

Wetland Intervention Monitoring Program (WIMP)

Overview August 2020

WIMP is a long-term, state-wide program assessing how effective different management actions are in improving the health of wetlands



Improving grazing management

In the first stage of WIMP we are assessing the effectiveness of different methods of managing livestock in wetlands. While managing livestock access is a common strategy to protect wetlands on private land, we don't know how effective this strategy is. This program is studying how different grazing regimes affect the health of wetlands on private land across Victoria.

How does grazing affect wetland plants?

Although heavy grazing by livestock damages the condition of wetlands, we also know that in some situations grazing by livestock can be beneficial.

Where grazing is recommended for ecological reasons it is usually to: (i) control introduced species, (ii) prevent competitive species becoming dominant and excluding other species, or (iii) to reduce plant litter loads so that native plants can germinate (Figure 1).

In these cases, native species abundance and diversity may decline without some grazing. However, too much grazing can damage native wetland plants and also reduce diversity (Figure 2).

We are interested in seeing if there's a 'goldilocks' zone where the benefits of grazing can be maximised.

Currently we have a poor understanding of how much, how long, or how often grazing is needed in different types of wetland plant communities to protect and enhance their condition. The findings from this program will inform wetland management guidance in the future.

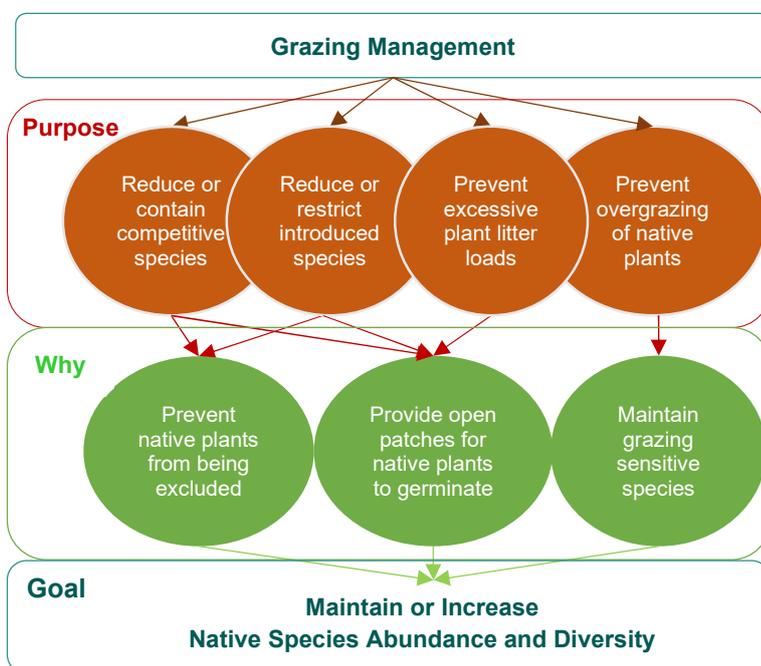


Figure 1. Using grazing for biodiversity benefits

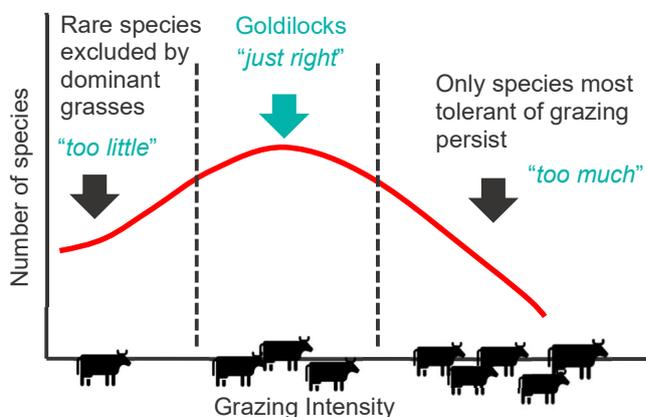
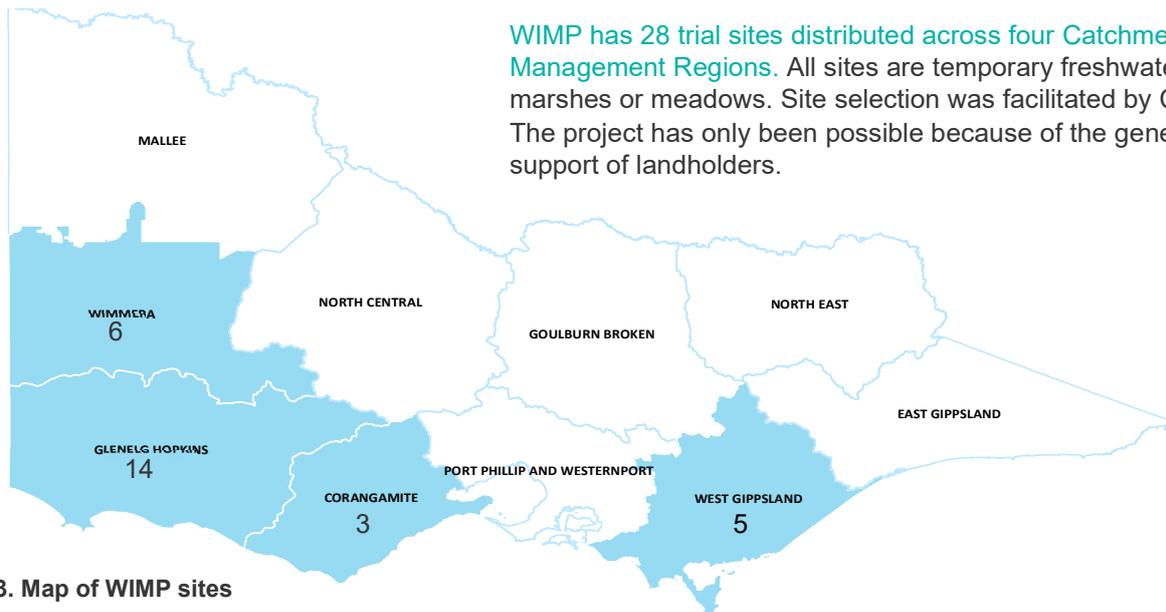


Figure 2. How grazing intensity might influence diversity



WIMP has 28 trial sites distributed across four Catchment Management Regions. All sites are temporary freshwater marshes or meadows. Site selection was facilitated by CMAs. The project has only been possible because of the generous support of landholders.

Figure 3. Map of WIMP sites

How we monitor - In each wetland, we are assessing how vegetation changes over time inside two trial plots. Each trial plot is about 0.25 ha in size. One plot is open to the grazing management being applied in the wetland and the other plot is fenced to exclude livestock (sheep and cattle). Monitoring is done when the wetland is drying out but still wet as this is the when most wetland plants are present. Monitoring is done along transects and quadrats in each plot before fencing, and then every year after fencing for 3-5 years.

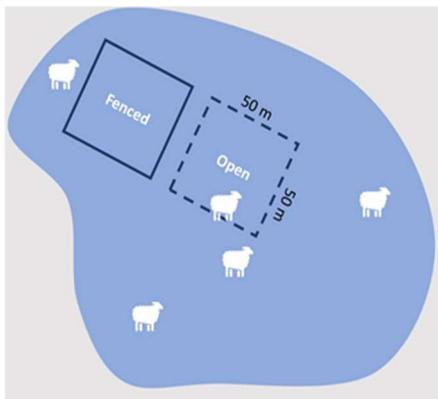


Figure 4. Survey design

What we measure

- Abundance of all plant species
- Number of native and introduced species
- Depth of the plant litter layer
- Plant height

What it will tell us - Monitoring will tell us how close the current grazing regime is to the “Goldilocks” zone where native species abundance and diversity are optimal, weed species are contained and grazing sensitive species are maintained. Long-term monitor is needed as livestock exclusion could be beneficial in the short-term, but benefits may be lost in the long-term.

Funding - WIMP is funded by the Victorian Government under Water for Victoria to improve the health of waterways. Five sites in the Glenelg Hopkins CMA are funded by the National Landcare Program.

Contact - Kaylene.Morris@delwp.vic.gov.au
Ashley.Sparrow@delwp.vic.gov.au

© The State of Victoria Department of Environment, Land, Water and Planning 2020



This work is licensed under a Creative Commons Attribution 4.0 International licence. You are free to re-use the work under that licence, on the condition that you credit the State of Victoria as author. The licence does not apply to any images, photographs or branding, including the Victorian Coat of Arms, the Victorian Government logo and the Department of Environment, Land, Water and Planning (DELWP) logo. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>

ISBN 978-1-76105-270-5 (pdf/online/MS word)

Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

Accessibility

If you would like to receive this publication in an alternative format, please telephone the DELWP Customer Service Centre on 136186, email customer.service@delwp.vic.gov.au or via the National Relay Service on 133 677 www.relayservice.com.au. This document is also available on the internet at www.delwp.vic.gov.au.