



National Irrigators' Council

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MINUTES

Groundwater sub-committee

Wednesday 20 October 2021: 4pm – 5pm
Chair: Mary Ewing

Item 1	Present and Apologies <u>Present:</u> Mary Ewing (Chair), Iva Quarisa, Michael Murray, Jenny McLeod, Michael Neville, Jeff King (MPI), Matt Toscan, Tim Napier, Isaac Jeffrey (CEO), Joy Thomas (NIC) <u>Apologies:</u> Dale Holliss
Item 2	Minutes of Groundwater sub-committee meeting held 19 May 2021 <ul style="list-style-type: none">• Business arising: there were no actions recorded.
RESO 1	<i>Iva Quarisa moved</i> <i>That the Minutes of Groundwater sub-committee meeting held on 19 May 2021 be accepted as a true and accurate record.</i> <i>Seconded by Mike Neville</i> CARRIED
Item 3	General Business <u>Managing compliance with groundwater extraction limits in NSW</u> and update on discussions held at NSW Irrigators' Council meeting. The Chair advised: <ul style="list-style-type: none">• The issue has progressed little. Some wanted to manage by AWD (available water determinations) and others on take limit. Lower Murrumbidgee and Lower Lachlan keen to investigate moving away from overall groundwater resource management to prevent some licence holders in both areas, who are high users• A concern in both areas that overuse could affect other people who are using 70-80% of their entitlement could be affected by overuse by others.• A meeting held with NSW Department of Water have met with Department of Industry and advised they are unable to do anything for six months. Matt suggested a couple of scenarios to explore would be useful and a good argument when the Water Resource Plans are not lining up with the MDBA SDL. This could be in water users' favour to achieve change and how that is sold to the State Water Minister. Jenny observed that with Groundwater Sharing Plans being re-made, this might be an opportunity to feed into that and an opportunity for irrigators to advocate. The Chair suggested with the Department's lack of capacity to progress anything for six months, it may enable some scenario planning and identify any problems and how they can be addressed. <u>Progress on policy position / principle on telemetry:</u> The Chair advised NSW is offering funding assistance for telemetry to support farmers to make the change. Tim advised the Queensland policy is in development and similar to NSW. Telemetry will be ubiquitous in a few years. Border Rivers Food & Fibre members are seeking to be on front foot. Mike noted that most systems in Victoria have telemetry. Michael advised that the Qld version of standards looks similar to NSW and exemption for groundwater.

Matt advised that Murrumbidgee Groundwater had a motion at their AGM to support telemetry to the more timely feedback of usage, back to the decision makers, so that DPI can make that call; if they have to make adjustments to AWD it would be more timely. Twelve months ago Murrumbidgee Groundwater did not want to force the cost onto members.

Voluntary buyback options Michael was not aware of any examples of where this would apply to groundwater. Minister Pitt's office not wanting to move on groundwater though the Queensland Government might seek to move in this direction, but not on groundwater.

Regional reports: Michael Drum advised that most groundwater users accept that telemetry is coming in and most are proactive.

Groundwater Water Resource Plans (WRPs) accreditation

Discussion on groundwater WRPs that have been returned; the reasons apparently relate to cultural water and engagement not being adequate.

Michael advised if NSW plans have been returned due to lack of engagement with First Nations, it would be a surprise if Qld, Vic and SA had done much in this space either.

The Chair observed that MDBA has become more stringent over time re assessing WRPs noting the surface water plans and the definition of planned environmental water.

Jenny agreed that NSW are taking a tough approach on the planned environmental water. In terms of Indigenous engagement, there were some timing issues and changes in MLDRN (Murray Lower Darling Rivers Indigenous Nations) and likely to get different responses to what might have been earlier.

At 4.15 pm: Guest Speaker: Dr Allan Peake, CSIRO, Managed Aquifer Recharge (MAR)

<https://ecos.csiro.au/managed-aquifer-recharge/>

<https://www.npr.org/2021/10/05/1037370430/water-is-scarce-in-california-but-farmers-have-found-ways-to-store-it-undergroun>

Allan provided the following presentation:

- CSIRO has joined forces with hydrologists on MAR and to raise awareness of this technology.
- Water banking: take water when plentiful and let it drain to aquifer and store it; assisting with drought mitigation.
- Benefits: Aquifers under-utilised, water storage and recovery via bore pumping when needed. To store water long term.
- Dams exposed to evaporation etc. In suitable aquifer minimum storage losses.
- Many don't have access to high security water, some dams leaky and it lasts for 2 years.
- MAR can hold water during drought; benefits also for urban water supply.
- High value irrigated agriculture, high value horticulture needs secure water supply.
- Can move water from dams into aquifer.
- Challenges: to understand whether an aquifer is suitable and how it behaves.
- The regulatory framework; put water into groundwater system, who pays; complicated reg framework; need the right aquifer in the right place.
- Cost of running MAR?
- Opportunities for high value horticulture
- How to assess site suitability. Team of people, GIS big data and putting it into maps and soil maps and finding groundwater characteristics; how to implement faster.

- Need shallow aquifer to get water in and out quickly; need significant storage capacity to make it worthwhile.
- Low cost is gravity infiltration – this happens in Central Qld Monto and Eidsvold.
- Also opportunity to build big recharge tanks; instead of sealing the tank, dig out the top
- Alternative method is pressure injection, extra costs associated.
- Understanding environmental issues; an aquifer that has not been used before, wildlife issues, salinity issues and cost of desalination.
- Economic: increased cost but potential savings during drought when water cost increased.
- It has been suggested to build above ground storage with partitions.
- Other economic considerations: establish hort industry in a community; and how many years water stored underground and how to establish and manage that.
- Enough stream flow coming in to fill the aquifer.
- Infrastructure requirements, topography and logistics; for existing users, say 20 km away. Perhaps pipelines to deliver water, extra expense.
- Regulatory and policy considerations; need to be able to trade water from downstream to upstream – ie St George where farmers can't trade water.
- Understanding interaction of surface water / groundwater management.
- Who Benefits? landowners in the location of the aquifer; Possibly community benefit?
- Location of potential aquifers; engaging with irrigators and community groups to do site investigations, with the aim of establishing demonstration sites. Need to get some interest and funding to get started to do this.
- Cross business unit collab with CSIRO; also with Future Drought Fund and to organisations like NIC and state govts.

Michael noted that Wendy Merritt is coordinating the project at ANU and Fenner School.

Questions and discussion: CSIRO has submitted an application to the Future Drought Fund. Allan also working with Mallawa irrigation

Iva noted considerations around water quality / contaminants; collecting surface water going into groundwater. A question around existing irrigators have first access rather than new entities?

Allan noted Mallawa irrigation is the largest hort producer in the district. Have come through severe drought, but hopefully existing users would have enough.

Michael queried for use by new users or existing? Allan for existing water entitlement holders.

Jenny queried whether it is a question of trying to understand what is technically feasible; is CSIRO undertaking the regulatory issues in parallel? Allan noted there is no recipe in terms of how this is approached; St George case study, looking at this together, feasibility / regulatory. More physical constraints and it is ideal to confirm an aquifer's suitability before commencing.

Allan departed the meeting

Committee discussion: The Chair sought committee feedback noting MAR work occurring in other areas. Jenny advised that ANU completed work with Coleambally Irrigation, putting flood water into storage, not entitlement water; it was weak on the regulatory side and have had to make minor changes to surface water rules. This would involve a very significant rethink at Commonwealth and state levels. Coleambally Irrigation believes there is some interest, but it is beyond CICL expertise. Conceptually, MAR it is something that could provide drought relief.

	<p>Michael noted the ANU work, exploring taking water from flood water and putting it in an aquifer. ANU was requested to do a case study on the Gilbert River in Qld. to look at alternatives, eg building above ground or other.</p> <p>The Chair noted the potential benefits while noting all complexities and how it would be managed; not something NIC would pursue as a priority.</p> <p>Tim suggested NIC could gauge Members' interest, but don't think NIC can play a constructive role; it will work if people can justify the price of water but doesn't create any new water.</p> <p>Michael noted that if it gets to the stage of a project on the ground CSIRO seek industry input, NIC could offer up participants on a steering committee.</p>
ACTION 1	Next Groundwater sub-committee meeting, invite Victorian perspective speaker on Groundwater issues in Victoria, including cross border issues.
Item 4	Other business No other business was raised.
Item 5	Meeting closed at 5.15 pm