ELMA review

Scope and background information

Scope

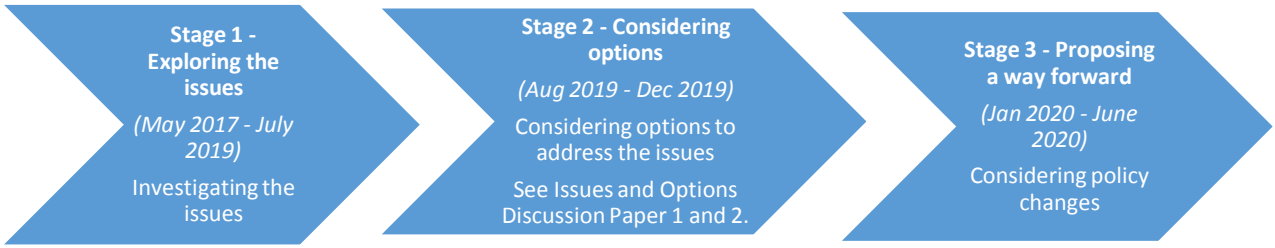
The South Australian Murray-Darling Basin Natural Resources Management Board (the Board) committed to undertaking a comprehensive review of how Environmental Land Management Allocations (ELMA) are used and administered following community feedback on the draft 2017 *Water Allocation Plan for the River Murray Prescribed Watercourse* (River Murray WAP).

The feedback indicated that there was a perception that ELMA was being used for productive purposes rather than for the intended land management purpose and the high degree of underuse was perceived as ELMA not really being needed.

The review <u>will not</u> include changes to the total volume of water set aside for environmental land management purposes in the Lower Murray (22.2 GL)

The review is using knowledge from previous studies and investigations to consider whether improvements need to be made to how ELMA is managed or administered to make it more effective. The review provides an opportunity for continuous improvement. While the Board acknowledges some successful outcomes have been achieved in the area, improvements can still be made.

The review is being conducted in three stages:



The review is being guided by a sub-group of the River Murray Advisory Committee comprised of water users from the Lower Murray Reclaimed Irrigation Area (LMRIA) and the Chief Executive of Regional Development Australia – Murraylands and Riverland.

Stage 1 of the review is complete and has involved:

- a review of relevant scientific work that looks at the effect of water application in the LMRIA
- an analysis of recent water use information
- a survey of water entitlement holders to understand how they use and value ELMA
- new scientific work conducted by the University of Adelaide to assess how much water needs to be applied to land to successfully leach salt from the root zone.

All documents related to the review can be found here www.naturalresources.sa.gov.au/elmareview.

Stage 2 of the review has now begun. Two discussion papers have been prepared that set out the key issues associated with the use and management of ELMA identified in stage 1 of the review. The discussion papers focus on two areas of reform:

- Discussion paper 1. Issues and options – amendments to the 2019 WAP; and
- Discussion paper 2. Issues and options – longer-term concepts (to be explored further and are currently outside of the scope of the River Murray WAP).

The Board seeks your feedback on the proposed policy options before any decisions are made on changes to the existing policy contained in the River Murray WAP. How to provide feedback on the proposed policy options presented in the discussion papers is provided at the end of this document.

Background information

Background information related to Environmental Land Management Allocations (ELMA) in the Lower Murray Reclaimed Irrigation Area has been summarised, as follows.

The Lower Murray Reclaimed Irrigation Area (LMRIA) is approximately 5,200 hectares (ha) of land between Mannum and Wellington along the River Murray in South Australia.

Under natural conditions (pre-irrigation development), the land was connected to the river as a floodplain and experienced wet and dry periods according to river levels and local climatic conditions. Prior to European colinisation, these productive floodplain areas along Murrundi (River Murray) were managed for thousands of years by Ngarrindjeri people. Areas within the LMRIA are also part of the creation story of Murrundi (River Murray) about how the river, floodplains and wetlands were created by Ngurunderi (a cultural ancestor) and Pondi (the Murray Cod). The lower Murray has sustained First Nations for thousands of years and continues to be vital to the living Ngarrindjeri culture of today and into the future.

Agricultural development of the area commenced in the late 1890's and intensified in the early 1900's when barrages and levee banks were constructed along the river's edge. The land was drained and the levee banks controlled natural flooding of the land.

At its peak, there was up to 5,200 ha of productive irrigated farm land in the LMRIA, almost exclusively used for dairy production (Philcox and Scown 2012). Over the last decade there have been significant changes to land use in the region, with around 2000 ha of land taken out of active production (Philcox and Scown 2012). Dairy farming has reduced in the region and there has been a gradual shift towards beef cattle and fodder production.

Figure 1: Lower Murray River Irrigation Area (LMRIA)

Today, the area is has more than 50 commercial farms as well as many other lifestyle farms and properties (DEWNR 2017). The LMRIA forms part of the Lower Murray Flood Plain region which provides significant employment and economic activity, contributing almost 2 percent of South Australia's economic productivity in 2011/12 (RDA 2013).

The unique landscape of the LMRIA offers many opportunities and challenges for those who live and work in the area.

The LMRIA floodplains of the River Murray has high productive potential due to its soil type and fertility, irrigation potential and climate. The top soils in particular are considered some of the best in Australia due to their high organic matter and nutrient content, low bulk density and high hydraulic connectivity, which enables good irrigation and drainage (Mosely et al 2017). These characteristics as well as the region's proximity to the river, landscape and amenity values make the area an attractive place for primary production, tourism, recreation and conservation purposes (RDA 2013).

While the region has many natural strengths, LMRIA soils can be susceptible to degradation without active management.

Land within the LMRIA is lower than the level of the River Murray, and is a natural discharge point for regional saline groundwater (see Figure 1). Soils are also clay based, prone to cracking when dry, and the sub-soil contains acid sulfate materials. Unlike many other soil types, LMRIA soils require regular irrigation, levelling and drainage in order to maintain their productive capability and prevent degradation.

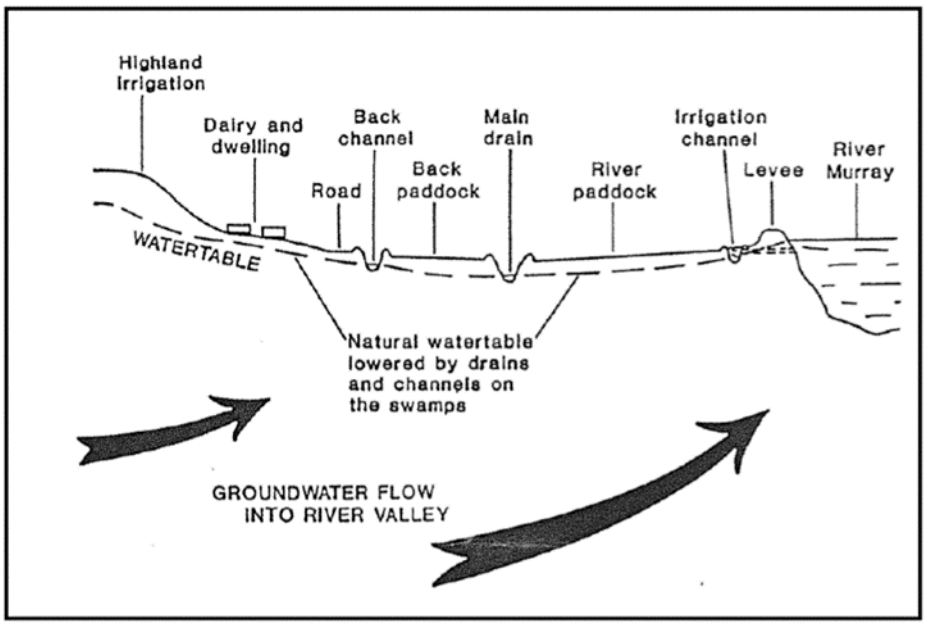


Figure 2: Diagram showing a typical landscape in the LMRIA

Environmental Land Management Allocations (ELMA) are provided to LMRIA land owners or occupiers in recognition that additional water is required flush away salt and to manage the land for the issues mentioned above.

Appying ELMA is also critically important to manage the land in a way that protects and looks after Ngarrindjeri cultural heritage throughout Ngarrindjeri Country.

- **ELMA is necessary for managing the land and contributes to the protection of environmental land and infrastructure of the LMRIA, including by:**
  - **i. reducing soil salinization as a result of saline groundwater discharge**
  - **ii. minimising oxidation of acid sulfate soils, and**
  - **iii. minimising cracking and movement of soils.**
- **ELMA is of most benefit when it is used across the landscape in a connected way, not just on individual land parcels.**
- **ELMA is for environmental land management purposes and should not be relied upon for pasture/crop growth.**

How ELMA is currently managed

The *Water Allocation Plan for the River Murray Prescribed Watercourse* (River Murray WAP) is a rulebook that guides the taking and use of water from the River Murray. It sets out objectives for managing the river and the principles (the rules) for how to do this. Principles can apply across the entire river or can be tailored to suit unique areas such as the LMRIA.

The River Murray WAP sets aside 22.2 million shares (equivalent to 22.2 gigalitres of water under normal water availability conditions) for ELMA. ELMA is provided at no cost to the licence holder (apart from an administrative fee upon application) and is exempt from the natural resources management (NRM) water levy. ELMA is specifically for use within the LMRIA, the entitlements and allocations are non-tradeable, not eligible for carryover, and expire and revert to the Minister for Environment and Water upon the sale of land. ELMA provides maximum benefit when applied in full every year.

The objectives for the use of ELMA and its allocation rates are set out based on the location of the property within the LMRIA.

Next steps

The issues and options related to ELMA will be presented and discussed at a community workshop on 2 October 2019. The Board will collect feedback from the community on options at this meeting. Feedback can also be provided in writing or via online feedback form (further information provided below). The Board will review the feedback and advice put forward by the community and make a decision as to whether or not to make amendments to the River Murray WAP.

If amendments are required and depending on their nature, then it is likely that a new River Murray WAP will need to be prepared that focusses on changes to the ELMA. Any revisions to the River Murray WAP requires formal procedures to be followed (as set out in the *Natural Resources Management Act, 2004*) and includes further public consultation.

Community workshop

The Board is hosting a community workshop and seeks your views on the proposed policy options and other alternative solutions.

The ELMA community workshop will be held on:

Tuesday, 2 October 2019

11.00 am – 2.00 pm with lunch provided

Location: RSL, 2 Ross Road, Murray Bridge, SA.

The workshop will be chaired by Dean Brown and facilitated by Emily Jenke.

Information pack

A series of papers have been prepared in relation to the ELMA review, these include:

- ELMA Review Scope and Background Information (this paper)
- Discussion Paper 1. Issues and options – amendments to the 2019 WAP
- Discussion Paper 2. Issues and options – longer-term concepts
- ELMA submissions/feedback form

References

DEWNR (2017), Survey of Environmental Land Management Allocations entitlement holders, Department of Environment, Water and Natural Resources, August 2017 (unpublished)

Mosley L.M., Biswas T.K., Cook F.J., Marschner P., Palmer D., Shand P., Yuan C., and Fitpatrick R.W. (2017a), *Prolonged recovery of acid sulfate soils with sulfuric materials following severe drought: causes and implications*, Geoderma, http://dx.doi.org/10.1016/j.geoderma.2017.03.019.

Philcox, M. and Scown, S (2012,) *LMRIA Sustainable Soils Project – Summary of Current Practices*, prepared by MDB Consulting and Scown Consulting for Dairy SA ,2013

RDA (2013), *Land Use Study and Development Plan Review for the Lower Murray Flood Plain*, prepared by URPS for Regional Development Australia Murraylands and Riverland South Australia, 2013

For more information

ELMA review information can be found here:

www.naturalresources.sa.gov.au/elmareview

To provide feedback:

Via mail:
Natural Resources SA Murray-Darling Basin
Upper Level, Cnr Mann & Walker Street
Mount Barker 5251
E: rmwap.feedback@sa.gov.au

Or complete an online feedback form:
www.naturalresources.sa.gov.au/elmareview

The closing date for submissions is 27 November 2019.

Or please contact:

Lyz Risby, Water Resources Manager, SAMDB
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M: 0427 000 136
E Lyz.Risby@sa.gov.au

For information related to water licensing please contact:

Department of Environment and Water
Natural Resources Centre
Licences and Permits
2 Wade Street, Berri, SA, 5343
P: (08) 8595 2053
E dewwatertrade@sa.gov.au
www.environment.sa.gov.au/licences-andpermits/water-licence-and-permit-forms