

Water Allocation Plan for the River Murray Prescribed Watercourse Environmental Land Management Allocations



Background

Environmental Land Management Allocations (ELMA) apply to the Lower Murray Reclaimed Irrigation Area (LMRIA) (see figure 1).

Applying water to soil on irrigated and non-irrigated land in the LMRIA is a management approach to address salinity and acid sulphate soil issues. ELMA helps to maintain the LMRIA as a productive irrigation area, and also contributes to managing water quality issues, which can impact on SA Water offtakes. A volume of 22.2 GL is set aside in the Murray-Darling Basin Agreement for ELMA.

The Water Allocation Plan for the River Murray Prescribed Watercourse (the Plan) includes ELMA in a separate class (Class 8) within the All Purpose Consumptive Pool. Up to 22.2 GL of water access entitlements may be granted to landholders for application within the LMRIA. The Plan sets out application rates for irrigation areas within the LMRIA to best manage the issues. ELMA is important to the long-term management and productive capacity of the LMRIA.

What is in the Plan?

Rules in the Plan mean that ELMA cannot be transferred. This is consistent with the requirements of the Murray-Darling Basin Agreement. It is important that the full water allocation is used each year to address land management issues. For this same reason, ELMA is not eligible for private carryover.

ELMA expires upon the sale of land and reverts back to the Minister. The new owner can then apply for ELMA.

High level objectives have been added to highlight the importance of ELMA. These objectives focus on the benefit that ELMA has to land assets in the LMRIA, like reducing soil salinisation and minimising cracking and movement of soils.



What are the issues in the Lower Murray Reclaimed Irrigation Area?

The LMRIA is affected by highly saline groundwater due to its low lying landscape and the construction of infrastructure to manage the river at constant levels. Before locks, barrages and levee banks were constructed, groundwater would have discharged to the River Murray at the lowest point in the landscape. The construction of levee banks has resulted in the river level being held higher, making the LMRIA the lowest lying point and therefore a discharge point for the saline groundwater.

While infrastructure works have secured access to water for agriculture in the region and provided the ability to gravity feed water for irrigation, this also means that management of the saline groundwater is required. Drainage channels and irrigation of the land have allowed the saline groundwater to be kept to a suitable depth below the surface.

During the drought, low river levels and low water allocations resulted in no irrigation occurring on a number of properties. Groundwater levels also dropped. This caused the acid sulfate soils to dry out, leading to severe cracking and the formation of subsurface sulfuric acid (see figure 2). When water did return, acid in the soil was at risk of being mobilised and entering the River Murray channel through drainage channels. This resulted in a risk to water quality in the River Murray, potentially affecting SA Water offtakes, and causing other environmental impacts.

For the LMRIA to continue to be a productive area, and to mitigate water quality risks, it is important that salinity and acid sulfate soil issues continue to be managed in the future.

Why is ELMA important?

Without application of ELMA water or other irrigation, the risk of soils drying and cracking is high, and salinity and acid sulfate soil issues could reoccur. It is important to keep the soil profile wet to avoid these issues and the resultant risks to water quality and the river environment.

For more information on the issues in the LMRIA, please refer to the EPA website – www.epa.sa.gov.au (search LMRIA)

How do I know if I need ELMA?

ELMA is available if you own property in the LMRIA (see figure 1) as the water is specifically to manage issues in this region. If you own a property in the LMRIA you are encouraged to apply for ELMA; details of how to apply are below.

I own a property in the Lower Murray Reclaimed Irrigation Area (LMRIA) but I don't irrigate. Do I need ELMA?

ELMA is important to all land in the LMRIA and should be applied to land even if it isn't irrigated. The application of water keeps the soil profile wet and prevents drying, cracking, and exposing soils to air, which can cause acid and water quality issues.

How do I apply for ELMA?

You will need a water licence, a site use approval and a water resources works approval. Application forms can be found at <http://www.environment.sa.gov.au/licences-and-permits/water-licence-and-permit-forms>

To find out more about how to apply, please contact the DEW Berri Office on (08) 8595 2053.

How should ELMA be applied to land?

For irrigated land, guidelines are in place to assist landholders to apply water, including ELMA, in line with best practice methods to manage land issues effectively. The guidelines are available on the Natural Resources SA Murray-Darling Basin website – www.naturalresources.sa.gov.au/rivermurraywap.

Maximum application rates are also detailed in Chapter 6.3.3 of the Plan. The volumes differ based on where the property is located.

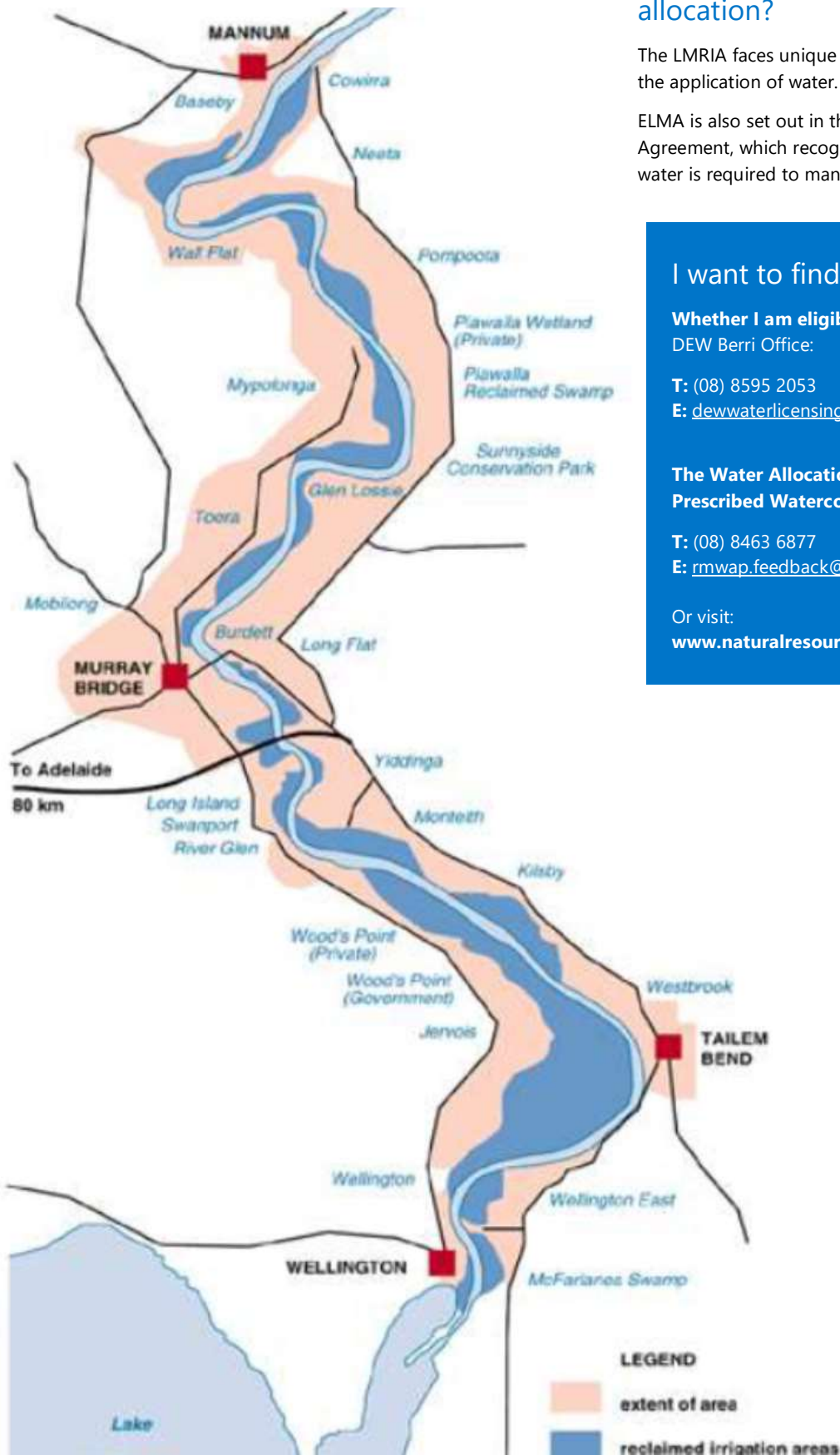
Where land is not irrigated, ELMA should be applied at a rate that is appropriate for managing the effects of rising saline groundwater and remnant acid sulfate soil issues.

Can ELMA be traded?

No. ELMA cannot be traded as it is allocated specifically to manage issues in the LMRIA and is therefore applicable to these land parcels only and must be applied evenly across the land. When a property is sold, ELMA reverts back to the Minister, and can then be allocated to the new owner upon application.



Figure 1 - The Lower Murray Reclaimed Irrigation Areas



Why don't other areas have an environmental land management allocation?

The LMRIA faces unique issues that are best managed by the application of water.

ELMA is also set out in the Murray-Darling Basin Agreement, which recognises that a specific volume of water is required to manage the unique issues in the area.

I want to find out more about...

Whether I am eligible for ELMA, please contact the DEW Berri Office:

T: (08) 8595 2053

E: dewaterlicensingberri@sa.gov.au

The Water Allocation Plan for the River Murray Prescribed Watercourse:

T: (08) 8463 6877

E: rmwap.feedback@sa.gov.au

Or visit:

www.naturalresources.sa.gov.au/rivermurraywap

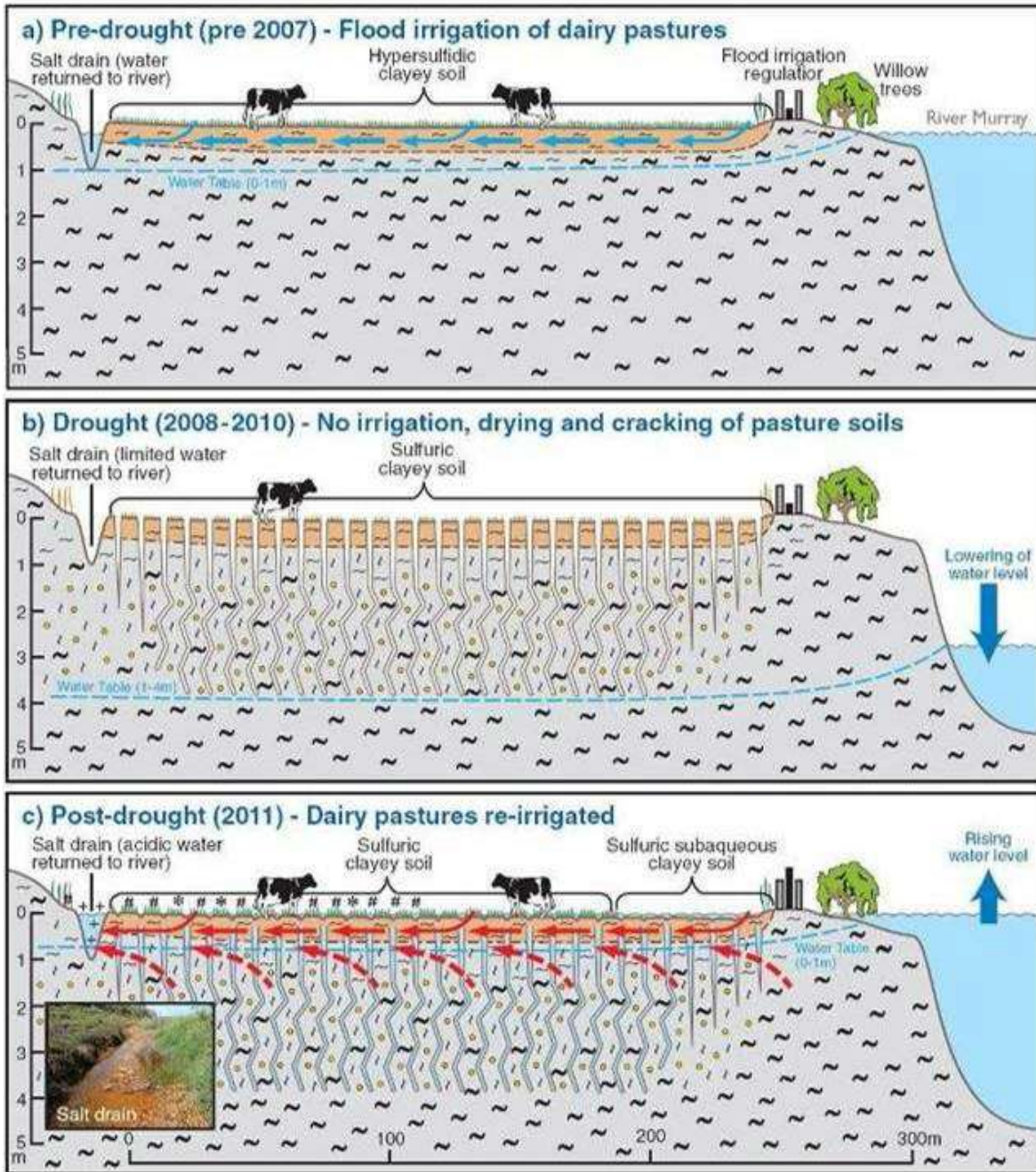


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Figure 2 – process of acid sulphate soil oxidation in the LMRIA during the drought (CSIRO, 2013)



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