Lower Limestone Coast Water Allocation Plan
Stakeholder Advisory Group
Minutes

Meeting No. 7, 19 December 2024, 10:30 – 3:30 pm

Millicent Football Clubrooms, Millicent

Objectives

- Complete action 5.3 to have a session on the drainage network to provide Group members more information.
- Understand water resources legislation and how the Limestone Coast Landscape Board and South Eastern Water Conservation and Drainage Board work together.
- Provide an overview of the history of the drainage network, current drainage network operations, flows and commitments.
- Provide an update on progress of drainage adaptation projects, relevant research and case study of groundwater surface water interaction.

Attendees:

Group Attendees – Penny Schulz (Chair), Pete Bissell (Chair), Alan Rossouw, Belinda Williamson, Claire Harding, Claire Davies, Darren Shelden, Graeme Hamilton, Kerry DeGaris, Kylie Boston, Melissa Herpich, Peter Balnaves, Simon Sherriff, Terry Buckley, Wayne Hancock

LC Landscape Board Staff Attendees – Liz Perkins, Sue Botting, Chelsea Burns, Ryan Judd, Mark de Jong, Steve Bourne, Jason Taylor

South Eastern Water Conservation and Drainage Board Attendees – Brett McLaren (Presiding Member SEWCDB), David Williamson

Apologies – James Prescott

Welcome and agenda

The Chairs welcomed everyone and thanked Group members and staff for their attendance and gave an acknowledgement of country.

Agenda Check Discussion

Nil

Minutes

Discussion:

- An update was provided on actions 5.2, 6.0, 6.1, 6.2, 6.3.
- The IMAT table was briefly discussed in relation to opportunities to move water if reductions were to occur. IMAT table will be discussed further at relevant meeting.

Minutes from Meeting 6 were confirmed as true and correct.
Moved by: Alan Rossouw. Seconded by: Pete Balnaves. All were in favour.

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Groundwater legislation and how the boards work together

Liz Perkins provided an overview of the *Landscape South Australia Act 2019* as it relates to the drainage network and how the Limestone Coast (LC) Landscape Board and South Eastern Water Conservation and Drainage (SEWCD) Board work together.

Discussion:

- Groundwater dependent ecosystems and wetlands may have a surface water interaction but it is required under the Landscape Act that water allocation plans must consider groundwater dependent ecosystems.
- Swamps which have a drain constructed impacting a wetland or watercourse could be covered under both Drainage Act and Landscape Act depending on the circumstances. Example earlier in 2024 where Drainage Board, LCLB and DEW all worked together to address a compliance issue of a similar nature.
- Definition of surface water and how that relates to recharge interception of the drains. Is it possible to determine which drains are intercepting rainfall recharge as opposed to draining surface water. This was addressed more fully later in the day in terms of area drains impact and gaining vs losing drains.

Drainage network surface water legislation and current operations

David Williamson provided an overview of the *South Eastern Water Conservation and Drainage Act 1992* and the current operations of the SEWCD Board and artificial drainage network.

Discussion:

<u>Overview and administration:</u>

- Was salt always in the landscape or was it from removal of vegetation. This was addressed in a later presentation.
- Conflicting objectives within the current legislation, has been some discussion of review but not currently resourced to do so. Legislation is 1992 likely reflects more historical thinking
- Management plan is reviewed and developed every 3 years, reviewed annually.
- The Board manages a number of important environmental assets, managed by the Principal Land and Flows Management Officer. Total of around 16 people for the entirety of operations within the current structure (one position not filled to provide operational funding, proposing 3 next year for increase operational funds).
- Should some of the more significant crossovers and culverts be the responsibility of other agencies such as DIT? Responsibilities are divided between agencies. Highways are DIT, others are council and drainage. The SEWCD Board currently maintain 104 road bridges, 1,600 culvert crossings.
- Bridges are routinely inspected either by SEWCDB staff or external contractors.
- At the time of the drains being designed, they were designed for a 1 in 10 year event, 10mm per day if efficiently kept clean and running at peak.
- Is a 'wetland' include a seasonally inundated pasture? Definition of a wetland is more where is permanently or periodically inundated to affect the biota or ecological process.
- Are private drains emptying into the SEWCDB system? Yes. Mole drains would be considered as a private drains and would need a drain permit and WAA permit.

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- Where does the drainage board have control of a private drain? They would need an approval for the drain, the Board controls what's in the public drain but can enforce in the private drain as well. Jurisdiction for drainage across the entirety of the system within the provisions of the Act.

Hydrology:

- Rating sites are locations where may not be able to put a meter in, may not be able to get a clear enough run.
- Piccaninnie ponds doesn't feature on the pie chart of flows, discharge too small of a % to be seen. Eight mile creek and deep creek are 49% of discharge in last 5 years but has still decreased significantly in volume. Total volume decreased by approx. 25% compared to the 5 years prior. These locations are karst expressions more than drainage flows.
- Salt Creek and Blackford flows from 2019 are due to diversion to the wetlands. Has seen some variability over whole of record (i.e. 1970s).
- Drain L has a couple of weirs. What is the criteria for putting in weirs or managing them? There are guidelines, generally to hold water in the landscape or rehydrate agricultural lands.
- Why does Bool Lagoon use so much water, why is there no overflow for Lake George? It isn't a huge user, it just isn't receiving flows from upstream or groundwater. It isn't receiving in order to overflow.
- Current commitments (174 GL) aren't able to be met with current drainage flows (150 GL). Would need significantly more flows to meet those commitments. How far south can you go to get commitment to Coorong? This was covered in a later presentation.
- 9 current authorisations, only one is active. Located in the Eight Mile creek area.
- Rainfall has a salt content, so salt export needs to be continue – e.g. 50 mgl per square metre of salt content. Dryland salinity is primarily caused by vegetation removal and ongoing irrigation. Saline water is also due to cut of fresh flows from the south with the implementation of drainage.

Funding

- How much of the NRM levy comes back to the drainage board? Drainage Act has no provisions to impose a levy. Can a summary sheet about the SEWCD board funding needs be provided? The SEWCD Board has developed a prospectus that can be provided to industry representatives. The SEWCD Board will be canvassing far and wide for funding to resource current challenges including the backlog.
- Guard railing is a big issue. Sizing of implements and machinery has increased with land use change. This can cause damage on narrow bridges plus other community safety concerns/incidents.
- Regulation of weirs is equally as important as the infrastructure, do you have sufficient staff to manage these if we had an event? From March we will only have 1 staff to do that so capacity will be extremely limited. Confident in the skillset that is being built. Timing is very sensitive for weir regulation which may not be able to be achieved. 198 regulators that are maintained/adjusted up and down, only a very small amount are automatic. From March to September, most are removed to pre-empt for winter season. Monitor locations to try and pre plan when need to be put back in to hold water back in the landscape. Managing water in the landscape is very sensitive for landholders, often conflicting wants or needs of landholders.

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- Look at forecasts to be predictive rather than reactive as the weather occurs. Dropping at a certain rate then indicates they need to go back in. Like the umpire, not everyone is always happy. Tension from landholders.
- Even more challenging now as it is a drier landscape, has been a shift in baseline of land expectation so when a wet event does occur there is a changed expectation of land availability. Very wet and very dry are easier to manage then the in between years.
- Some of the flows to sea such as Ewens or Salt Creek may not be fit for purpose in regards to water quality so may be limited in its usefulness or what can be done with those flows.
- What pressure does the SEWCD Board come under politically to direct water from the SE to the Coroong vs what is best for the region? Commonwealth and state agreements are the basis. The SEWCD Board tries to manage the wetlands in the Limestone Coast as the priority.

History of the drainage network

Mark de Jong provided an overview of the history of the drainage network.

Discussion:

- Formation of dunes over time with retreat of sea level.
- Drain influence on groundwater is approximately 1.8 km up flow dependent on soil profile. Baseflow into drains is reflective of healthy water table levels. Drains will not have any impact on groundwater depth, only a wedge at the top.
- Why is the groundwater so saline at the top of the Limestone Coast? Salt tends to be terminal. Fresh flows from the south to the north have been cut off with the implementation of drainage.
- Lots of community perceptions on drains, what are the regular complaints? 2015 Community Panel feedback process. Varying view both ways, some wanting more drainage for production, some wanting to retain water in the landscape. Capacity to respond to an event, landholder engagement and relationships allow for some drains to be operated by private landholders where appropriate. An appetite to retrofit the network to allow for more adaptive and responsive management but funding is the current limiter. Federal/grant funding is competitive and not often able to be applied for due to co-contribution requirements and/or eligibility.
- 2019 was the last drain completion. Board gets private drain applications from time to time, often refused.
- There isn't volume going out to sea that people think. Water commitments from the network are not being met, when there is water it is not when we can utilise it, the drains aren't intercepting recharge, this is not the easy solution that some make it out to be. Importance of messaging and education but challenge. Has this been considered by the joint board meetings as joint communication campaign? The Boards are discussing this.
- Redirection projects are very well designed/considered in upper Limestone Coast based on water quality – current priority wish list project is Lake George augmentation project subject to funding (current Lake Frome, Mullins, Southend discharge) and would allow environmental water commitments to be met. Drainage Board and Landscape Board are both advocating for this project, currently through federal funding which is a competitive process
- Lake Hawdon North project, weir 10 km in from Robe for Drain L to increase flows to enhance Lake Hawdon North for migratory shorebirds and other species/vegetation.

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- Opportunity to redirect water positively to GDEs would ideally minimise reductions if environmental needs can be met or improved, but is unlikely there is enough reliable water do so.
- 3D drainage model in Millicent museum? Does this still exist/work and could that be used for education purposes? Not known at this time.
- Water levy – how much of this goes to managing the region? LC Landscape Board receives approximately $5.5M land levies, $4.5M water levy. 50% goes back to DEW for water planning and management charge which fund water licensing and water planning activities.
- If there was a significant overflow in 1 in 5 years the engineering solutions could be viable, but aren't getting those events that often to be reliable for significant impact. Is it about harnessing smaller flows by private drains on private property to be managed by landholders? The flows aren't there in the drains.
- USE network was designed to remove salt, but if localised impact how is the whole region benefiting? Some of the region is not captured. Size of drain influences the area impacted, significant system. Areas above where the Upper South East drains end, a lot more dryland salinity since occurring and being managed.
- For drains to support GDEs, needs to go close to those wetland systems. Where this is viable is primarily already happening.
- Has there been any attempt to measure the outflows to sea underneath the surface? Mainly estimated as realistically unable to measure. Modelling has inflows from east and outflows to west, analogous to shore.

Groundwater surface water interactions - Drain M / Margareys Lane case study

Ryan Judd presented on groundwater and surface water interactions seen at Drain M weir placement as a case study.

Discussion:

- Regulator was installed in 1980s as a result of community discussion around impacts of drains on soil moisture profile.
- Drain M is closed most of the time. Significant amount of water in winter when regulator is open, but has only flowed significantly once or twice since 2017.
- Case study from 2017 for one year only, wet winter year. Normally always water in this drain at that time of year due to regulator and quite a deep drain.
- Lower Limestone Coast drains were designed on a coefficient to capture surface water runoff, depth is a consequence of getting the depth to get capacity. Upper Limestone Coast drains were specifically designed to intercept groundwater to remove salt from soil profile. Design worked well at places like Diddicoolum but not as well at other places like Bald Hills, mainly due to soil type/profile. Doesn't work well everywhere.
- Influence up to 1.5 km upstream and 800 m downstream but generally more localised, Drain M case study saw main impacts within 500 m of the drain. Biggest/deepest drain in the region when water was available.
- General discussion around shift in groundwater and drainage management over time.

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Drainage adaptation projects update

Sue Botting provided an update and overview of projects and draft results for studies underway relating to the drainage network.

Discussion:

- MAR feasibility study, detail on flows from specific sites at Mosquito Creek, Bool Lagoon, Callendale and Drain M
- Biodiversity value of drains is not fully understood by community. Multiple places in drainage network, particularly coastal creeks, have threatened species and freshwater fish, frogs, turtles, refuges for birds. Some of the last remaining permanent water sources and flowing systems we have left. There is a report on drains as refugia.
- Evapotranspiration is the main impact on water balance.
- Query in regard to the surface water extent/volumes on some of the maps presented.
- Some of the presentation was deferred due to time.

Any other business

Discussion:

- Discussion around whether industry could advocate for funding or investment for some critical projects across the network where they aren't huge money projects. Collaborative advocacy effort.

Next meeting date

- Next meeting date: Meeting 8 scheduled for Wednesday 26 February 2025 (to be confirmed)

Close of meeting

Meeting closed at 3.40pm
The Chair thanked the South Eastern Water Conservation and Drainage Board for supporting the meeting.
The Chair thanked the stakeholders and staff for attending.

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Lower Limestone Coast WAP Stakeholder Advisory Group
Action Table

Action	LLC WAP Stakeholder Advisory Group Actions	Status	Meeting 7 Update
1.1	LC Landscape Board to provide the Group updates on outcomes from the Limestone Coast Water Steering Committee.	Ongoing	
3.1	LC Landscape Board to analyse potential amalgamations and provide back to the Group.	Ongoing	
3.3	Revisit management zones as adaptive management and sustainable allocation are considered.	Ongoing	
3.4	Understand the impact of SPR and DS if class 3 and 4 were merged to look at moving forward with 3 classes as a starting point.	Ongoing	
3.5	Allocation and use data to be presented spatially in addition to the table.	Ongoing	
4.1	Run two scenarios: full allocation extracted with RCP4.5 climate change scenario and current average extraction with RCP4.5 climate change scenario.	Ongoing	
5.2	Organise for the Group to meet with the South East Aboriginal Focus Group.	Ongoing	
6.2	LC Landscape Board to added glossary of terms on project page.	Ongoing	

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Action Table – Closed Items

Action	LLC WAP Stakeholder Advisory Group Actions	Status
1.2	LC Landscape Board staff to take the option of proxies in the terms of reference to the LC Landscape Board Governing Body.	Complete
1.3	LC Landscape Board staff to provide an overview of the monitoring network at Meeting 2.	Complete
3.2	Move forward with same management zones as current for now.	Complete
5.1	Revisit guiding principles for the Plan in Meeting 6.	Complete
2.2	Provide the Group terms of reference for Limestone Coast Water Steering Committee	Complete
2.1	Request from Group for extraction and allocation for each management area + holding licences info.	Complete
5.3	Have a session on the drains to provide members more information.	Complete
6.0	Pull out key concepts slide and provide on members project page.	Complete
6.1	LC Landscape Board to send out dates for meetings for the first 6 months of 2025.	Complete
6.3	LC Landscape Board to query DEW about providing IMAT table to the Group.	Complete

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