management zone where most water extraction occurs and where there is most data.

The Senior Hydrogeologist addressed a question about aquifer connectedness, answering that all the aquifers are connected but that the degree of connectedness changes depending on the properties of a particular aquifer such as porosity and transmissibility.

The second presentation (Dale Cobban) explained the Class 2 regional-scale numerical model used for basin scale predictions in the Western Davenport region, including for natural water budgets and basin scale extraction scenario testing. Model and plan boundaries, hydrostratigraphic units and conceptualisation including recharge and discharge mechanisms, were described, as well as model inputs and calibration. Calibration testing shows the model results correlate well with measured groundwater level data. The 2018 Western Davenport model development report is available [here](#).

The Manager of Modelling addressed questions about the certainty of the model, explaining that the current model is the same as that used to inform the 2018 plan; that no model is 100% certain and that an independent 'uncertainty' analysis of the model (in 2021) concluded that the model parameters are acceptable. This report will be published shortly. The independent review shows that the model meets industry standards as a Class 2 model at the basin scale, with some individual parameters considered to be at Class 3 level. The Department considers the model adequate for water allocation planning. Improvements, including data from new monitoring sites and recommendations from an independent review of the model, will be included in the next update of the model scheduled for 2024/25.

A member asked the Manager of Modelling to explain how the concept of water stored in the regolith is addressed by the model and in the current Estimated Sustainable Yield (ESY) volume. Following some clarification of the question, the Chair indicated that discussions on ESY are scheduled for future meetings. It was agreed that the question of how uncertainty is treated in the model would be considered at the next meeting.

In response to a question on how total aquifer storage is calculated and water yields are estimated, it was explained that storage is calculated using an economically accessible depth, beyond which water is essentially inaccessible and unusable and generally excluded from calculations that may inform determination of the ESY.

Broad discussion on comparability of models was undertaken and it was indicated that the level of confidence in the model related to the amount of data used in the modelling process. It was noted that the Daly Roper model was more mature due to the number data points (monitored extraction bores) and a longer history of extraction in this region.

A range of questions were raised including how water stored in the regolith is accounted for by the model and implications for the current ESY; how the model outputs link to limits of change and GDEs; the range of extraction scenarios (including worst case scenario) already tested; how this

information is presented/used by the model and how risks are flagged in model results. Members agreed that more time is needed to explore these questions at a future meeting.

A third presentation, by the Director of Water Assessment (Adrian Costar), briefly described the water monitoring program in the Western Davenport Plan area. He explained that the monitoring data collected builds understanding of hydrological processes and enables better assessment of the impacts of water extraction proposed under licence applications. Data collected is checked and then made available on the [NT Water Data Portal](#). The Committee noted that information about the monitoring program was also provided to members before the meeting as a requested paper.

The Executive Director of Water Resources Division added that a report outlining the results of a desktop study on salinity risks from irrigated agriculture will be available soon.

The Chair noted that queries not addressed in this meeting will be addressed at the next meeting. The Committee reflected on the presentations and identified some critical considerations for the new Plan:

- Derivation of the ESY, including the need for greater understanding of the regolith in the current plan and how the regolith fits into conceptualisation of the resource for the new plan.
- Recharge and discharge areas
- Implications for the protection and monitoring of GDEs under the new plan
- How limits of change have been applied since the current plan was declared and how this will be handled in the new plan
- Information on the effects of pumping on the aquifers
- Department has confidence in model performance for the Central Plains management zone, but less so around the edges of the zone and in the Davenport and Southern Ranges.
- Scale of storage, including the application of an agreed economic depth.
- Water security for growers and environment ie scenarios of maximum water use/full extraction and minimum recharge and what this means for water tables. For example, the environmental sector would like to know what happens to GDEs under these scenarios; the agricultural sector would like to understand the impact on irrigation.

**ACTION 2.2:** The department will provide members with links to several technical reports: 1) [2018 Western Davenport model report](#); 2) Independent model uncertainty analysis report (when it is published); 3) Western Davenport water quality (salinity) report (when it is published).

**ACTION 2.3:** The department will provide the Committee with information about the role of the regolith and how that will be addressed in the next water allocation plan and the next update of the model.

**ACTION 2.4:** The department will provide the Committee with information about how the ESY, GDEs and limits to change are considered in the model.

**ACTION 2.5:** The department will provide examples of the outputs of the model, including how risks and uncertainty associated with the outputs are flagged.

**ACTION 2.6:** The department will provide a list of Western Davenport monitoring bores to the Committee with a link to the NT Water Data Portal.

## 11. Information Session: *Water Use in the Western Davenport Water Control District*

Presenter: Michelle Rodrigo, Water Resources Planner, DEPWS

The Water Planner provided a brief presentation on the allocations to beneficial uses in the current water allocation plan, the current status of licensed and unlicensed water entitlements in each management zone, and the status of actual use across the district for the period 2015 to 2021.

Several key points were made in the presentation:

- The current volume of licensed entitlements falls within the allocations prescribed in the current water allocation plan.
- The volume of extraction under licence has increased from approx 5,900 ML/yr to 51,500 ML/yr since plan commenced in 2018.
- Aboriginal Water Reserves (AWR) are fully provisioned in all management zones – licensing of water from the AWR can occur once the related Regulations are enshrined in legislation (expected in 2022).
- The estimation of rural stock and domestic use is to be refined for the new plan, using an improved methodology developed by Water Resources Division.
- The Central Plains consumptive pool is 88.6% allocated to existing entitlements
- There are two current licence applications pending (total 9,475 ML/yr) in the Central Plains management zone.
- The Controller of Water has deferred the granting of any new or increased extraction until the new plan is declared in December 2022.

The Water Planner addressed a question about the difference between current entitlements and actual use, explaining that actual use was approx 60% of total entitlements during the 2019 and 2020 water accounting years. The Executive Director explained that 60% use of entitlements is typical for most plans areas across the Northern Territory. The Executive Director also addressed questions about the 'use it or lose it' policy (*Recovery of Unused Water Entitlements [Policy](#) and [Procedure](#)*), explaining the criteria under which this policy is applied where licence holders are under-utilising their entitlements.

The Executive Director addressed questions about whether it is the goal of the department to fully allocate the water available within the ESY and whether full allocation is an indicator of success for a water allocation plan. The department encourages the use of water trading and seeks to improve water monitoring in order to increase efficiencies in water use. The department is working to make water available for use under the arrangements prescribed in water allocation plans.

Members reiterated that it is important to understand the indicators of success in a water allocation plan from the department's perspective. Members expressed concern that the mechanisms for trade are not clear and that the policy of 'first in first served' has created a perverse pattern of behaviour ie. a rush to secure water licences in the Western Davenport area before the ESY is fully allocated. Members cautioned against an over-reliance on tools such as trading, which must be carefully managed to avoid overuse of the water resource, and emphasised the importance of active adaptive management.

Members requested a breakdown of the distribution of entitlements and actual use by sector (beneficial uses) in order to assess the pattern of under-utilisation across sectors.

Members raised a question about how entitlements would be managed (reduced) in a scenario where the ESY in the Western Davenport plan has been over-estimated and the system is therefore over-allocated.

It was noted that the specific rules around trade and triggers would be discussed in later meetings but that it is necessary to understand the mechanisms to determine the ESY. Members reiterated that adaptive management needs further discussion and improvement, and that the department should commit to and implement an adaptive management process, including regular evaluation to track trends and changing parameters.

**ACTION 2.7:** Department to provide a breakdown of entitlements and actual water use by sector/beneficial use.

**12. Information Session: *Environmental water requirements in the Western Davenport Water Control district - groundwater dependent ecosystem (GDE) mapping and water requirements***

Presenter: Dr Jayne Brim Box, Senior Scientist, DEPWS

Dr Brim Box gave a presentation on the groundwater-dependent environmental values in the Western Davenport Plan area including springs, stygofauna and groundwater-dependent vegetation.

The presentation highlighted:

- the significant amount of knowledge gained about GDEs since 2018 including through the Mapping the Future program
- GDE mapping by the department has revealed that GDEs are far more extensive across the region than previously understood in 2018
- the need for further GDE mapping of the water control district and work on springs, stygofauna and culturally important ecological values.
- the need to protect environmental values from damage by stock
- the importance of scattered open woodlands in optimising groundwater recharge
- clear evidence that tree species using shallow groundwater are taller and larger in diameter than their species equivalent in areas where groundwater is beyond rooting depth
- floristic diversity in GDE areas is significantly higher and this in turn supports broader faunal diversity
- wetlands like Thring Swamp and Wycliffe Creek are highly significant for their biodiversity value.

Various matters were discussed including connectivity of surface water features such as claypans to groundwater and potential contribution to recharge, and the prioritisation of GDEs based on biodiversity values as a mechanism to protect GDEs, rather than the blunt 30%/70% rule. It was noted that drilling and monitoring work to better understand GDEs is scheduled in 2022. It was agreed that the question - *Is there a limit to change mechanism to identify and avoid impacts where groundwater is less than 5 m below ground level and how would an adaptive management processes respond?* - be addressed at a future meeting.

**ACTION 2.8:** The Department to provide a response to the question on notice regarding mechanisms for identifying and avoiding impacts in shallow (<5m below ground) groundwater areas.

**ACTION 2.9:** Department to circulate the Western Davenport Mapping the Future Biodiversity Report

**ACTION 2.10:** Department to circulate the GDE mapping methodology paper once it is published.

**13. Information Session: *Cultural water values in the Western Davenport Water Control District***

The Chair requested the information session on cultural water values is held until Day 2 due to the meeting running overtime.

**14. Day 1 Wrap up**

The Chair summarised the discussions and actions from Day 1, including the commitment by the Department to address particular questions in an overview paper. The Chair reiterated the Committee's view that the adaptive management process and triggers is an essential element of the Western Davenport plan and that the Committee wishes to provide further advice on this at the next meeting to support preparation of the new water allocation plan.

The Committee agreed to commence Day 2 proceedings half an hour earlier at 8.30 am.

## 15. Day 1 Meeting Evaluation

Paul McLaughlin participated online via Teams, but was connected only intermittently due to technical issues.

Steve Morton left the meeting at 4.30 pm but provided his assessment of the day's proceedings using the meeting evaluation checklist. The evaluation was positive and raised no issues to be addressed for Day 2.

The Chair closed the meeting at 5pm.

### Meeting Record – Day 2 of 2

**Date:** Thursday 24 February 2022

**Time:** 08.30 am

**Venue:** Conference Room, AZRI John Hayes Building and online using MS Teams

### Day 2 Attendance and apologies

No change in member attendance

## 16. Recap of Day 1 (8.40pm)

The Chair welcomed everyone to Day 2 of the meeting.

The Chair summarised the proceedings of Day 1 and invited members to raise any questions or comments.

In response to questions from Day 1, the Water Resources Division Executive Director offered to provide members with a paper that addresses issues raised around the regolith and model outputs to ensure members have a complete picture of water resources and water balance matters.

**ACTION 2.11:** Department to prepare an overview paper addressing issues raised around the regolith and model outputs, which is preferably addressed as an out-of-session teleconference prior to Meeting #03.

## Item 13. Information Session: *Cultural water values in the Western Davenport Water Control District*

This session was held over from Day 1.

Presenter: Peter Donohoe, Manager Land Management Unit, Central Land Council (CLC)

This record of the presentation and discussion is a combination of meeting notes and a clarifying email from the Central Land Council.

Mr Donohoe summarised various mechanisms being undertaken by the CLC to determine the cultural values and monitoring work required for a water allocation plan. It was suggested that cultural values should be identified as part of a water licence application process rather than at the scale of a water allocation plan, due mainly to confidentiality and consent issues. This feeds into a free, prior and informed consent process. Before water allocation decisions can be made, the Land Council should be provided with sufficient information/a paper to understand the proposed licence's potential water drawdown, conduct an assessment of potential impact on water dependant cultural values and support discussions with Traditional Owners (TOs).

There is scope to undertake cultural values work on a licence by licence basis during the modelling and investigative phase prior to a licence application being submitted, as long as all relevant scope and impact information is made available. Licence conditions and monitoring requirements to protect cultural values should be included in water licences, not left until later e.g. as a separate process. There is scope for the Aboriginal Areas Protection Authority (AAPA) and the CLC (and other experts) to work together on how best to determine what conditions could be included in licences. Monitoring should be included in licence conditions and be undertaken in partnership with the Department and the CLC. TOs are best able to undertake surveys to protect cultural values when they are provided with detailed information about the potential impacts and can provide information on a confidential and, if necessary, gender restricted basis. Results of surveys would be provided in a way that does not breach confidentiality requirements.

The Committee reflected on what this means for the new water allocation plan. The Plan needs to describe this process and the need for protection of cultural values. The new Plan should identify the types of cultural values that may be affected but would not be site specific. It can set up a framework to provide guidance to developers and provide confidence to TOs. The Plan can identify where competition or trade-offs are likely e.g. investors will likely develop where access to water is easy which is also where cultural and environmental values occur. The role of the Plan is to understand and minimise conflict, while the detail will be addressed within a licence context. CLC's decades of sacred site protection work has confirmed that surveys need to be related to specific impacts to be robust. The larger the area, the less likely that cultural impacts will be properly identified in the absence of information about predicted impacts.

Members reinforced the need for values mapping and assessment at an early stage of licence application to protect both investors and TOs. They also discussed the need to recognise cultural values in a similar way to land clearing assessment processes, since these values may be lost due to vegetation loss as a result of water table drawdown, but that it was important not to duplicate work. The Water Resources Executive Director explained that there are current discussions across departments to improve coordination and legislation on this matter.

A member asked how potential impacts on GDEs and cultural values outside of a licence holder's property boundary are addressed in a Plan and licence. Responses included that scenario modelling can assist, that the new Plan can provide guidance on this issue, and that this is accounted for in the cumulative assessment of extraction impacts. The Executive Director added that because several government agencies work under separate pieces of NT legislation agencies around cultural values, Water Resources Division needed to restrict focus to the Water Act and water-related cultural values.

The Chair highlighted the need for a policy framework that can enable the process of assessing cultural values within a licence context.

## **17 & 18. Review of Western Davenport Water Allocation Plan –Committee advice on review findings**

The Water Resources Division Executive Director summarised the legislative framework for water allocation plans and their review. She explained that according to the Act the scope of a Plan is to allocate water for beneficial uses within the context of environmental and cultural sustainability. The legislative role of the WAC in a review is advisory and specifically is to provide advice on maximising economic and social benefits within ecological restraints.

The Water Planner explained that the Act doesn't provide detailed guidance on water allocation planning or a definition of estimated sustainable yield, but presented the agreed definition of estimated sustainable yield. The Planner outlined the process used to develop a water allocation plan, referred members to the draft review findings and introduced the workshop session.

The workshop session sought advice from Committee members on gaps, areas of agreement/disagreement and priorities in the draft review paper, as well as on two 'big picture' questions: 1. How effective has the Plan been in maximising economic and social benefits within ecological restraints and 2. What does success for the new Plan look like?

A member commented that the first question had not been addressed in the review paper and that the Committee did not have enough background information to discuss it. The Department clarified that Committee input on the topic is first being sought, and the Chair suggested the Committee did not need to come up with an answer at this time but rather criteria and inputs as a starter, and related advice that may be useful for the new Plan.

The Committee broke into two groups to discuss the topics. After about 30mins of discussion, the groups reconvened and a spokesperson from each summarised key points:

#### Group 1

- Water allocation has happened faster than the timeframe for water planning, and the resource is now at, or close to, full allocation.
- Monitoring/adaptive management may not detect impacts for many years and if the ESY is too high this presents a big risk to all users.
- The Department/Plan needs to:
  - better address risks and facilitate a fast learning cycle
  - ensure robust, transparent and timely monitoring, evaluation and feedback loops to build public confidence in water allocation process
  - build community trust, not in the model or other technical aspects of the planning process themselves, but in how they are applied
  - demonstrate how allocating water from a public resource benefits the public, what is the value here
  - be honest and upfront to address the decline in trust in water allocation processes
  - better articulate how licence conditions will protect values and how adaptive management will track and ensure compliance
  - do the monitoring since the community wont trust monitoring by licence holders, and/or use strict compliance checks
  - spell out monitoring and reporting requirements (what, where when) for both licence holders and the Department at both property and regional scales so community members can see for themselves that development impacts are within limits
  - measure success by whether the same message is coming from multiple stakeholders

#### Group 2

- There is a lack of community confidence in the existing Plan and the ESY.
- There is a lack of confidence in and understanding of the approach used to for the Plan and Limits of Acceptable Change guideline, and the method used to assess trade-offs and how it's applied.
- There has been an absence of monitoring
- There is particular concern about the Singleton water licence
- The new Plan needs to:
  - Use a precautionary approach to set the ESY
  - Be based on a better understanding of economic development and where it may take place, as well as the difference between economic activity and economic benefit and how to determine both
  - Be explicit about trade-offs and mechanisms to determine and manage any risks associated with delivery of the Plan.
  - Have a solid understanding of the amount of water that is available and has been allocated and implications of this for existing values

- Establish a process for assessing cultural values within the license applications and be based on a better understanding of GDEs and limits of acceptable change
- Clarify responsibility of users to monitor and address concerns of how the department will use the information.
- The Department needs to:
  - Be clear and transparent about how the monitoring data provided by licence holders will be used to determine impacts and triggers
  - establish a system to use, check and evaluate monitoring data, especially data provided by licence holders
  - Measure success by when there is a balance between development and protection of environmental and cultural values and the trade-offs are acceptable and accepted.
  - Measure success by when communications from the department align with communications from non-government organisations etc.

The Chair summarised the session, noting it led to considerable discussion on a variety of issues such as ESY and confidence in its determination, the difference between economic activity and economic benefit and how to determine both. The Committee also discussed the need for explicit trade-offs and mechanisms to determine and manage any risks associated with delivery of the Plan.

**RECOMMENDATION 2.2:** The Committee recommends that the advice provided in the review workshop be used to assist in the preparation of the new Western Davenport Water Allocation Plan.

**RECOMMENDATION 2.3:** That the Committee is given sufficient time to consider the revised version of the plan review findings in order that sound feedback/advice can be provided to finalise the review at the next meeting.

**ACTION 2.12:** Committee members to email any interim comments on the plan review to the water planning team before the next meeting.

**ACTION 2.13:** The Department to make the slide presentations available to committee members.

## 19. Expert panel Q&A session

The Chair consulted with members about proceeding with this session. Members indicated that the opportunity to speak with technical water experts is valuable, but may be more productive once the Committee has reviewed the papers which are to be prepared by the department after this meeting (refer Action 2.11)

## 20. Review of Western Davenport Water Allocation Plan – Committee advice on Plan objectives

Water Resources Planner, Michelle Rodrigo, introduced the session with information about the purpose of objectives (see below) in a water allocation plan, and presented the four objectives of the current Western Davenport plan.

## Objectives of the water allocation plan should...

...establish a high-level framework for water allocation (and adaptive management) by defining what is to be achieved from utilisation of a water resource

...reflect community and industry water values

...reflect the acceptable level of trade-offs or priority outcomes sought

...(ideally) be specific and measurable enough to enable evaluation of achievement at the mid-term statutory review

*How well do the current Western Davenport plan objectives do this job?*

[www.nt.gov.au](http://www.nt.gov.au)



The Planner described the advice being sought from the Committee and posed a series of questions (below) to prompt discussion and feedback on the suitability of the current objectives for the new Western Davenport water allocation plan.

Objectives workshop questions....

- *Do the current objectives provide a suitable framework for guiding water allocation over the next 10 years (new plan)? Do they adequately represent community and industry water values of the region?*
- *Can all of the objectives be achieved simultaneously over the life of the plan, assuming appropriate water management arrangements are applied? Or are there tensions between objectives that need to be resolved in the new water allocation plan?*
- *Are there assumed priorities across the four objectives that should be made more explicit?*
- *How can the objectives be 'unpacked' to set more specific and measurable goals to enable assessment of progress towards objectives?*

Committee discussion and advice on plan objectives:

- Committee advised that, as a package, the four objectives in the current plan cover the key aspects of water use and management.
- In general, the current wording of objectives makes them difficult to measure – room for improvement.
- Environmental water requirements (Objective 1) – it is unclear from the objective what level of environmental impact is acceptable under this plan, creating a risk that the definition of acceptable impact can shift and change over the life of the plan. Greater clarity is needed here.
- Objective 1 and Objective 4 are very similar in purpose ie. avoid the environmental impacts of consumptive use (Obj 1) and achieve environmentally sustainable development (Obj 4)
- Achievement of Objective 4 is dependent on achieving Objective 1 – this interdependency implies there is a priority order to the objectives and could impact implementation of the plan if this is not acknowledged.
- Objective 4, in general, needs to be more specific about what is to be achieved. This objective incorporates multiple concepts. Need to unpack 'ecological sustainable development' (ESD) and resolve overlap with other objectives. Committee suggested ESD could be separated from the objectives statements and feature instead as an overarching goal/principle of the water allocation plan.
- The term 'equitable access' in Objective 4 should be better defined. The Committee raised concerns about whether 'equitable access' is possible while ever licence applications are

processed on a first come first served basis - refer licensing policy [Processing Water Extraction Licence Applications](#). How is 'equitable access' achieved by this plan? The conflict between this goal and the current policy needs to be resolved.

- Objectives should support both Aboriginal and non-Aboriginal cultural values, for example, as regional social benefits as a whole. It was noted that social benefit does not feature in any of the objectives.
- Objective 1 – the term “as far as possible” is too ambiguous. Committee recognises that there cannot be development without some degree of impact and suggests the objective should be clearer about what the acceptable level of impact is.
- Objectives should link to the adaptive management cycle to enable plan evaluations to document what has been learned and what adaption is required to improve plan implementation and management of the resource. Important that this is reflected in Objective 4. Critical to be clear about what level of impact is acceptable beforehand and, most importantly, learn from the outcomes to adapt and improve within an adaptive management process that has commitment and resourcing.
- Committee discussed the need for prioritisation of objectives and considered the basic purpose of a water allocation plan which is to make water available for consumptive use.
- Objectives related to consumptive use (eg. Objective 4) could be prioritised if the trade-offs and the limits for protection of environmental and cultural water were clearly identified.
- Could be argued that Objective 3 (public water supply and stock and domestic use) has the highest priority because legislation prioritises these uses above others. Committee considered whether there are better ways to deal with public water supply outside of a water allocation plan, given the implicit acceptance that public water supply will always be provisioned and will not be traded-off against other uses.
- Committee noted that the combined demand for remote community supply and rural stock and domestic supply is not insignificant in volume – plan must be careful not to underestimate this demand.
- While public water supply should have total security, Committee noted the importance of responsible use and ongoing demand management.
- An issue was raised regarding the ability of mining operations to tap into a remote public water supply – water for mining activity needs to be managed within the plan.
- Objectives 1, 3 and 4 are connected and aren't easily prioritised because they are intertwined.
- Members understand the economic drivers for water development in the region, but not all members are comfortable with environmental and cultural use values being traded-off, or assigned lower priority.
- Objectives should be outcome-focussed, that is, describe what will be achieved. They also need to be achievable and practical to implement. The Committee felt that the objectives as stated are not easy to implement.
- Committee doubts that there is enough known about cultural and environmental water requirements to achieve Objectives 1 and 2, or to know when they are achieved.
- The Committee considered whether Rural Stock and Domestic use needs to be specifically considered in the objectives at all, given the Water Act guarantees access to water for stock watering and station homesteads.
- Objective 2 – plan should seek to leverage the Aboriginal Water Reserve (AWR) within the timeframe of the next water allocation plan – make the objective time-bound. Committee discussed the merits of moving AWR into Objective 4 as it is a key element of sustainable regional economic development.
- In general, the objectives should reflect the social and economic benefit to be gained from the application of the water allocation plan.

- Members discussed how the water allocation plan can reflect the sometimes changing nature of community water values over time, as economic development expands in the region.
- Mining is not specifically mentioned in the plan objectives, but the current water allocations in the plan have considered current and potential future water use by mining activities. This will also be considered in the new plan. Water for mining operations must now be licensed under the Water Act. As the Central Plains region approaches full allocation, there may be water availability implications for future water-dependent mining activity.

**RECOMMENDATION 2.4:** The Committee recommends the Western Davenport plan objectives be revised using the following criteria:

- Reduce interdependency between objectives
- Reduce ambiguity in terms used
- Be more specific and outcome focussed to enable implementation to be tracked and measured
- Better define the social and economic benefits that will arise as a result of achieving the objectives.
- Resolve tensions between terms used in the objectives (eg. 'equitable access') and current policy settings (eg. first in first served on licence applications)
- More clearly defining terms like 'ecologically sustainable regional economic development' (Objective 4), or consider some over-arching principles for the new plan.
- Rework Objective 3 to reflect the security afforded by legislation for public water supply and stock and domestic use.
- Link the objectives to the adaptive management framework and make clear that achievement of the objectives depends on a commitment to the implementation and resourcing of the adaptive management process throughout the life of the plan.

## 21. Communication and engagement to support Plan review

The Committee considered ways that it can effectively engage the community in the planning process given the very short timeframe available for the review, and noting the significant level of community engagement that has occurred since the plan was declared in 2018.

Mr Donohoe explained that the Central Land Council has a statutory role in consulting Traditional Owners and that they fully intend to run consultations in the region. The challenge is how best to do this while licencing matters are running concurrently with the planning process.

The Executive Director indicated that it is important for the department to build trust, acknowledged that this takes time and sees the need for the department to be more visible in the area. She outlined some plans for upcoming activities in the region.

Members considered ways to take information out to the sector they represent, but some were wary about doing this too prematurely before the approach to the new water allocation plan is better developed.

Members suggested the following activities:

- Engagement with the science and engineer sector, such as AWA and Engineers Australia, organisations who are skilled at breaking down heavy, science-based information into more digestible material for a non-technical audience.
- Facilitated sessions to present the science to community, especially the GDE presentation provided by Dr Jayne Brim Box. Members could facilitate sessions within their sectors.
- Science presentation (hydrogeology, GDEs etc.) to the irrigated agriculture sector, given they are currently the dominant users of the consumptive pool.

The Executive Director reiterated that the department will continue to work with the CLC and individuals in the region to improve engagement and information sharing. She also committed to

supporting the monitoring and reporting of the plan over the next five years.

**ACTION 2.14:** All members to consider opportunities for engagement with their sectors and contact the department to discuss.

## 22. Future meetings

Meeting #03 is scheduled for 27 and 28 April. Meeting #04 will be in late June 2022.

**ACTION 2.15:** Members to contact the water planning team with any availability/event information that might impact a late June meeting, and the department will email suggested dates, avoiding school holidays and CLC meetings where possible.

## 23. Key messages and actions

Key Messages, Recommendations and Actions are listed at the front of this meeting record.

Members reiterated the need for adequate resources to implement the plan. The Executive Director suggested that risks associated with resourcing should be addressed as we go through the plan development process, and clarified that water allocation plans should not commit the department to activities that it can't realistically resource within the life of the plan.

Peter Donohoe advised the Committee that he is leaving the Central Land Council and moving interstate. The CLC is discussing a suitable replacement for him on the Committee and will advise the department. The Chair thanked Mr Donohoe for his contribution to the Committee and looks forward to ongoing input from the CLC.

## 24. Day 2 Wrap up

The Chair provided a brief wrap up of Day 1 and 2.

## 25. Day 2 meeting evaluation

The nominated evaluator (Roy Chisholm) provided his assessment of the day's proceedings using the meeting evaluation checklist. He highlighted that the meeting papers were well developed, the discussions were rich and positive and that potential conflicts were well managed. He flagged that the audio and video communications could be improved.

The Chair closed the meeting at 12.40 pm.