



**STORMWATER  
MANAGEMENT  
PLAN OVERVIEW**  
2024-2034



# Contents

Introduction	3
Our context	4
Challenges of stormwater management	5
Opportunities	6
Our Stormwater Management Mission	7
Our Stormwater Management Objectives	7
Our Stormwater Policy	8
Our Stormwater Management Action Plan	8
Our Flood Mapping Program – Overview	9
What's next?	10
Implementation Plan	10-11

## Introduction

**Stormwater management is an integral part of sustaining our natural environment, upon which our economy, health, wellbeing and lifestyle depends.**

Yarra Ranges Council has produced the Stormwater Management Plan 2024-2034 to strategically manage both the flood risk and to protect and maintain the natural water cycle and health of waterways from the impacts of urban development.

It seeks to provide the community with a collaborative and balanced approach to the management of stormwater infrastructure, to ensure sustainability and resilience.





# Our context

Yarra Ranges is home to over 163,000 residents which is expected to grow to 186,000 by 2041.

There are over 790km of drainage including pits, pipes and channels owned and managed by Council, some in difficult terrain making it challenging and expensive to maintain and renew.

Not all rainfall drains into Council's drainage structures. The Department of Transport and Planning (DTP) manage drains on major roads and stormwater connects into Melbourne Water's drainage network. Melbourne Water manage over 1,962 km of waterways within our municipality, as well as 64 km of open channels and 42 km of underground drainage (such as pipes).

Many older areas within the municipality contain drainage built according to the standards of their time. However, the level of development in many areas has increased and those standards are no longer suitable for today's standards.

In some cases, as more hard surface was added to these areas, the original drainage has been unable to handle the extra stormwater that drains into it.

Climate change is also causing more intense rainfall, which means more rain falls in the same or shorter amount of time than might have happened before. We anticipate that there will continue to be more frequent and severe extreme weather events such as floods and storms into the future due to climate change.



## Challenges of stormwater management

The Yarra Ranges municipality is the largest in area of all the local government areas in Melbourne, covering 2450 square kilometres. Most of the upper catchment is protected forest. Development occurs throughout the municipality in forest, farmland and urbanised areas.



### Flooding

Flooding affects many people and properties within Yarra Ranges. There are a number of known flood hotspots, and Council receives many flood and drainage requests each year across the municipality.

Some of the flooding is due to stormwater runoff taking its natural path to the creeks and rivers.



### Water in the landscape

Water and flooding are a part of our natural environment and landscape. While we try to improve conditions when it rains, not all storm events can be managed and there is not always an engineering solution for every stormwater issue.

We strive to use traditional and new knowledge to manage stormwater in a way that respects the land, water, and biodiversity within our municipality, and to help us keep the community safe during extreme flood events.



### Funding challenges

Maintaining and building drainage across such a large and challenging area comes at considerable cost. We recognise that there is a need for significant investment in our ageing infrastructure to meet the expectations of the community.

As the State Government has introduced rate capping, there is less ability for Council to raise funds necessary to ensure essential community services.



### Protecting Our Waterways

An important part of stormwater management is to improve the quality of the water that enters into our creeks and rivers from the drainage network.

Yarra Ranges is known for its beautiful environment and this includes many pristine creeks and rivers, including the headwaters of the Yarra River, Birrarung. These headwaters are highly valued by the community and have great ecological importance.

Rain that falls in the catchments eventually makes its way to these waterways. When development happens, areas that were once forest, farm or more natural surfaces end up becoming covered with concrete and other 'hard' surfaces. The hard surfaces cause rainwater to flow over the landscape rather than naturally soaking into the soil, which causes unnaturally high flows of water to enter streams and creeks, potentially causing erosion and damaging fish and platypus habitat.

Some of the creeks and rivers have been severely impacted by extra stormwater flows from development. We need to harvest and reuse more stormwater as well as let more of the stormwater absorb into the ground to help protect these precious waterways from future damage and pollution.

The stormwater runoff can also carry pollution to the waterways. Additional stormwater from developed areas and our road network needs to be managed in a way that protects our waterways from these impacts through keeping some of the stormwater within catchment while maintaining flood protection.

We have worked out which of the high priority waterways are at greatest risk of degradation due to future development. This means we can give further attention to the way extra stormwater is treated and managed within the catchments of those at-risk waterways.



# Opportunities

There are new benchmarking industry standards that we are using to help us design drainage that will be able to better handle the extra rain that climate change is bringing.

We will also use guidelines that help build drainage assets that better support our environment where we can. For example:

- Storing additional stormwater and using it to irrigate open spaces.
- Allowing stormwater to flow directly to the roots of Council maintained street trees (rather than flow past along the kerb).
- Encouraging new developments to create new green spaces where water sensitive design can occur.
- Enhancing and restoring billabongs.

These clever approaches will help create a greener, cooler environment, as well as reducing flooding and protecting waterways from stormwater flows and pollution.

## Our Stormwater Management Mission

At Yarra Ranges Council, our mission is to proactively manage stormwater to safeguard our community, preserve natural ecosystems, and promote sustainable development practices.

Guided by a commitment to resilience and environmental stewardship, we strive to minimise flood risk while protecting the integrity of our waterways and the health of our communities amidst the increasing frequency and severity of severe weather events.

Through innovative strategies, continuous monitoring, and collaborative partnerships, we aim to adapt to evolving environmental challenges and build a future where stormwater management serves as a foundation for thriving, resilient communities within the Yarra Ranges municipality.

## Our Stormwater Management Objectives

To manage these challenges and opportunities, Yarra Ranges Stormwater Management Plan has six objectives that support our Stormwater Policy.



### Utilising Stormwater as a resource

- Increase fit-for-purpose use of stormwater and rainwater.



### Existing and future flood risks are managed to maximise outcomes for the community

- Reduce the impacts of dangerous flooding now and into the future with development and climate change.
- Increase cross-consideration of flood mitigation and integrated water management.
- Improve community education around the flood management function of roadways.



### Healthy and valued waterways

- Reduce the total urban stormwater runoff volume discharged to receiving waters.
- Decrease pollutants discharged to receiving waters.
- Protect high value waterways.



### Healthy and valued urban and rural landscapes

- To minimise increases in stormwater due to development and protect the environmental values and physical characteristics of the landscape from degradation by stormwater.
- To ensure integrated stormwater management that maximises ecosystem services, such as cooling and local habitat improvement, and provides attractive and enjoyable spaces.



### Community values are reflected in stormwater planning

- Increase organisational capacity to partner with Traditional Owners to be able to respectfully acknowledge the connection of Traditional Owners to the land and waterways and include indigenous knowledge in stormwater management.
- Engage with the community during flood mapping and stormwater management projects and studies to support and enhance community connection with and understanding of the water cycle.
- To enable better asset management with improved efficiencies and overall cost reductions for council via strategic planning.
- Respond to climate and climate change related events through resilience planning.



### Strategic Partnerships

- Increased collaboration with other organisations to support strategic stormwater management.



## Our Stormwater Policy

Yarra Ranges Stormwater Policy outlines how Council will meet its legislative requirements and support State Government's policies, strategies and plans. Ultimately, it aims to protect our diverse and valuable waterways and reduce flood risk to the community.

## Our Stormwater Management Action Plan

Thirty-one stormwater-related actions will be undertaken over the next 10 years to reduce flood risk and protect waterways in Yarra Ranges.

### Better respond to flood and drainage requests

While all flooding is damaging, some has more severe impacts or is more hazardous to people than other types of flooding. Our planned works will allow us to quickly identify the severity of flood and drainage requests, so that the most severe cases can be addressed first.

### Update the Yarra Ranges Engineering Development Design Guidelines

We are linking the Development Engineering Guidelines more closely with the Yarra Ranges Planning Scheme, so that the excess stormwater from a broader range of development types will be better treated and detained.

We will include climate change factors when working out how much stormwater will be allowed to leave a development site, and when working out how much stormwater will need to be detained onsite.

### Develop the Yarra Ranges Water Sensitive Urban Design Guidelines

We will prepare these guidelines to help support the sound design, building and maintenance of structures that improve the quality of stormwater and help detain it in the landscape.

### Investigate Yarra Ranges Stormwater Quality In-lieu Contributions

Under the Victorian Planning Scheme, councils are permitted to establish stormwater quality in-lieu contributions schemes, or 'stormwater offsets'. Such schemes give developers of certain types of developments the choice of either building stormwater quality treatment structures within the development or paying a fee to Council to 'offset' the treatment of the stormwater. That fee then goes toward building a larger, Council-managed structure closer to the drainage outlet.

### Maintain strategic partnerships

We have formed many strong partnerships with other authorities such as DEECA and Melbourne Water. These partnerships are essential to improving stormwater and flood management throughout the municipality.

### Explore funding mechanisms

Maintaining and building drainage across such a large and challenging area comes at considerable cost. As the State Government has introduced rate capping, there is less ability for Council to raise funds necessary to ensure essential community services. As part of the Plan other funding sources will be explored including:

- Stormwater offsets collected by Melbourne Water
- Drainage scheme contributions
- Melbourne Water quality and quantity infrastructure – sometimes handed over to council (not as a rule though)
- Victorian urban stormwater offsets
- Developer Contribution Plans
- Special rates and charges
- General rates
- Grants
- Leveraging from other capital plans – e.g. road upgrades/ infrastructure
- Melbourne Water partnership on flood modelling, mapping and planning scheme amendments
- Melbourne Water redevelopment schemes
- Partnerships with major projects – e.g. LXRA, major road projects.
- Federal/state funding – e.g.



## Our Flood Mapping Program – Overview

Over the next 10 Years, we will be developing flood maps of key areas within the municipality, including rural areas. This flood mapping exercise will use historical flood data and modern mapping techniques to accurately predict where water will flow and where flooding may occur during storm events. Flood maps also includes information of how deep a flood may get and how fast and hazardous a flood may become.

We will model this for different amounts of rainfall, and we will include climate change impacts in this modelling by increasing the amount of rain falling on the municipality.

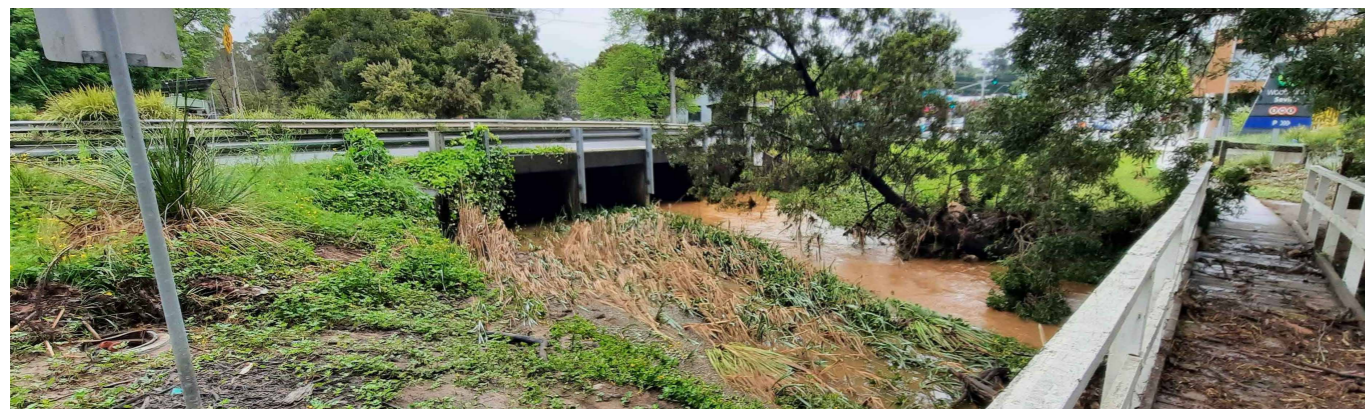
We will work closely with Melbourne Water to make sure that the pipes and waterways that they manage are also modelled together with the drainage structures that Council manages.

We will use the flood mapping to prioritise flood mitigation projects and allow us to provide better advice and conditions for developments that are occurring in or near flood affected areas.

We have used lots of information to work out which areas need to be modelled most urgently. The information used to prioritise the catchment 'areas' for flood mapping included:

- Whether or not there were flood hotspots
- What type of development (if any) is expected
- Whether there are any facilities that are considered 'vulnerable'
- How much 'hard surface' drains directly to waterways now, and how much this is expected to change in the future

There are 49 identified catchment areas that have been prioritised. The catchment map, along with the prioritisation framework results, can be viewed within the Yarra Ranges Council Stormwater Management Plan – 2024 to 2034 document.





# What's next?

The Stormwater Management Plan will be implemented over a 10-year timeframe, concluding in 2034. Details of the key actions can be found at the end of this document.

The Stormwater Drainage Management Plan will be implemented by Council in partnership with stakeholders and the local community. Reporting on the Plan will be undertaken through biennial reviews presented to Council.

Yarra Ranges will consistently work on refining investment plans to reflect lessons learnt and the successful completion of implementation plan actions



The Plan will be monitored to determine if Council is on track to meet its vision and intent and a monitoring program will be established to track progress towards:

- implementation of key actions
- achievement of specific targets
- achievement of strategic directions

## Implementation Plan

Action	Description	Timeline (target completion date)	Key External Stakeholders	Estimated Cost	Funding Source
<b>Utilising Stormwater as a resource</b>					
<b>SWMP1</b>	Finalise the Integrated Water Management plan which will help inform the catchment stormwater management strategies.	TBC	MW, DEECA	No Cost	Existing
<b>Existing and future flood risks are managed to maximise outcomes for the community</b>					
<b>SWMP2</b>	Update the Development Engineering Guidelines to better support the Stormwater Policy and this SWMP.	2025	MW, DEECA, Developers	No Cost	Existing
<b>SWMP3</b>	Review and improve the development application and approvals process to better support the Stormwater Policy and the SWMP	2025	MW, DEECA, Developers	No Cost	Existing
<b>SWMP4</b>	Undertake flood mapping and prepare stormwater management strategies for priority catchment areas. These are the highest priority, and the approach will be refined after each iteration.	2028	MW, Wider local community within Yarra Ranges Council	\$2.1M	TBC – Grant assistance from MW
<b>SWMP5</b>	Complete development of flood mapping and Stormwater Management Strategies for all remaining catchments. Provide implementation status update and prepare next version of the Stormwater Policy and SWMP.	2034	MW	TBC	Other strategies
<b>SWMP6</b>	Develop and prioritise a program of works (for design & delivery) for our most critical outfall drains as part of the rolling completion of action SWMP4. These outfall drains coincide with where the downstream drainage network meets the natural waterways.	Ongoing	Nil	\$30,000	TBC
<b>SWMP7</b>	Develop and prioritise a program of works focused on mitigation and adaptation of our existing drainage network. The critical areas of our existing drainage network will be determined via a combination of flood modelling (SWMP4) and hazard categorisation assessment.	Ongoing	Nil	\$60,000	TBC
<b>SWMP8</b>	Consider drainage infrastructure for new unsealed road upgrade programs.	TBC	Nil	\$30,000	TBC
<b>Healthy and valued waterways</b>					
<b>SWMP9</b>	Investigate Victorian urban stormwater offsets which can be managed by Council.	2024	MW, DEECA	\$120,000	TBC
<b>SWMP10</b>	Improve workable options for on lot WSUD via research and pilot testing and develop WSUD Guidelines with preferred solutions.	2025	MW, DEECA	No Cost	Existing
<b>SWMP11</b>	Establish WSUD criteria for public and private realms – either in standalone guidelines or as part of updates to existing guidelines.	2025	MW, DEECA	\$60,000	TBC
<b>SWMP12</b>	Review outcomes of the Little Stringy Bark Creek stormwater management	2025	MW, DEECA	No Cost	Existing

## Implementation Plan (cont.)

Action	Description	Timeline (target completion date)	Key External Stakeholders	Estimated Cost	Funding Source
<b>Healthy and valued urban and rural Landscapes</b>					
<b>SWMP13</b>	Following the completion of SWMP10, assess the Tree Canopy Strategy (e.g. along key pedestrian routes and throughout activity centres) for overlaps with new or redevelopment areas, or with road upgrade plans to determine where passively irrigated street trees could best be placed.	2025	MW, DEECA	\$20,000	Existing
<b>Community values are reflected in stormwater planning</b>					
<b>SWMP14</b>	Determine where road capital works program locations overlap with drainage works and align timelines where appropriate.	2024	DOT, MW	No Cost	Existing
<b>SWMP15</b>	Develop framework for data collection to inform assessment against SWMP objectives.	2024	Nil	\$25,000	TBC
<b>SWMP16</b>	Develop a Fact Sheet to clearly outline Council's approach to prioritising catchments for future flood mapping and drainage issues, and the roles that infrastructure, including roadways, play in flood management.	2025	Wider local community within Yarra Ranges Council	No cost	Existing
<b>SWMP17</b>	Determine a clear prioritisation for and approach to addressing flood and drainage complaints and an associated Fact Sheet.	2025	Wider local community within Yarra Ranges Council	\$10,000	Existing
<b>SWMP18</b>	Develop a Fact Sheet to clearly detail how Council manages new developments with respect to flooding, per the Stormwater Policy.	2025	Wider local community within Yarra Ranges Council	\$5,500	Existing
<b>SWMP19</b>	Develop a Fact Sheet to clearly outline authority and private responsibilities including responsibilities for private to private property flooding with no infrastructure and property access (e.g. water running down driveway).	2025	Wider local community within Yarra Ranges Council	\$5,500	Existing
<b>SWMP20</b>	Provide SWMP implementation status update to Council.	2029	Nil	No cost	Existing
<b>SWMP21</b>	Following completion of flood mapping and Stormwater Management Strategies for priority catchments, undertake community consultation and investigate Planning scheme amendment.	2029	MW	\$200,000	TBC
<b>SWMP22</b>	Update asset management plans (including 10-year capital plan) using information from completed stormwater management strategies.	Ongoing	Nil	\$25,000	TBC
<b>SWMP23</b>	Incorporate key findings from the catchment flood mapping projects into the Municipal Flood Management Plan.	Ongoing	Wider local community within Yarra Ranges Council	\$20,000	TBC
<b>SWMP24</b>	Investigate ways of further improving community flood resilience, such as retrofits and overlays.	2024	Wider local community within Yarra Ranges Council, MW	No cost	Existing
<b>SWMP25</b>	Undertake a process review and gap analysis of the permit application process from start to statement of compliance. Involve planners, developers, engineering, consultants in the review. This will help with overall process improvement.	2024	Developers	No cost	Existing
<b>SWMP26</b>	Implement a Community Reference Panel (CRP) for Stormwater Management.	Ongoing	Wider local community within Yarra Ranges Council	\$30,000	Existing
<b>SWMP27</b>	Biennial review of the SWMP.	2026, 2028, 2030, 2032, 2034	All	No cost	Existing
<b>Strategic Partnerships</b>					
<b>SWMP28</b>	Establish a partnership between the Yarra Ranges water managers, including Yarra Valley Water, South East Water and Melbourne Water to enable a governance structure that supports the commissioning and development of the catchment flood mapping and stormwater management strategies, and that supports the implementation of actions identified in the strategies.	2024	MW, DEECA	No cost	Existing
<b>SWMP29</b>	Investigate alternative funding opportunities.	2026	MW	No cost	Existing
<b>SWMP30</b>	Commence advocacy for any special or flagship projects pertaining to waterway protection, stormwater and flood management as identified in stormwater management strategies.	2026	MW, DEECA	No cost	Existing
<b>SWMP31</b>	Test alternative funding opportunities.	2027	MW, DEECA, State Government	No cost	Existing

**Yarra Ranges Shire Council**  
P.O. Box 105, Anderson Street  
Lilydale, VIC 3140

**P** 1300 368 333  
**E** [mail@yarraranges.vic.gov.au](mailto:mail@yarraranges.vic.gov.au)

**[yarraranges.vic.gov.au](http://yarraranges.vic.gov.au)**