Lower Limestone Coast Water Allocation Plan amendment

Summary of information sessions held during August 2024 to support amendment of the Lower Limestone Coast Water Allocation Plan

LANDSCAPE SOUTH AUSTRALIA LIMESTONE COAST

Background

Thank you to those who attended one of the Lower Limestone Coast Water Allocation Plan amendment public information sessions in August 2024. Over 340 individuals attended the sessions which were held in Kingston, Naracoorte, Mt Gambier, Millicent and online.

If you were unable to attend a session this document and the project page provide a summary of the sessions and information about the amendment.

The feedback and queries from attendees is greatly appreciated and will inform the next steps in the amendment process.

Our Lower Limestone Coast Water Allocation Plan project page has a number of ways where you can find information and be involved in the amendment.

Lower Limestone Coast Water Allocation Plan project page

- **Drill down for more information on focus areas**
  From sustainable allocation to water trade to groundwater modelling, you can drill down for more information on the key focus areas for amendment.
  Explore more information on the key focus areas for amendment.
- **Have your say and provide insight on areas being explored for amendment**
  From your thoughts on merging management zones to whether you have lowered a bore on your property in the last 5 years, we are keen to hear from you and providing feedback is simple.
  Answer simple questions on the proposed changes and contribute further feedback.
- **Check out the water levels near you**
  Check out the water levels from over 500 observation wells in the Lower Limestone Coast prescribed wells area.
  Check out a well near you.
- **Follow the progress of the Stakeholder Advisory Group**
  The agendas, minutes and a video summary from each Stakeholder Advisory Group meeting are published on our page.
  Find out what is being discussed at the meetings.

We will be looking at heading back out to the community and providing another round of public information sessions in March 2025. The Limestone Coast Landscape Board encourages you to visit the page and stay connected with the amendment as it progresses. There is an option on the page to follow it and be alerted of any opportunities for involvement and announcements relating to the Plan amendment.

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Sustainable allocation and the concept of acceptable impact

The revised Plan will take a different approach to sustainable allocation in comparison to the current Plan. The amendment process will explore acceptable impact and use groundwater models to inform sustainable allocation.

When water is taken from the groundwater system it has an impact. The scale, timeframe and values impacted will vary. Acceptable impact is based on understanding what impact from consumptive uses we accept. It will consider all values including economic, environmental, social and cultural.

The amendment process is now starting to look at acceptable impact.

The following outlines the feedback and/or discussion that occurred around sustainable allocation and acceptable impact at the August 2024 consultations that were held in Kingston, Naracoorte, Mount Gambier, Millicent and online.

Industry practices and recharge

- Queries were raised as to whether pivot irrigation creates recharge and therefore those who irrigate should receive some benefit for that recharge. It was suggested that opportunities for recognition in licensing and incentivise wetlands could create benefit. No recharge is considered to occur from pivot irrigation. It was raised that aquaculture practices can also contribute to creating wetlands and recharge and no credit is given for this.
- It was asked whether the growing push for carbon credits has been considered in terms of impact to the groundwater resource. Carbon plantings are under consideration, but more is needed to understand the potential. How it works from a policy perspective would depend on whether they are plantation forestry that will be harvested or are native plantings. Plantation forestry may be accounted for as farm forestry.

Environmental considerations

- Some information on the status and drivers of change around Piccaninnie Ponds and Ewens Ponds were discussed. Queries were raised around whether there is any connection between groundwater use, water level declines and pollution, in particular in relation to the current status of Piccaninnie ponds, Ewens Ponds and other karst springs.
- It was queried whether the 10% allocated for wetlands in the current Plan is going to be increased significantly in the revised Plan. The 10% of annual average recharge that wasn't allocated to consumptive use was to support resource condition and the environment. This methodology of allocating a percent of annual average recharge for the environment has been demonstrated to not be effective at maintaining the environment. Under the revised Plan a different approach will be taken of only allocating water for use from the resource that does not have impacts that we don't accept. It was queried whether the revised Padthaway Water Allocation Plan has an environmental allocation. It doesn't, it has taken an approach of acceptable impact. Concerns were raised as to how acceptable impact would be determined and whether it could result in a backward step for the environment and wetlands.
- It was queried who would decide which wetlands are valued under this approach. Ultimately the LC Landscape Board and then the Minister are the decisions makers in this process.

Items raised for consideration around acceptable impact

- It was asked whether continued groundwater level drop in the south coast region could increase the risk of seawater intrusion. Seawater intrusion is a risk largely unique to the south coast. Seawater intrudes under groundwater under the coast. The pressure from the groundwater system holds the seawater at a stable level. Decline of pressure in the groundwater system could result in the interface between groundwater and seawater rising up. This risk is a consideration for acceptable impact on the south coast. Declining groundwater levels will increase the risk but more information is needed to understand where the areas or key risks are. The LC Landscape Board has undertaken some aerial geophysics work which will inform this.
- How does use in the north impact the south, is the resource connected and therefore changes in the north could impact the south. The resource is connected and how changes in one part of the region might impact another part needs to be considered. This includes a resource condition like hydraulic gradient. It was queried how long does it take for water to move through the system. The time varies across the prescribed wells area due to varying aquifer properties. As an example water in Ewens Ponds the water is estimated at 20-30 years old.
- It was queried whether deepening of bores was being raised as an issue by the people who have had to do this. Widespread issues haven't been raised but we are asking questions to find out, it has been anecdotally reported in a few cases. Deepening bores does require a permit but these are processed through the Department for Environment and Water.
- There were queries around how impacts on individuals or industry will be perceived or determined as acceptable. Some impacts that have occurred from reductions in the current Plan have not been perceived as acceptable. There have been significant impacts from these reductions to industries like forestry. It is recognised and acknowledged that allocation changes would also have impacts, however there is a need to consider the sustainability of the resource and the impacts of over allocation.
- It was queried whether buy backs were being considered. Buy backs were raised extensively during the review process. The LC Landscape Board is querying the South Australian Government in terms of its position on buy backs noting this only occurs now in relation to the Murray River.
- It was raised that the confined wells capping scheme resulted in an increase in pressure in the confined aquifer and it was queried whether this was still the same. It is acknowledged the program was successful and positively impacted the confined aquifer. The pressure has remained stable since in some of the area but decreased slightly in some other parts since then. The system may still be reaching a new level.
- It was discussed that in some place changes that have already occurred are likely irreversible. Where levels have declined, recharge will have also decreased and the declines may not be recovered.
- It was queried whether state obligations such as those under the Environment Protection and Biodiversity Conservation Act were a consideration for acceptable impact. They are a consideration in terms of obligations the state has.
- What is the effect of blue gums in Victoria on groundwater levels in Joanna. Where possible the groundwater models extend into Victoria to allow the impacts from use, including plantations to be accounted for.
- Queries were raised as to whether water quality will change with depth in the aquifer. Water quality is known to change with depth. It can result in salinity issues, iron bacteria and also yield from bores can be impacted.

- It was queried whether the depth or thickness of the aquifer is considered in acceptable impact. A percentage of decline could then be a better representation than metres decline. Thickness could be a consideration but the focus needs to be more on the impact of the decline and what is acceptable rather than how much aquifer is left. This could impact on stock and domestic bores and affect recharge, potentially water quality and yield with increasing declines of groundwater levels.
- Red gums are a type of vegetation that are also dependent on access to groundwater. There are concerns that if groundwater levels decline to a point that the red gums can no longer access groundwater this could result in widespread loss of paddock trees. This should be a consideration for acceptable impact.
- There were some individual views that proposed changes to allocation were essentially prioritising recharge over businesses, vines would die off, cows will be sold off and therefore what was the point of having the resource if it wasn't being used. The LC Landscape Board was asked to justify itself by giving an indication of its staffing number.

<u>How the current Plan set sustainable allocation</u>

- Prior to 2013 area-based allocations were used. With the introduction of the Lower Limestone Coast Water Allocation Plan area-based allocations were converted to volumes from 2013.
- For the unconfined aquifer, allocations were set by taking an average annual recharge rate per management area and allocating 90% to consumptive uses. This is a methodology that some understand whereas some were unaware of how allocation had been set. Recharge was determined from different studies, some of which dated back to the 1970s. Methodology to determine recharge takes into account rainfall and other aquifer properties. The water table fluctuation method is one method for calculating recharge. The recharge rates used are provided in the Plan. While there is newer science around recharge the reality is there is no one recharge rate, it is highly variable and water allocation plans are tending to move away from using an annual average recharge as the only basis for sustainable allocation. It is difficult to know how much water goes into back into the system as there are so many variables, just because it rains does not mean recharge occurs. Recharge itself is incredibly difficult to accurately measure at scale. Much investment and time could go into trying to determine recharge but groundwater models offer an alternate and improved way to move forward with acceptable impact for sustainable allocation.
- How is recharge impacted by significant changes such as bushfires wiping out large areas of vegetation. Recharge would be impacted by a significant change like this or other significant land use changes. This can be one of the issues of basing allocation on average annual recharge. Recharge will be variable year to year and may never actually be the average over time.
- Are we definitely getting reductions if we are moving away from the current 90/10 allocation? Not definite, no decisions have been made, but it is within scope.
- Has there been any further science done since the current Plan on the impacts of forestry on groundwater. The forestry industry has undertaken some research on tree water use. The groundwater models use current information on groundwater levels and the deemed rate from the Plan and they calibrate well to real data.

- There was a query as to whether recharge was a priority, would allocations be then based on rainfall. Rainfall is used to inform recharge. Recharge is what it is, the LC Landscape Board isn't prioritising rainfall or recharge but is recognising the challenges in this approach of using annual average recharge and looking to use better ways to determine sustainable allocation.
- Plans in other places do use similar methodology to the current Plan but as plans are reviewed and updated they are looking to better methodologies particularly where groundwater models are available.

Use of groundwater models to inform acceptable impact

- It was queried whether the groundwater models show that we have reached a new baseline in areas since the Plan was introduced. In some places it does look like current use and current climate have reached a new level. It isn't consistent across the prescribed wells area, some places are showing continued declining trends under current use and climate.
- Groundwater models are calibrated by running the model back in time and comparing the model run to real data and groundwater level trends. The model can be updated when the Plan is reviewed or if issues arise with the resource.
- For publication purposes the models are run with two book-end scenarios. Scenario 1 is current use with current climate (current climate is considered climatic conditions over the last 10 years). This could be considered the best-case scenario but is also unlikely moving forward with climate and use expected to change. Scenario 2 applies a climate change scenario of RCP8.5 with all allocation being used. This is 6.6% reduction in rainfall. This could be considered the absolute worst-case scenario and is also unlikely/unrealistic. The LC Landscape Board will now work with the Stakeholder Advisory Group to develop more realistic and relevant scenarios to inform policy change.
- It is acknowledged that there is an area around Millicent/Mount Gambier that isn't covered by a sub-regional model. These areas are covered by the regional model and work has been done to ensure the regional model works well in these areas. The LC Landscape Board is also in a conversation with SA Water about any models they may be looking to undertake in relation to the Blue Lake.
- It was queried whether groundwater models can be used to determine the source of impact e.g. forestry versus irrigation. The Mid-South East model has explored this and discusses some of this in the publicly available report. Essentially it can be done by taking one use away and running the model to see whether the trend varies greatly. It is only relevant to do so where both uses occur.
- A query was raised as to whether the groundwater models are peer reviewed. The Department for Environment and Water develops the models to industry standards. All models are externally peer reviewed. Hugh Middlemiss is the reviewer of the models currently available.
- It was asked whether declining trends in an observation well in the monitoring network could be used to determine whether restrictions are required. Groundwater levels could be used in an adaptive management framework and be a trigger for a restriction to allocation. Groundwater modelling can be used in reviewing sustainable allocation to understand trends, whether declines might continue or whether they may stabilise or shift to an increasing trend under different use and climate scenarios.

Allocation and use in the Lower Limestone Coast

- Queries were raised as to whether full allocation includes all taking licences and holding licences. Allocation does include holding licences. It was asked if people with holding allocations had been asked if they would forfeit them yet. No decisions have been made in relation to holding licences and a broader view of over-allocation is being looked at rather than focusing only on holding licences. There is no plan to recalibrate the number of licences e.g. reduce the number of licences.
- Queries were raised around use in comparison to allocation. At the prescribed well area level use is approximately 50% of allocation in the confined and unconfined aquifers. However, use does vary considerably between management areas. Use tends to correlate with rainfall with use being higher in low rainfall years. There are many different reasons why water isn't being used, reasons are different from business to business, industry to industry. Much of the unused water is water taking licence that people aren't yet using. But in some places water is being activated that has never been used before.
- Stock and domestic use is estimated through a calculation in the Plan. It is an estimate as stock and domestic use is not metered. While not metered it is accounted for in the allocation. Stock and domestic use will be reviewed as part of the amendment process. Licensing of stock and domestic is not within scope of the amendment.

Water market in the Lower Limestone Coast

- Concerns were raised about the risk of an active water market. This could result in more water being used which would cause negative impacts to resource condition. It was raised that encouraging a water market could have negative outcomes, particularly when allocation and use are so different. The LC Landscape Board acknowledged this risk and is undertaking a water market study to better understand this complex topic. This could include looking at trading rules needed to prevent trade into high-risk areas. The water market study being undertaken by Flinders University will look at the benefits, risks, barriers and limitations. There will be opportunities for licence holders to contribute to this study.
- Water market speculation was also raised as a risk and something not desirable for the region.
- Differences between water value between management areas was raised as an important consideration. It was also raised as to whether trading administrative processes could be simplified to make it easier to trade water.

Monitoring in the Lower Limestone Coast Prescribed Wells Area

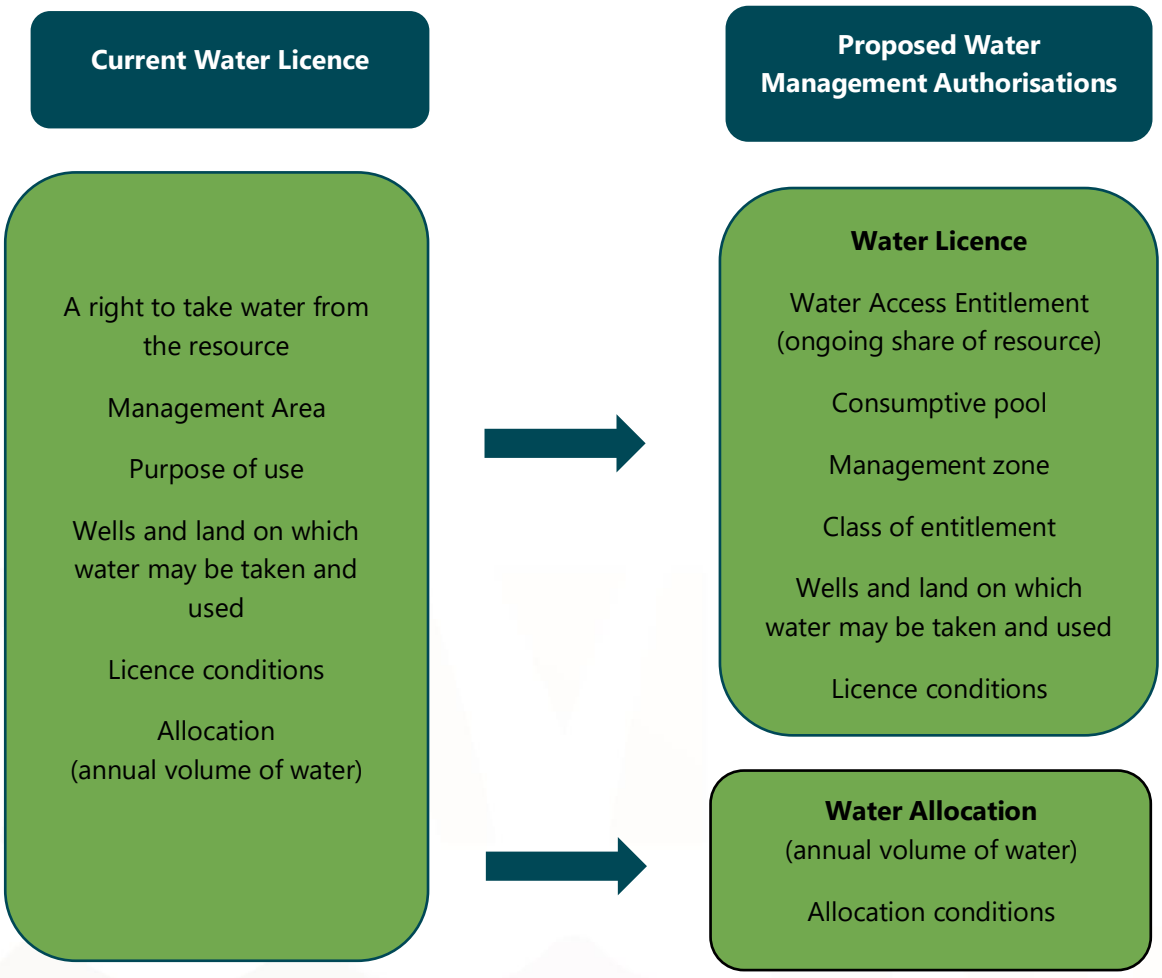
- Queries were raised about the monitoring network across the Lower Limestone Coast Prescribed Wells Area. Many were not aware that there are over 500 observation wells regularly monitored by the Department for Environment and Water. This monitoring is important to underpin the groundwater modelling and manage the resource. The network monitors groundwater levels and salinity, it does not monitor other water quality elements such as nitrates. Nitrates were raised as something that should also be monitored.

Artificial drainage network across the Lower Limestone Coast

- The artificial drainage network is managed by the South Eastern Water Conservation and Drainage Board under the *South Eastern Water Conservation and Drainage Act 1992*. They are responsible for monitoring water in the drains and the management and operation of infrastructure in the drainage network.
- There were a range of queries in relation to the artificial drainage network including their function, how much water is available and options to use that water and whether they have been dug too deep. The LC Landscape Board has a research project underway to bring together data and knowledge to help inform opportunities and risks with modifying the drainage network. This research is occurring outside of the water allocation plan process and will be delivered in 2025. Holding back water in the drainage network has already occurred in some places to support wetlands. Freshwater, both surface and groundwater, reach the ocean via the artificial drainage network.
- There was some discussion in relation to the current status of Ewens Ponds. Some information around water levels and trends at the Ponds were presented and reed cutting at the Ponds was discussed.
- Groundwater models used for the amendment process incorporate the artificial drainage network where appropriate. It was queried whether data from the research project would be used for these models. The data required for incorporating the drains into the groundwater models already exists and is being used. The research project will not deliver knowledge relevant to the groundwater models.
- Queries were raised as to whether there would be benefits to recharge if we slowed water up in the drains using the weirs. Drains perform different functions across the landscape. Drains to the north of the region are needed to move saline water out of the landscape and holding up water in these drains could pose salinity risks. Drains to the south of the region are needed to prevent flooding of agricultural land during the wetter months. It was highlighted that this function has been critical to the economy and development of the region. Weirs are already used to manage how water moves through the network. Changing management could result in flooding and the risks of this need to be better understood. But change in management of the drains could also have benefits for groundwater resources in certain places in the region. Changing operation of the artificial drainage network does not negate the need for changes to the water allocation plan. More knowledge is needed to understand risks and benefits. While opportunities may exist they will be limited, changing the management of the drainage network cannot solve all problems.
- The LC Landscape Board and South Eastern Water Conservation and Drainage Board need to work together to better manage the groundwater resource more holistically. The two boards already work together extensively. This occurs through multiple mechanisms including joint board meetings, joint committees and collaboration between staff. The boards also have a joint strategy in the Drainage and Wetland Strategy.

Proposed licensing system – splitting licence and allocation

During the August consultation it was proposed that a "partially unbundled" licensing system be adopted for the revised Lower Limestone Coast Water Allocation Plan. A water licence will entitle the holder to gain access to a share of water in a consumptive pool ("*water access entitlement*"). The water access entitlement, expressed as a number of unit shares, gives rise to an annual allocation of water permitted to be extracted. This volume may be adjusted dependent on resource condition. This change supports the development and implementation of an adaptive management framework.



The following outlines the feedback and/or discussion that occurred around the licensing system at the August 2024 consultations that were held in Kingston, Naracoorte, Mount Gambier, Millicent and online.

<u>Appropriateness of adaptive management to a groundwater system</u>

- It was acknowledged and discussed that this change has similarities to surface water systems such as the Murray River. There are a lot of negative views around how the river system works and may not be a good model to follow. It is agreed that any adaptive management framework needs to be fit for purpose for a groundwater system which is much less dynamic than a river system. What works in a surface water system won't necessarily work for groundwater.

- This proposed licensing change has differences to surface water systems which tend to be fully unbundled. Groundwater systems tend towards partially unbundled as more appropriate to the way groundwater systems work.
- There are examples in other places where adaptive management frameworks are being implemented for groundwater. It is a change being considered as plans are revised across South Australia. This includes the Adelaide Plains Water Allocation Plan and the soon to be introduced revised Padthaway Water Allocation Plan. The adaptive management framework for the revised Padthaway Water Allocation Plan was discussed as an example of what this can look like for a groundwater system.
- Allocations are currently issued annually in alignment with the *Landscape South Australia Act 2019*. This will continue moving forward but if this change was to be implemented there could be a framework in the Plan that would allow the volume of allocation to be changed under set conditions.
- It was discussed that this system can better protect the resource provided it can be developed to be fit for a system that is less dynamic than a river system.
- It was queried how adaptive management triggers would be determined, would it be based on groundwater levels or other factors like rainfall or recharge. This still needs to be worked through but groundwater levels are an obvious measure that could inform triggers. Another type of trigger could be salinity. At this stage rainfall and recharge are not being considered as triggers as they don't directly indicate resource condition.
- It was pointed out by some individuals that data from bores is one of the simplest ways to understand the resource condition and this could inform triggers in line with showing any ongoing declines in groundwater levels.

<u>Development of further detail to support adaptive management</u>

- It was discussed that the LC Landscape Board would need to further develop adaptive management and come back to community with more detailed proposals for feedback. The detail is very important.
- It was queried how water licence holders could have confidence that the water allocation would be returned if resource condition improved under adaptive management. Any changes, either decreases or increases in allocation would need to be clearly outlined in the water allocation plan. There would be a transparent adaptive management framework in the Plan that sets out the conditions under which allocations may be restricted and also when they are returned. Transparency and communication are key to this process and licence holders would be kept informed about resource condition in relation to the adaptive management framework.

<u>Impacts of changing allocation under an adaptive management framework</u>

- It was raised that many businesses and industries use more water in dry times. This is demonstrated when use is compared to rainfall. Allocations would be most likely to be restricted in dry times when businesses or industries need the water the most. This could impact an irrigator's ability to pull through a drought as there could be less available water allocated to them. Ongoing high use when the system isn't recharging from rainfall causes irreversible impacts on the system. It was queried whether instead of pulling back allocation in dry times more resource should be pooled in wetter times.

There are a lot of challenges to increasing recharge or storing water in wetter times. It might be possible in certain places but may also not negate the need for actions to protect the resource in dry times.

- It was queried whether in a high rainfall year would allocation be increased. If allocations have been restricted and higher rainfall years then occur resulting in improvement of resource condition then triggers could be hit that cease restrictions to allocation. An adaptive management framework operates in both directions of restricting and returning allocation based on triggers. Allocation would not be issued above the entitlement on a licence.
- It was queried how carryover would fit into an adaptive management framework. Carryover hasn't been discussed yet as part of the amendment process so this is still to be worked through. In other adaptive management frameworks, where carryover exists, hitting certain triggers can result in carryover being suspended. This would occur before allocation is restricted.
- There was some discussion around what the flow on impacts of restricted water availability in difficult years could be, flow on impacts to other parts of the economy and business impacts.
- Another impact that was identified as needing consideration was that water licences have been used as an asset or in financing and how would changing allocations impact this. One benefit to this proposed change is that only allocation would be impacted not the entitlement to the resource which could continue to be used as an asset.
- It was raised that the unused water needs to be addressed or any reductions or restrictions can't be effective in terms of impacting resource condition.

<u>How it will work for less adaptable industries so that it is equitable</u>

- There was discussion at multiple sessions around how an adaptive management framework could be applied to certain industries like forestry, permanent plantings or even industries that aren't as capable of altering their level of production in alignment with water availability. This includes industries who have a lot of capital investment tied up. It is acknowledged that the differences in industry and business types, need to be used to inform an adaptive management framework and it will be a more difficult to work through for some industries than others.
- Concerns were raised through the sessions that an adaptive management framework couldn't be made equitable because some industries are not as adaptable. Concerns were raised that all industries wouldn't be treated equally because of this. It is acknowledged that there are challenges to work through due to the diversity of industries in the Lower Limestone Coast, but the Plan will need to be transparent on how this process will work.
- It was queried whether the environment would be treated equally and therefore have allocations restricted when consumptive uses do. During dry times the amount of water available for the environment is by default less. As the environment will not have an allocation under the Plan because it is not a consumptive use, allocation for the environment cannot be varied under an adaptive management framework.
- It was queried if it was even possible for forestry to take reductions and so be treated like other industries under the Plan. Groundwater levels in areas of intense forestry development have dropped considerably. It was outlined that forestry has been subject to considerable reductions under the current Plan so this is possible.

Costs of water licence and of water

- It was raised that currently water licence holders pay an annual fee to take water each year and it was queried whether this would then change year to year or would it be held at the same rate, ongoing into the future. The cost of water has not yet been looked at in the amendment process. Under the National Water Initiative the cost of water is for the purpose of cost recovery, water planning and management and those activities undertaken by, or on behalf of governments as a result of water use (or potential water use e.g. where a water licence holder is not using water) only. It is within scope of the process to review whether current costs will meet this principle in a revised Plan.

Introduction of consumptive pools

A consumptive pool is the water that constitutes the resource available for consumptive uses within a prescribed water resource area. This includes both licensed and unlicensed consumptive uses.
A consumptive pool does not include the water required to maintain the condition of the resource or the ecosystems dependent on it.

At this stage in the amendment process six consumptive pools have been proposed for the revised Lower Limestone Coast Water Allocation Plan. These have been identified as consumptive uses which will likely require different and/or separate mechanisms in the Plan to manage them. Retaining these as separate consumptive pools ensures acknowledgement and visibility of these uses during consultation and through the amendment process. It does not exclude combining some at a later date if that simplifies the Plan without compromising the purpose or management of these consumptive uses.

Confined aquifer consumptive pool

- For licensed and unlicensed consumptive uses of the confined aquifer.
- Could include unlicensed uses including stock and domestic, Minister's Reserve and Section 105 authorisations, if not held in a separate consumptive pool.
- Allows for management options independent of the unconfined aquifer, for example, setting a maximum number of water access entitlements.

Unconfined aquifer consumptive pool

- For licensed and unlicensed consumptive uses of the unconfined aquifer.
- Could include unlicensed uses including stock and domestic, farm forestry, Minister's Reserve and Section 105 authorisations, if not held in a separate consumptive pool.
- Allows for management options independent of the confined aquifer, for example, setting a maximum number of water access entitlements.

Managed aquifer recharge consumptive pool

- Provides for licensed take and use of water that has been artificially pumped directly into the aquifer for later extraction.
- Although there is currently no managed aquifer recharge (MAR) in the LLC providing mechanisms to license and manage MAR ensures transparency if someone wished to pursue that option.
- The licensing structure, and associated rules, would differ from those of the confined aquifer and unconfined aquifer consumptive pools. As the volume of water discharged into the aquifer would vary between MAR schemes and from year to year, specifying a common relationship between water access entitlements and water allocations is not possible.

Environment consumptive pool

- Water additional to the non-consumptive water required to maintain the resource and dependent ecosystems.
- It has been suggested that an alternative name was required to distinguish it from the non-consumptive water required to maintain the resource and dependent ecosystems (for example 'Significant Environmental Benefit' consumptive pool or 'Significant Natural Asset Gain' consumptive pool).
- The water is to be used for specific purposes to provide additional benefit to natural assets. For example: augmentation flows in a creek to facilitate an ecological process; providing refuge for obligate aquatic species when under stress; supplementing water to a wetland to support bird breeding events.
- Holding water in a consumptive pool separate to tradeable water access entitlements provides a degree of surety to licensees who wish to donate water for environmental purposes and have confidence that it will not be used for other consumptive purposes.

First Nations consumptive pool

- Increasing the involvement and influence of First Nations peoples in water management, including accessing, owning and managing water, has been recognised at both national and state level with the Productivity Commission recommending it as an area for renewed focus for the National Water Initiative.
- Identifying a separate consumptive pool for First Nations acknowledges that responsibility and provides visibility to First Nations water access interests. First Nations people can currently access water for cultural purposes under a Section 105 authorisation.
- South East First Nations peoples have yet to be consulted on a consumptive pool and may advise on alternative means of representing their interests. However, a First Nations consumptive pool provides a positive basis from which to commence consultations.

Stock and domestic consumptive pool

- Although stock and domestic use could be included in the confined aquifer and unconfined aquifer consumptive pools a separate consumptive pool creates visibility of the use and accountability for it during consultation and through the amendment process.

The following outlines the feedback and/or discussion that occurred around consumptive pools at the August 2024 consultations that were held in Kingston, Naracoorte, Mount Gambier, Millicent and online.

- Managed aquifer recharge was discussed as an opportunity that occurs successfully in many places and needs to be looked at for the Lower Limestone Coast.
- The Minister's Reserve was raised regarding how large the reserve is. There is no defined number for this reserve, and it is expected that the Minister would consider current use and allocation before providing water from a reserve.

- Queries were raised around how the environmental consumptive pool would work such as who will be able to use it, where and under what conditions. These are details that would need to be worked through and then outlined in the revised Plan. It could be strictly providing life support for environmental assets such as permanent pools in creeks (Mosquito Creek was discussed as an example). There would be rules around how the water could be used and where and this is the purpose of it having its own consumptive pool – it allows the rules to be clearly outlined.
- Queries were raised as to whether the information around stock and domestic is sufficient. It was also queried whether having a consumptive pool would mean the metering of stock and domestic bores. Information around stock and domestic use will be revised for the updated plan but metering of stock and domestic bores is not within scope of this process.
- A query was raised as to whether someone's neighbour who is a First Nations person could put in a centre pivot under the First Nations consumptive pool. The rules around what this consumptive pool would allow would need to be worked through. Any centre pivot application would be assessed under the same principles/processes (e.g. hydro test). Under the current Plan First Nations people can take water for cultural purposes under a range of conditions without a licence. This consumptive pool could reflect that current opportunity.
- Queries were raised as to the cost of setting up consumptive pools and costs of managed aquifer recharge. The costs of managed aquifer recharge could be cost prohibitive. Setting up consumptive pools as a policy isn't a huge undertaking or cost and could be done under the revision of the Plan. Costs for managed aquifer recharge could be expensive and would need to be considered in relation to cost/benefit to the licensee. While the costs might not seem realistic now in the future they could be. A part of considering changes to the Plan is thinking about changes that provide policy settings for future opportunities not just what happens now. Under a changing and more variable climate alternate water resources could be more important and worth investing in.

Management zones

An initial discussion of potential management zones (previously called management areas) indicated there was no significant appetite to change current management area boundaries other than to investigate the amalgamation of some of the smaller management zones.

It was acknowledged that some rules, limits and management responses may be consistent across more than one management zone. Further assessments of where this may occur will consider:

- hydrogeological zones
- current management zone boundaries
- water quality (salinity)
- land use.

Amalgamation of smaller management areas

A number of smaller management areas have been identified as possible areas for amalgamation. Further assessment and consultation is needed to understand potential benefits and issues.

The following outlines the feedback and/or discussion that occurred around management zones at the August 2024 consultations that were held in Kingston, Naracoorte, Mount Gambier, Millicent and online.

<u>The benefits and risks to changing management zone boundaries</u>

- It was raised that changes to management zone boundaries will negatively affect the value of water. Some management zones have water that is much higher value than others. Combining management zones like this would de-value water that is currently high value. This was raised as a risk to changing management zone boundaries. This risk was particularly noted for the border zone but the risk is applicable across the prescribed wells area.
- In other places in Australia groundwater management areas have boundaries that fit the actual hydrogeology of the resource. This has been shown to work for groundwater management elsewhere. It was raised whether the zones in relation to the hydrogeology for the Lower Limestone Coast could be used instead of current management zones. These zones were shown in comparison to current management zones for the unconfined aquifer. Some viewed that management zones should match the resource rather than hundreds. The resource doesn't understand management zones boundaries, current zones seem very regimented and don't align to anything meaningful. Consideration of hydrogeological zones is within scope but more work needs to be done around the risks and benefits.
- It was raised that along the border changes to management zones would be limited by the legislation associated with the Border Groundwaters Agreement. Along the border zone management zones are best placed to align to the Border Groundwaters Agreement. In the current Plan some border zones are smaller than what they are under the Border Groundwater Agreement. It was asked what the Border Groundwater Agreement committee's perspective on the proposed changes were. Given how early we are in considering these changes the LC Landscape Board has not yet sought views of this committee but will engage with them when appropriate.
- The issue of management actions (e.g. restrictions on allocations) were raised as another risk to combining management areas. An example of Hindmarsh, which has 75% use, joining with Mt Muirhead, which only has 25% use, was discussed. Joining could mean those in Mt Muirhead are then subject to a management action only because they join with Hindmarsh. However, it was also raised that perhaps consideration to changes is needed to ensure management actions are relevant and appropriate. It was raised whether it would be possible to somehow use both the hydrogeological zones and current management zones for the best management of the resource. This would need to be worked through further as to the risks, benefits and the potential complexity it could introduce.
- It was suggested that management zones could be made much smaller and then some of the regulation such as the hydrogeological assessment removed. This was raised as an option with the impacts to water values and the hydrogeological assessment considered the biggest disadvantages in creating larger management areas.
- Soil types were also raised as another way to look at combining management zones. Soil types differ across the region, perhaps like soil types would be better within in one management zone.

Classes of water access entitlement

A simplification of the water licensing system proposes that the current components and purposes of use be replaced by three classes. Each class allows for a different level of security with the highest level of security restricted to public water supply. The lowest level of security may be used for any purpose. Table 1 provides an example of how water classes might work. It is proposed that classes of water access entitlements would not be able to be changed. For example, if SA Water were to purchase some Class 3 water on the market it could not convert that to Class 1 water.

Table 1: Proposed classes of water access entitlements for the Lower Limestone Coast Water Allocation Plan.

Class	Description	Example uses
1	Highest level of security. Not tradeable. Only available to protect critical human needs. Not subject to reductions or restrictions.	Public water supply
2	Provides comparable protections as current Plan. Limited trade. May have specific conditions relating to particular uses. Not subject to restrictions.	Public water supply Industrial Recreational Intensive animal keeping
3	Lowest level of security. Fully tradable. May have specific conditions relating to particular uses.	Any use as allowed by the water allocation plan

Transitioning the current system to classes

Table 2 provides a summary of the classes to which components or purposes of use in the current water allocation would be assigned and the equivalent volumes these would relate to. This assumes a 1:1 transfer. Under the proposed transition all delivery supplements and specialised production requirements would be fully tradeable. A proportional transfer may be considered for delivery supplements and / or specialised production requirements where converting those allocations may result in an unacceptable impact.

Table 2: Proposed transition to classes of water access entitlements for the Lower Limestone Coast Water Allocation Plan.

Class	Current purpose of use to be allocated to class	2023 equivalent LLC allocation volume
1	Public water supply	0.9% of total allocation
2	Industrial Recreational Intensive animal keeping	1.4% of total allocation
3	All tradeable components excluding Public water supply, Industrial, Recreational and Intensive animal keeping All delivery supplements All specialised production requirements	97.7% of total allocation

Further work will investigate current levels of delivery supplement and specialised production requirements in individual management areas, particularly if amalgamation of management zones is being considered.

The following outlines the feedback and/or discussion that occurred around water classes at the August 2024 consultations that were held in Kingston, Naracoorte, Mount Gambier, Millicent and online.

<u>General discussion or questions around the proposed water classes:</u>

- Queries were raised around how water classes would then work under an adaptive management framework. For example, would the industrial purpose of use be exempt to restrictions or reductions? This detail has not yet been worked through, the Limestone Coast Landscape Board welcomes any feedback.
- Some purposes of use are not represented, for example mining. This reflects that there are currently no licences with this purpose of use. Under the proposed structure purposes of use, such as mining, would need to source class 3 water on the market.
- Will classes apply to both the unconfined and confined aquifers. Under the current proposal classes are being considered for both the unconfined and confined aquifers. There is still considerable detail to be worked through.

- There is an indication in the proposal that some conditions may apply to classes. An example of what types of conditions these could be was discussed such as for unique purposes like aquaculture. No conditions are currently expected to be introduced to irrigation practices. But where certain purpose have unique practices around them, such as aquaculture having both closed and open systems, specific conditions may be required to manage these complexities.
- There was discussion and queries around whether three classes were required or whether class 2 and class 3 could be amalgamated. Discussion centred around whether this would be a more level playing field and more equitable rather than some industries being subject to increased protection. The economics of industry would then guide the use of water. For example, if a processor needed more water if restrictions were introduced they would need to purchase it on the market as others would.
- Clarification was provided around what is currently an industrial purpose of use. Industrial includes water for processors (e.g. meat, timber or dairy) but also includes water used for dairy wash down.
- It was queried how different the percentages per class would be if they were based on use rather than allocation. These numbers have not been done but are likely to be similar with use still highest against class 3.
- It was queried where a forest water licence would sit in the classes. A forest water licence would sit in class 3.
- It was highlighted by some individuals that under the proposed three class system the responsibility of repairing/rectifying impact will fall on the class 3 which is predominantly irrigators.
- There was some agreeance and discussion that recreational purposes of use, such as for schools and sporting ovals should be exempt from any reductions or restrictions. These support important parts of our communities and some would not like to see these impacted.
- Clarification was sought over whether a class of water could change classes. For example could class 3 water be purchased be and converted into class 2. Under the current proposal water cannot change classes. For example, if someone with only class 2 water needed/wanted more water and no class 2 was available on the market they could purchase class 3, but this portion of their water would be subject to the same conditions as other class 3 water, such as restrictions.

<u>The environment and water classes</u>

- Some concerns were raised around confidence in whether the revised Plan would do more or less for the environment as under some of these proposed changes, including classes, it isn't as clear how the environment is provided for. Will the environment get what is left over, and in times of stress, the environment will miss out altogether. Classes apply to consumptive uses and environment is not considered a consumptive use and therefore classes will not apply. The current proposal has not yet incorporated new ideas like the environment consumptive pool and how classes might need to apply to this. This would still need to be worked through.

Public water supply

- Some queries were raised around how SA Water operate in comparison to other water licence holders. SA Water is a licence holder like other water licence holders and must manage its allocation across its responsibilities. Conflicting views were raised around whether public water supply should or should not be subject to increased protections over other purposes of use.