

# GROUNDWATER MANAGEMENT

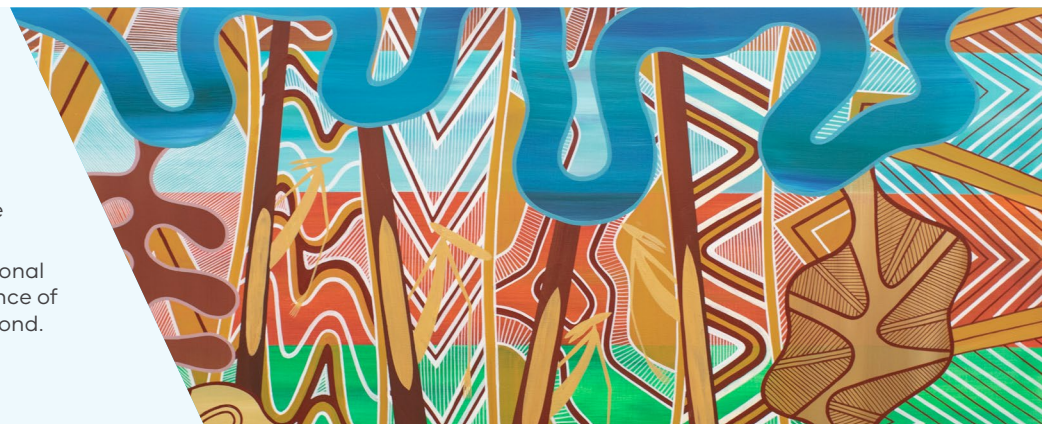
# 2030



## Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present, whose knowledge and wisdom have ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



© The State of Victoria Department of Environment, Land, Water and Planning 2022

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 978-1-76136-005-3 (pdf)

### 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 disclaim 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](mailto:customer.service@delwp.vic.gov.au), or via the National Relay Service on 133 677 [www.relayservice.com.au](http://www.relayservice.com.au). This document is also available on the internet at [www.delwp.vic.gov.au](http://www.delwp.vic.gov.au)

# CONTENTS

<b>INTRODUCTION</b>	<b>04</b>
<hr/>	
<b>OUTCOME 1</b> AN IMPROVED, SHARED UNDERSTANDING OF GROUNDWATER AND ITS USES FOR EVIDENCE-BASED MANAGEMENT	<b>09</b>
<hr/>	
<b>OUTCOME 2</b> MODERN TOOLS IN THE STATE-WIDE FRAMEWORK FOR FLEXIBLE AND COST-EFFECTIVE GROUNDWATER MANAGEMENT	<b>11</b>
<hr/>	
<b>OUTCOME 3</b> STREAMLINED AND EFFECTIVE LICENSING, TRADE RULES AND CONTROLS ON GROUNDWATER USE THAT SUPPORT CHANGING WATER USES	<b>14</b>
<hr/>	
<b>IMPLEMENTATION AND ENGAGEMENT</b>	<b>17</b>

An illustration on the left side of the page depicts a rural landscape. Above the ground line, there is a blue sky with a white cloud, a green hill with a tree, a white house with a blue roof, a white cow with black spots, and a blue well. Below the ground line, the ground is shown in shades of blue, with a vertical line representing a well shaft extending down into the groundwater. The groundwater level is indicated by a horizontal line. The overall style is flat and modern.

# INTRODUCTION

Groundwater is a valuable natural resource that we must manage well now and in future for Victoria's communities.

It supplies about 15 per cent of Victoria's water needs, including 70 towns, and is vital for a healthy environment and healthy Country for Traditional Owners.

GM2030 is a statement of priorities for the next seven years for the Department of Environment, Land, Water and Planning (DELWP) and the rural water corporations Lower Murray Water, Goulburn-Murray Water, Grampians Wimmera Mallee Water and Southern Rural Water.

It is the Victorian water sector's commitment to strong groundwater management that can adjust to meet opportunities and challenges as water use and industry transform in the future.

The long-term delivery of GM2030 involves three outcomes and the supporting priority areas to progress its vision by 2030. The vision is the first step in outlining how we will improve groundwater management and licensing.

Victoria's Traditional Owners will be a crucial part of GM2030, reflecting DELWP's commitment to their participation in managing the state's water resources through the Water is Life - Traditional Owner Access to Water Roadmap.

GM2030 embeds opportunities for partnering with Traditional Owners in priority areas, with DELWP and the rural water corporations inviting Traditional Owners to actively decide how this will happen.

More broadly, DELWP and rural water corporations recognise that the success of GM2030 will be realised by also working with water users, key stakeholders and the community.

**OUR VISION** is the sustainable use of groundwater that supports existing and new uses, protects ecosystems and supports living cultural landscapes

1



**An improved, shared understanding of groundwater and its uses for evidence-based management**

Delivered in **Priority Areas 1-4**

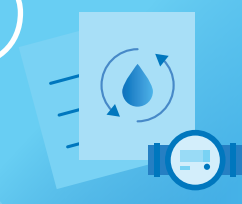
2



**Modern tools in the state-wide framework for flexible and cost-effective groundwater management**

Delivered in **Priority Areas 5-7**

3



**Streamlined and effective licensing, trade rules and controls on groundwater use that support changing water uses**

Delivered in **Priority Areas 8-13**

## GROUNDWATER PRIORITIES BASED ON SCIENCE, FLEXIBLE MANAGEMENT TOOLS AND RESPONSIVE LICENSING

We understand that groundwater use is strongly related to rainfall and the availability of surface water. Groundwater use increased during the Millennium Drought when rainfall and surface water availability were extremely low, and decreased during the 2010-11 floods, as shown in Figure 1.

This is a powerful case study as we look towards a hotter, drier future with climate change.

Figure 1: Victorian groundwater use (gigalitres) between 2003-04 and 2019-20

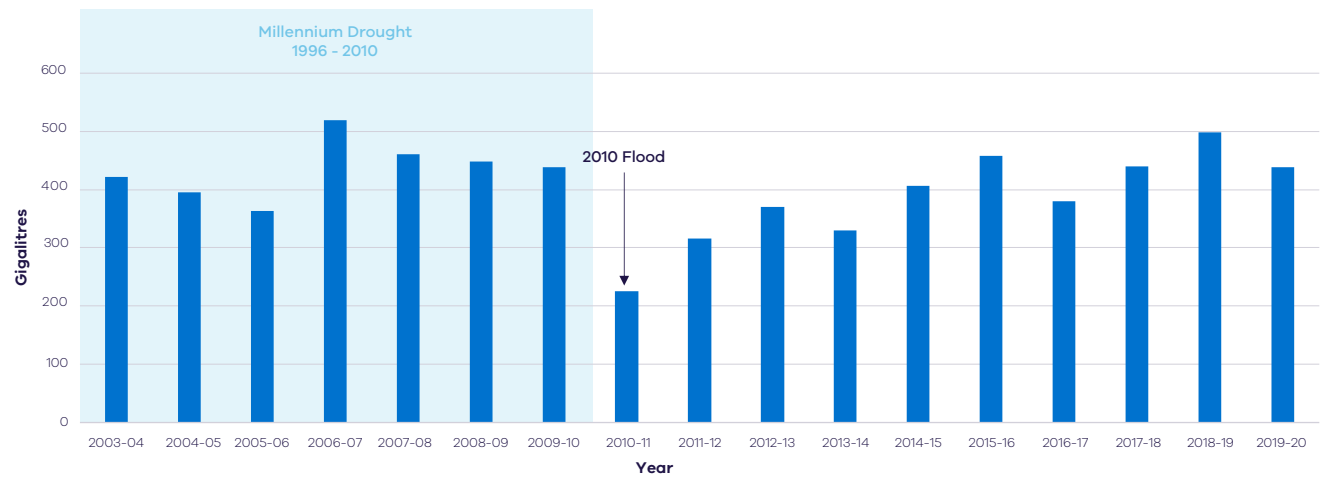
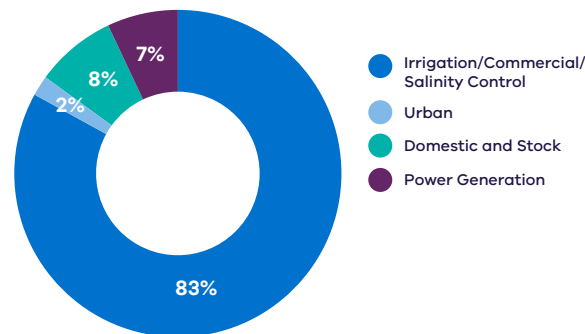


Figure 2: Groundwater use in Victoria in 2020-21 by sector. Total groundwater use totalled 377,014 ML



Most of the groundwater taken from aquifers in Victoria is used to irrigate agricultural land. Smaller volumes are used to support towns, individual households and stock watering, and groundwater is used in several places to support the power generation industry, as shown in **Figure 2**.

We use the best available information when deciding how to manage Victoria's water resources, but we also take a precautionary approach when there is limited knowledge and/or high uncertainty about impacts.

Certainty for groundwater users comes from:

- clear licensing arrangements,
- access to information,
- transparency in decision making, and
- compliance and follow-up.

Effective and strong compliance is essential for sustainable groundwater management and to protect the environment and living cultural landscapes. It deters illegal water use and maintains trust and confidence with water users and the community that all users are held accountable equally to the rules.

Our state-wide network of monitoring bores provides data to manage groundwater sustainably, especially as climate change affects recharge of aquifers and water availability. But the invisible nature of groundwater makes it challenging and expensive to monitor and means that communities do not understand and value its contribution to the environment and economy as much as river systems and surface water.

We will give entitlement holders more certainty about groundwater resources and access, streamlined processes and easy-to-understand information on groundwater and how we manage it. We will continue to balance affordable user fees and charges with effective investment in monitoring and management.

## OUR APPROACH

Successfully delivering GM2030 depends on improving groundwater management, without unreasonably impacting on its affordability.

We welcome the equitable participation of Traditional Owners and meaningful engagement with the community as we work together on the GM2030 vision, outcomes and priority areas.

DELWP and rural water corporations will deliver GM2030 with our stakeholders through **three outcomes**:

**OUR VISION** is the sustainable use of groundwater that supports existing and new uses, protects ecosystems and supports living cultural landscapes



We will have an improved, shared understanding of groundwater and its uses for evidence-based management

- By 2024** Undertake statewide technical assessments on groundwater availability and review take limits. Assess the Ministerial Guidelines for Groundwater Licensing and the Protection of High Value Groundwater-dependent Ecosystems.
- By 2025** Develop a 10-year monitoring strategy.
- Ongoing** Enable equitable participation by Traditional Owners in GM2030 implementation and groundwater management.



We will have modern tools in the state-wide framework for flexible and cost-effective groundwater management

- By 2024** Improve information and communication of groundwater.
- By 2025** Ensure the right legal instruments and guidance material is available.
- By 2026** Streamline framework to support groundwater management and licensing cost recovery principles. Review the groundwater management framework to identify opportunities and streamline regional management.
- By 2030** Develop legislative reform plans to improve groundwater management.
- Ongoing** Value for money IT solutions that support the management and licensing of groundwater. Clarify decision making roles and responsibilities between government agencies.



We will have streamlined and effective licensing, trade rules and controls on groundwater use that support changing water uses

- By 2022** Identify appropriate land parcels that can be nominated for assessment and decision making on applications for groundwater licences.
- By 2024** Improve administrative processes and guidance to respond to emerging saline groundwater use.
- By 2025** Support Traditional Owner access to water for cultural purposes through appropriate mechanisms. Update Ministerial policies and guidelines on take and use licensing. Improve groundwater trade and explore new markets.
- By 2026** Provide clear information on domestic and stock rights, develop better estimation of domestic and stock use and investigate localised management options in hot spot areas.
- By 2030** Update take and use and works licensing framework.
- Ongoing** Monitor and assess risks and implement and update regional risk-based compliance strategies.





# OUTCOME 1

## AN IMPROVED, SHARED UNDERSTANDING OF GROUNDWATER AND ITS USES FOR EVIDENCE-BASED MANAGEMENT

Effective decisions for managing groundwater need reliable information to understand:

- how different groundwater systems are connected,
- what people or environments rely on groundwater,
- how groundwater is used and the impacts of that use on its long-term availability and quality, and
- an assessment of the cumulative impacts from groundwater use as the environment changes.

Good quality, timely information is essential for groundwater management and licensing frameworks to work effectively. Better information about the availability and quality of groundwater will allow us to support the

community to access groundwater while setting strong management and licensing controls to protect groundwater now and in future in the face of declining surface water availability and a changing climate. There will also be a new focus on working with Traditional Owners so that groundwater management better supports cultural values and living cultural landscapes.

**Outcome 1** for GM2030 is to improve our shared understanding of the science and evidence base for groundwater and trends in use. This will make sure there is strong evidence to back any management decisions or proposals to change policy and operational arrangements, and that the community understands the reasons for change.

**We will do this by working across four priorities:**



### **PRIORITY AREA 1**

By 2024

**Water availability and limits on take:** DELWP working with the rural water corporations will carry out a state-wide technical assessment and review of the limits of take under licences. This is to make sure we continue to protect the environment and living cultural landscapes from unacceptable impacts, support economic development opportunities and continued access to groundwater for all users. It will support more informed decision making for groundwater management and licensing in the future under a changing climate.



### **PRIORITY AREA 2**

By 2024

**Groundwater-dependent ecosystems and environmental values:** DELWP working with the rural water corporations and catchment management authorities will make sure that licensing decisions are based on best available scientific understanding of groundwater-dependent ecosystems. This will be done by updating the Ministerial Guidelines for Groundwater Licensing and the Protection of High Value Groundwater-dependent Ecosystems and be informed by outcomes from Priority Area 1.



### **PRIORITY AREA 3**

By 2025

**Improving data and monitoring of groundwater:** After Priority Area 1 is completed, DELWP working with the Victorian Regional Water Monitoring Partnership will develop a 10-year Monitoring Strategy so that monitoring of availability and quality remains best practise and provides value for money.



### **PRIORITY AREA 4**

Continuous improvement

**Partnering with Traditional Owners:** Rural water corporations and DELWP will enable the equitable participation of Traditional Owners in GM2030 and groundwater management, in line with the Water is Life - Traditional Owner Access to Water Roadmap. Rural Water Corporations and DELWP will seek to improve understanding of cultural values of groundwater to inform future management decisions.



## OUTCOME 2

### MODERN TOOLS IN THE STATE-WIDE FRAMEWORK FOR FLEXIBLE AND COST-EFFECTIVE GROUNDWATER MANAGEMENT

Victoria uses the precautionary principle to manage our water. We use the best available information for decisions, while applying a more cautious approach when there is limited knowledge and high uncertainty about impacts.

**Outcome 2** of GM2030 is to have the tools to support sustainable groundwater management and licensing decisions.

Victoria's groundwater management was set up in the 1980s to be flexible, meet new opportunities and respond to new information about the state of the resource. We know more about groundwater today and we have access to better technologies. New opportunities for different uses of groundwater are becoming more viable.

DELWP and rural water corporations will update Victoria's groundwater management framework to handle emerging risks and accommodate new water uses with the right tools for effective decision making.

We will do this by working across three priorities:

## PRIORITY AREA 5



**Clear and transparent decision making:** DELWP will clarify and streamline the groundwater management framework that supports rural water corporations so that:

- there is clarity about the roles and responsibilities in decision making between relevant government agencies **(Continuous improvement)**
- the right legal instruments are in place and clear guidance material is made available for effective and transparent decision making **(By 2025)**
- groundwater management and licensing cost recovery principles inform rural water corporations' price determination processes. **(By 2026)**

## PRIORITY AREA 6



**Information for the community:** Rural water corporations and DELWP will:

- improve the information and communication of groundwater concepts, management arrangements and licensing requirements, supporting water users and the community to understand and engage in groundwater management **(By 2024)**
- make sure that the information technology used to manage and communicate information provides value-for-money solutions that support the management and licensing of groundwater, including through delivery of the Victorian Water Register Transform Project and update of the Water Measurement Information System. **(Continuous improvement)**

## PRIORITY AREA 7



**Using the right tools:** DELWP working with rural water corporations will review the groundwater management framework, including statutory management plans and the role of local management plans, to determine how they inform regional and local decision making, and to identify opportunities to clarify and streamline regional management of groundwater:

- implement any agreed changes to existing administrative arrangements such as to permissible consumptive volume orders or groundwater management area boundaries, identified in the review **(By 2026)**
- implement broader reforms to management tools, regulations and legislation if necessary, to make the proposed improvements identified in the review. **(By 2030)**



## OUTCOME 3

### STREAMLINED AND EFFECTIVE LICENSING, TRADE RULES AND CONTROLS ON GROUNDWATER USE THAT SUPPORT CHANGING WATER USES

Victoria's groundwater management approach and basis of the licensing framework were established when the *Water Act 1989* was introduced more than 30 years ago. Our understanding of groundwater and dependent-ecosystems has grown since then, use has changed significantly and a shared commitment to support living cultural landscapes in Victoria has recently emerged.

As part of GM2030, we will maintain the fundamentals of groundwater management and seek opportunities to adapt and change. This involves working towards supporting Traditional Owners' aspirations for water, managing emerging issues, supporting new water uses and making the most of available water in a drying climate, including through groundwater trade.

Our work to deliver **Outcomes Outcome 1** and **Outcome 2** of GM2030 means that DELWP and rural water corporations will be using the best possible information and updated management tools to sustainably and effectively manage Victoria's groundwater. It will also identify opportunities where structural changes to the licensing framework can improve outcomes for water users and strengthen protections for the environment and existing users.

Identifying whether structural changes need to be made to the licensing framework will support the work for **Outcome 3**, which may include developing proposals for legislative change where necessary.

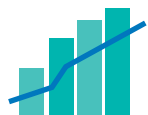
We will do this by working across six priorities:



## PRIORITY AREA 8

**Licensing that manages the risk to groundwater:** DELWP working with rural water corporations will review and update:

- the Ministerial policies and guidelines on take and use licensing and works licensing, with a focus on making sure rural water corporations have a strong basis for making decisions **(By 2025)**
- the take and use and works licensing framework, with a focus on emerging markets, fixed term licensing, flexibility to manage risk and changes in use. **(By 2030)**



## PRIORITY AREA 9

By 2025

**Improving groundwater markets:** DELWP working with rural water corporations will assess existing arrangements for groundwater trade and act to remove barriers where flexibility can help users make the most of available water without negatively impacting on living cultural landscapes, environmental health or the community. Opportunities for new groundwater markets will be explored.



## PRIORITY AREA 10

By 2024

**Enabling and managing the use of saline groundwater:** DELWP working with rural water corporations will improve administrative processes and guidance to ensure rural water corporations are equipped to respond to and support new users investing in access to saline groundwater resources, and effectively manage how that water is used on land.



## PRIORITY AREA 11

By 2026

**Supporting domestic and stock users:** DELWP will provide updated and clear information for the community about the right to take groundwater for domestic and stock purposes, develop a method for better estimation of domestic and stock use and investigate localised management options in hotspot areas. This is in line with commitments in the Central and Gippsland Region Sustainable Water Strategy to improve information about small catchment dams for domestic and stock use.



## PRIORITY AREA 12

Continuous improvement

**Compliance:** Rural water corporations and DELWP to continually monitor and assess risks to groundwater and focus resources on areas where there are the greatest compliance risks. Rural water corporations will revise and implement their Compliance and Enforcement Strategies, priorities and plans including for the risk to groundwater as part of annual business planning.



## PRIORITY AREA 13

**Traditional Owner access to water:** Consistent with commitments in the Central and Gippsland Sustainable Water Strategy, and as part of delivering Priority Area 4 in GM2030, DELWP will:

- work with Traditional Owners and public land managers to identify suitable land parcels to be nominated for assessment and making decisions on applications for groundwater licences **(By 2022)**
- lead joint work to investigate more appropriate ways that Traditional Owners can access water for cultural purposes within Victoria's water entitlement framework. **(By 2025)**



# IMPLEMENTATION AND ENGAGEMENT

Responsibility for delivery of GM2030 rests with DELWP, Goulburn-Murray Water, Grampians Wimmera Mallee Water, Lower Murray Water and Southern Rural Water.

We will report annually on implementation via the DELWP website.

Commencement of discussions with Traditional Owners will occur at the earliest opportunity to assist in incorporating cultural knowledge into the work program.

Should engagement with Traditional Owners and key stakeholders identify a need to adjust priorities or timelines for delivery, GM2030 will be updated to reflect this.

Upon release of GM2030, the next key steps will be:

- commencing technical and foundational investigations, studies and research,

- informing key stakeholders of the proposed work program and seeking feedback on proposed implementation strategies for priority areas,
- adjusting and resetting GM2030 Priority Areas around timing or scope to reflect community feedback, if necessary.

For more information, to provide feedback on this document and/or to register for future communications on GM2030, please do so via: [GM.2030@delwp.vic.gov.au](mailto:GM.2030@delwp.vic.gov.au).

Figure 3: GM2030 project delivery governance structure

