Onsite Wastewater Management Plan

2024-2028

Acknowledgement of Country

Pyrenees Shire Council acknowledges the Traditional Owners of the Land upon which the Pyrenees Shire is based. We acknowledge the people past and present of the Wadawurrung, Dja Dja Wurrung, Eastern Maar and Wotjobaluk tribes as the first Peoples of this region. We pay our respects to the customs, traditions, and stewardship of the land by Elders past and present, and the emerging leaders and recognise their ongoing connection to the land.

Directorate
Assets and Development

Owner
Manager Planning and Development

Date Created
June 2024

Acknowledgement of Funding
The development of this plan was made possible with thanks to funding from the Victorian Department of Energy, Environment and Climate Action (DEECA) Onsite Domestic Wastewater Management Grants Program.

Contents

Definitions	
CMA	Catchment Management Authority
DEECA	Department of Energy, Environment and Climate Action
DH	Department of Health (Victoria)
DWMP	Domestic wastewater management plan
EPA	Environment Protection Authority
GED	General environmental duty
LCA	Land capability assessment
MAV	Municipal Association of Victoria
OMLI	Obligations for Managers of Land or Infrastructure
OWMP	Onsite wastewater management plan
OWMS	Onsite wastewater management system
Potable water	Water suitable for human consumption (drinking and cooking)
SWSCA	Special water supply catchment area
The Act	Environment Protection Act 2017
The Regulations	Environment Protection Regulations 2021
VBA	Victorian Building Authority
WC	Water Corporation

1. Introduction

Pyrenees Shire Council is required under Victorian legislation to develop and implement an Onsite wastewater management plan (OWMP). The purpose of this plan is to guide and support the management of onsite domestic wastewater across the shire.

The objectives of this plan are to:

- Identify the public health and environmental risks associated with the onsite wastewater management systems.
- Set out monitoring and compliance strategies to minimise potential risks.
- Engage with key stakeholders who have roles in onsite wastewater management within council and externally.
- Provide strategies to protect the declared special water supply catchment areas (SWSCA) in the shire.
- Develop policies and procedures to support onsite wastewater risk management, as well as planning and development decision making.
- Meet legislative responsibilities and achieve ongoing compliance with relevant legislation.
- Provide a communications strategy for community education to support property owners to meet their general environmental duty (GED) and understand compliance inspection requirements.
- Review and update the OWMP every five years.

2. Context

The Pyrenees Shire has a population of 7671 people, sitting across traditional ownership areas of the Wadawurrung, Dja Dja Wurrung, Eastern Maar, and Wotjobaluk Aboriginal peoples. It spans an area approximately 3500 square kilometres between the regional centres of Ballarat and Ararat.

The Shire includes eleven main townships, with Avoca, Beaufort, Snake Valley, and Waubra currently serviced by reticulated sewerage within the main township areas. Outside of these sewered areas developments require connection to an onsite wastewater system.

Council has a statutory responsibility to administer the use and installation of onsite wastewater management systems within the shire. It must also assess the risks and identify strategies to manage these systems, via an onsite wastewater management plan (OWMP).

The Pyrenees Shire published its first Domestic Wastewater Management Plan (DWMP) in 2015, setting out strategies for managing new and existing onsite wastewater management systems throughout the shire. The plan focused on the special water supply catchment areas (SWSCA) and the five unsewered townships of Amphitheatre, Landsborough, Moonambel, Raglan and Redbank. Many of the actions set out in the plan were effectively implemented, including:

- Staff resourcing
- Wastewater database update
- Septic compliance inspection program, enforcement, and reporting
- Aerated wastewater treatment system (AWTS) service agent list
- Website content updates and communications
- Independent audit of the plan

This OWMP has been developed to align with changes that have occurred since the last plan, including population growth within the shire and significant updates in legislation, guidelines, and strategic plans which provide a framework for effective management. ***Appendix 1*** outlines the legislation, guidelines and strategic plans that apply to this OWMP.

2.1 Risks associated with domestic wastewater.

Domestic wastewater is generated by household activities including toilets, kitchens, bathrooms, and laundry. It contains elevated levels of microorganisms, organic matter, and chemicals capable of causing illness and impacting upon the environment. Poorly installed or maintained wastewater systems can create serious hazards, including pollution of drinking water, contaminated land and water bodies, and offensive odours.

The goal of onsite wastewater management is to protect:

- natural environment
- public health
- amenity
- social wellbeing
- economic stability

2.2 Onsite wastewater treatment options

Onsite wastewater can be managed by a variety of treatment systems, including but not limited to:

- Septic tanks
- Aerated wastewater treatment systems
- Reed beds
- Sand filters
- Greywater treatment systems

There are also a variety of methods for land application of treated effluent, the type used will depend on the site characteristics and land constraints, but options typically include:

- Conventional absorption trenches and beds
- Evapotranspiration-absorption (ETA) trenches and beds
- Subsurface drip irrigation
- Wisconsin or sand mounds
- Low pressure effluent distribution (LPED)
- Surface spray or drip irrigation
- Covered surface drip irrigation

2.3 Catchments and waterways

A special water supply catchment area (SWSCA) is a formally recognised, declared catchment that provides water for drinking and domestic supply. An 'open' catchment is where part or all the catchment area is in private ownership and is subject to various land uses and development. All use and developments in these open SWSCA are subject to regulation to ensure the water quality flowing into, and stored in, the water storage is maintained.

Schedule 5 of the *Catchment and Land Protection Act 1994* lists the special water supply catchments declared throughout Victoria. The SWSCA within Pyrenees Shire that require protection include:

- Avoca Town Water Supply
- Forest Creek (Amphitheatre)
- Fiery Creek Tributaries (Beaufort)
- Loddon River (Laanecoorie)
- McCallum Creek
- Musical Gully and Troy Reservoirs (Beaufort)
- Redbank Creek (Redbank)
- St Enochs Spring (Skipton)
- Trawalla Creek
- Tullaroop Reservoir
- Wimmera Systems

Figure 1 shows the SWSCA in Pyrenees Shire from which potable water is collected and supplied by Water Corporations. Figures 2 and 3 show the Environmental Significance Overlays. ***Appendix 2*** provides further information on the declared catchment areas.

Figure 1: Special water supply catchment areas (SWSCA) in Pyrenees Shire

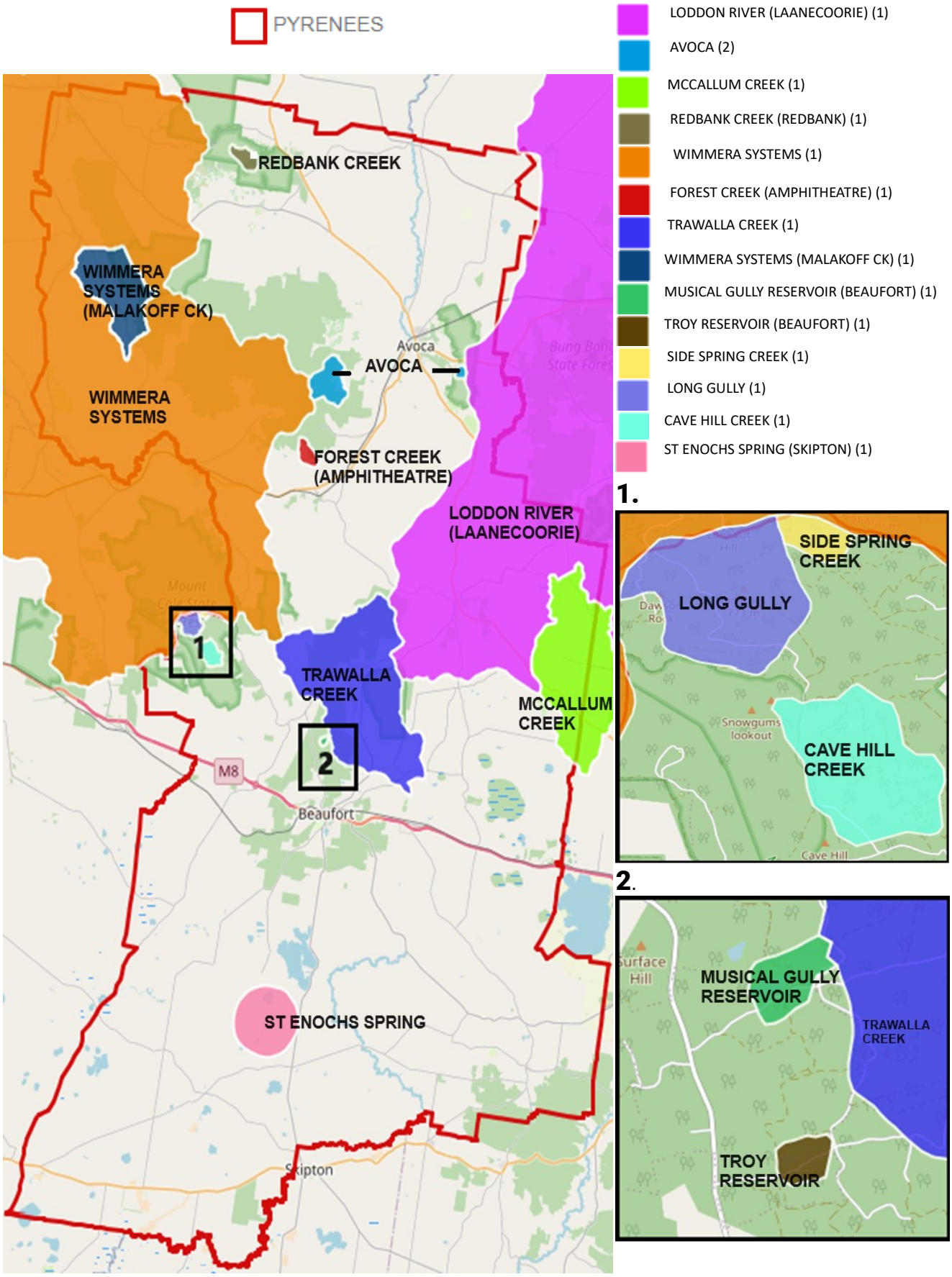
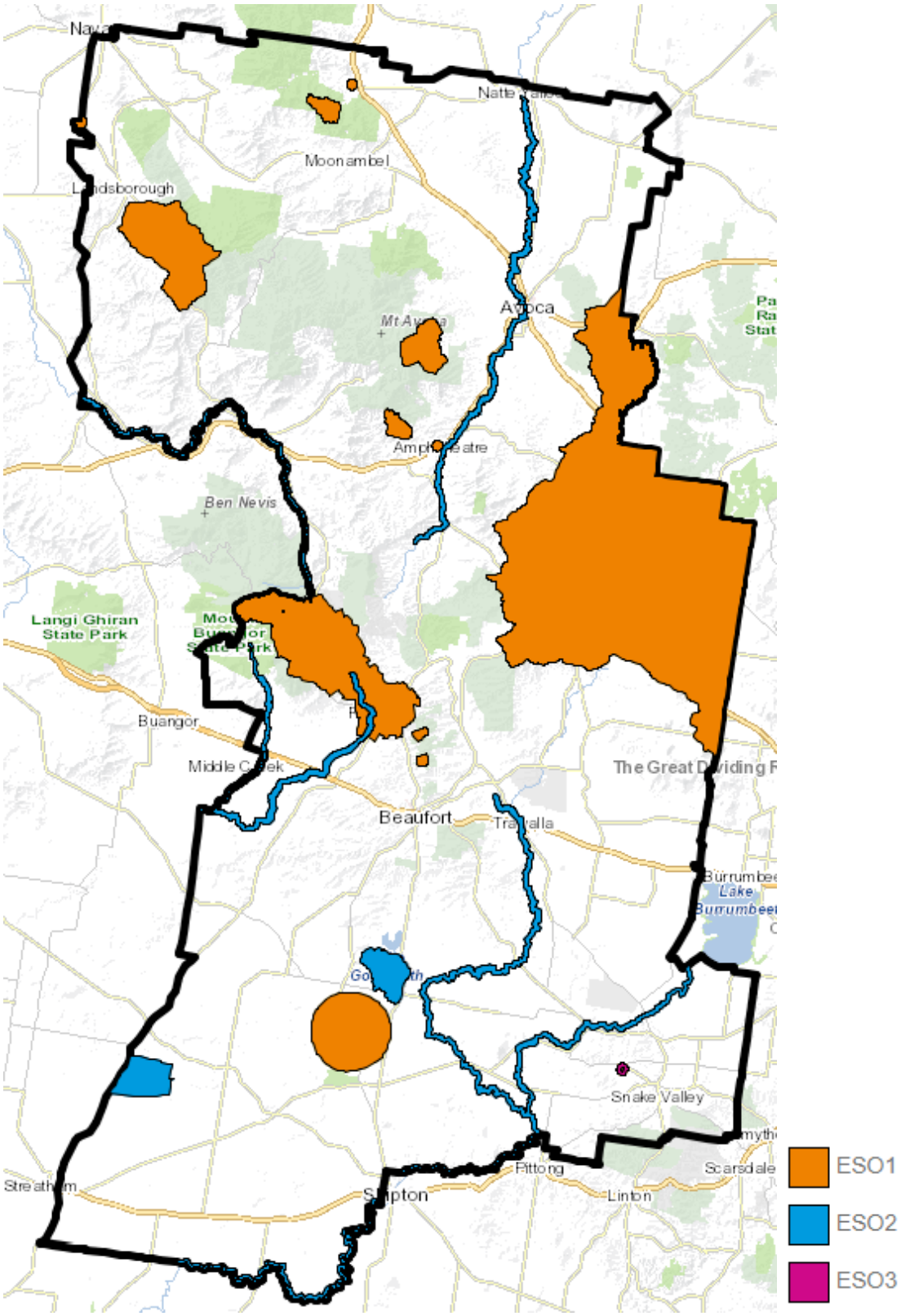
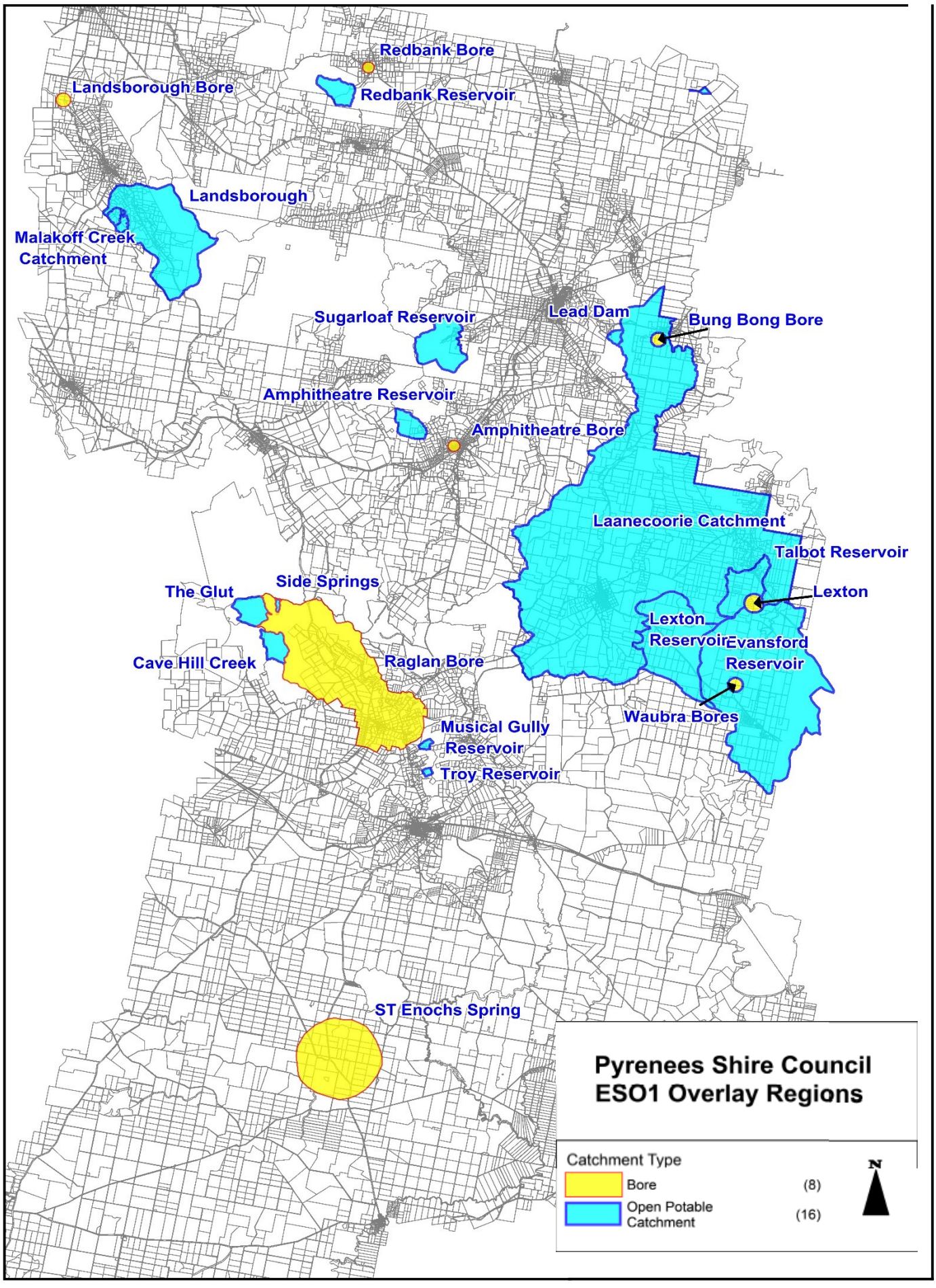


Figure 2: Pyrenees Shire Council Environmental Significance Overlays



ESO1 Designated water supply areas
ESO2 Major River and stream watercourses and environs
ESO3 Snake Valley Wastewater Treatment Plan Environmental Significance Area

Figure 3: Pyrenees Shire Council ESO1 – Bore and Open Water Supply Catchment



The ***Planning permit applications in special water supply catchment areas guidelines (2024)*** require Councils to develop, publish and implement an Onsite Wastewater Management Plan (OWMP) to protect open SWSCA's. The plan must satisfy the requirements set out in the above Guideline and it must identify, assess, and address the risks of harm to human health and the environment from onsite wastewater management systems (OWMS).

An OWMP that is compliant with the Guidelines is considered an acceptable basis for a relaxation of Policy 1 that otherwise restricts the density of dwellings in water supply catchment areas to one dwelling per 40 hectares.

Council's OWMP will protect SWSCA areas by:

- Effectively monitoring the condition and management of onsite wastewater systems, including compliance with permit conditions and the *EPA Guideline for onsite wastewater management systems*.
- Reporting the results of monitoring to stakeholders as agreed by the relevant stakeholders.
- Taking enforcement action where non-compliance is identified.
- Implementing a process to regularly review and update the plan and publish a report on the implementation of the plan on its website at intervals of no more than 5 years.
- Demonstrating that suitable resourcing for implementation including monitoring, enforcement and review is in place.

2.4 Roles and responsibilities

The management of onsite wastewater is the responsibility of variety of government organisations, private industry, and individuals at the state and local level.

Pyrenees Shire Council	Local Councils are responsible for administering and approving A20 permits for the installation and use of onsite wastewater management systems (less than 5,000 litres per day). They are also required to develop and implement onsite wastewater management plans (OWMP), and are responsible for preparing, administering, and enforcing planning schemes, including making decisions about planning permits.
Environment Protection Authority (EPA)	The EPA administers the *Environment Protection Act 2017* (the Act), Environment Protection Regulations 2021 (the Regulations) and the Guideline for onsite wastewater management 2024 (the Guideline), which sets out guidance for the appropriate management of onsite wastewater systems. The EPA are responsible for overseeing the regulatory framework that Councils and Water Corporations use to manage the risks posed by onsite wastewater systems. EPA are also responsible for approving wastewater systems that handle, or are designed to handle, flow rates higher than 5000 litres per day.
Department of Energy, Environment and Climate Action (DEECA)	DEECA are responsible for legislation for the water industry and inform policy that supports the Act. DEECA also have a responsibility for overseeing the regulatory framework that Councils and Water Corporations use to manage the risks posed by onsite wastewater systems.

Department of Health (DH)	The Victorian Department of Health administers the *Public Health and Wellbeing Act 2008*. It also provides advice to the EPA and local government about public health policy related to wastewater management to minimise the potential impacts on the provision of safe drinking water and public health.
Victorian Building Authority (VBA)	The VBA is responsible for regulating Victoria's building industry, including registering, licensing, and disciplining plumbing practitioners.
Municipal Association of Victoria (MAV)	The MAV advocate for an improved regulatory framework for wastewater management in Victoria. They are also responsible for the development of the *Onsite Domestic Wastewater Land Capability Assessment Framework* that provides guidance to Councils, land capability assessors and other stakeholders when assessing and developing Land Capability Assessments.
Catchment Management Authorities (CMA)	CMAs are responsible for the sustainable development of catchments, floodplains, and waterways within the shire. Water resources within our shire extend over four different CMA's: • North Central Catchment Management Authority (NCCMA) • Glenelg-Hopkins Catchment Management Authority (GCMA) • Corangamite Catchment Management Authority (CCMA) • Wimmera Catchment Management Authority (WCMA)
Water Corporations (WC)	WC's have a major interest in the correct functioning of onsite wastewater systems and lead the provision of sewerage services. Failing onsite wastewater systems may impact water quality in waterways, channels, and reservoirs, resulting in increased environmental and health risks, and operational costs. Central Highlands Water (CHW) is an urban water corporation that provides water and reticulated sewerage services to various townships across shire. Other urban and rural water corporations with responsibilities in the shire are: • Goulburn Murray Water (GMW) • Grampians Wimmera Mallee Water (GWMW) • Southern Rural Water (SRW) Both urban and rural water corporations have responsibility for managing potable water as well as water supply bore fields within the shire. They are also required to assess and respond to all referred applications under Clause 66 of the Pyrenees Planning Schemes for SWSCA.
Property owners and residents	Property owner's responsibilities include: • Connecting to reticulate sewerage where it is available. • Obtaining a permit to install an onsite wastewater system before a building permit is issued and installing the system. • Obtaining a certificate to use the system once installed. • Obtaining a permit to make any alterations to the existing system. • Ensuring system installers are licensed plumbers. • Complying with any permit conditions. • Ensuring their onsite wastewater system is operated and maintained so it does not pose a risk to human health or the environment. • Check for and respond to any signs the system may be failing.

	• Ensuring the effluent absorption area remains clear from development, stock, vehicles, and unsuitable vegetation.
Other stakeholder responsibilities	Land Capability Assessors have a responsibility to ensure land is suitable for siting an OWMS and recommend the most appropriate system. Plumbers and installers must be licensed to install an OWMS, ensure a permit to install has been issued and that systems are installed as per the relevant permit conditions.

2.5 Legislation

Environment Protection Legislation

There have been recent changes in legislation affecting onsite domestic wastewater management. This includes the new *Environment Protection Act 2017* (the Act) and Environment Protection Regulations 2021 (the Regulations). Both the Act and the Regulations include requirements for the installation, operation, and maintenance of onsite wastewater treatment systems.

The general environmental duty (GED) is at the centre of the Act and applies to all Victorians. The GED requires that property owners minimise the risk of activities harming the environment or human health.

The Regulations set out the duties and obligations for persons in relation to the management and control of land where OWMS are located, including:

- Operation and maintenance of the system so it does not pose a risk to human health or the environment.
- Monitoring and responding to signs of system failure.
- Provision of information to owners and occupiers regarding the correct operation and maintenance of the system.
- Keeping of maintenance records and, on request, being able to provide this information to council.

Councils have the power to act when there is a breach of the GED in relation to an onsite wastewater management system. The Regulations also set offences and allow councils to request system maintenance and enforce breaches of duties. The Regulations apply to all existing onsite wastewater management systems, including older systems installed before installation permits were introduced.

The EPA's *Order for Obligations of Managers of Land or Infrastructure (OMLI)* also sets out requirements for Council to develop and implement an onsite wastewater management plan.

Building and Planning Regulations

The *Building Act 1993* requires a compliance certificate from a licensed plumber to be issued at the completion of an OWMS installation. A compliance certificate is required before an occupancy permit can be issued for a new dwelling.

The *Planning and Environment Act 1987* sets out the requirements for obtaining planning permits. Not all unsewered development will require a planning permit. If a planning permit is required, it must be issued prior to an OWMS permit to install.

Guidelines

The *EPA Guideline for onsite wastewater management (2024)* sets out Council's statutory responsibilities in relation to the planning and management of onsite wastewater systems.

More recent publications provide further guidance including:

- *Planning permit applications in special water supply catchment areas guidelines (DEECA)*
- *EPA Guidance for owners and occupiers of land with an onsite wastewater management system ≤5000 litres on any day (including septic tank systems).*
- *EPA Regulating onsite wastewater management systems: local government toolkit.*

Australian Standards

The following Australian Standards apply to OWMS.

- ***AS/NZS 1547:2012*** *Onsite Domestic Wastewater Management*
- ***AS/NZS 1546.1-4*** *Onsite Domestic Wastewater Treatment Units – Septic tanks, Aerated wastewater treatment systems, Waterless composting toilets, Domestic greywater treatment systems*
- ***AS/NZS 3500.1-4:2021*** *Plumbing and Drainage*

Council Plans

The OWMP links to the vision, goals and strategies set out in the Pyrenees Shire Council Plan 2021-2025 and other relevant strategic plans.

Council Plan 2021-2025	
Council Vision - *Sustainable and welcoming places and natural environments that create inclusive, happy, and healthy connected communities.*	
People	Prepare for emergencies and ensure community safety Promote health, wellbeing, engagement, and connection
Place	Promote responsible development
Environment	Continue being an environmentally progressive organisation Foster a climate change resilient community Improve waste management to reduce landfill and reduce harm to the environment
Economy	Encourage and invest in assets and infrastructure for commerce and community

Municipal Health & Wellbeing Plan 2021-25
The OWMP links to the goals regarding Tackling Climate Change and its Impact on Health.

Municipal Emergency Management Plan 2020-23

Council's MEMP plan has environmental, public health and wastewater actions that link to the OWMP.

7.3.9 Environmental and Public Health Services	Council may be requested to assess, advise on, and minimise the public health impact of an emergency.
15.29.6 Emergency responsibilities > Incident Responsibilities > Other public health risks ***e.g., blue-green algae; wastewater treatment and septic tanks; recycled water; rainwater tanks***	Includes infectious diseases, incidents involving water and other biological incidents.

Council Communications & Engagement Strategy 2022-2025

The OWMP needs to follow Council's Communications and Engagement strategy and the following goals can be followed in our communications strategy.

Goal 1:	Improve engagement and communication methods to better meet the needs of the target community and desired outcome.
Goal 3:	Create an engagement environment which is accessible to all.
Goal 4:	Create a workforce that is informed and empowered to engagement and communicate effectively.
Goal 5:	Develop a culture of proactive and authentic engagement, communication, and responsiveness.

Pyrenees Shire Planning Scheme

The OWMP links to the various strategies for managing the impact of wastewater in the Planning Scheme. The intent of the Planning Scheme in relation to domestic wastewater is that all new subdivisions or developments have provisions for reticulated sewerage services. In areas where a reticulated service is not available, all wastewater must be treated and retained on-site.

The areas of the Planning Scheme that relate to domestic wastewater systems are outlined below.

02.03-1 Settlement	Provides strategic framework for settlement
02.03-2 Environmental risk and amenity	Discouraging use and development that causes pollution of water resources
02.03-3 Pyrenees Land Systems	Recognition of land systems and development
12.03-1S River and riparian corridors, waterways, lakes, wetlands, and billabongs	Direct growth to established settlements where water and wastewater can be managed.
14.02-1S Catchment planning and management	Sets out strategies to assist the protection and restoration of catchments, waterways, estuaries, bays, water bodies, groundwater, and the marine environment
14.02-1L Catchment management in Pyrenees Shire	Sets out strategies to protect proclaimed water supply catchment areas through restrictions on subdivision, land use and development, and retain vegetated areas within the Evansford township environs to protect the quality of water within the catchment.
14.02-2S Water Quality	Sets out strategies to protect water quality.
14.02-2L Water Quality in Pyrenees Shire	Sets out strategies to protect and improve water quality within the catchments and environs of bores providing potable water supplies in the Shire.
16.01-3L Rural-residential development in Pyrenees	Implement strategies to manage rural-residential development within the Rural Activity Zone, around

	Beaufort's periphery, east and west of the Landsborough township, around and north of the Lexton township area, and Snake Valley south.
19.03-3S Integrated water management	Plan and coordinate integrated water management, bringing together stormwater, wastewater, drainage, water supply, water treatment and re-use to take into account the catchment context, protect downstream environments, waterways, and bays, manage, and use potable water efficiently, reduce pressure on Victoria's drinking water supplies, and minimise drainage, water or wastewater infrastructure and operational costs.
32.03 Low Density Residential Zone	Development/Subdivision
32.05 Township Zone	Subdivision
35.03 Rural Living Zone	Development/Subdivision
35.06 Rural Conservation Zone	Use/Development/subdivision
35.07 Farming Zone	Use/Development/Subdivision
35.08 Rural Activity Zone	Use/Development/Subdivision
Schedule 1 To Clause 42.01 Environmental Significance Overlay (ESO1)	Permit requirements to use and manage land within designated water supply areas to ensure protection and maintenance of water quality and water yield within the catchments, in waterways, and groundwater supplies within the Shire and the broader region and other protection strategies.
Schedule 2 To Clause 42.01 Environmental Significance Overlay (ESO2)	Permit requirements to protect major river and stream watercourses and their immediate environs.
Schedule 3 To Clause 42.01 Environmental Significance Overlay (ESO3)	Snake Valley Wastewater Treatment Plant Environmental Significance Area. Restrictions on housing developments within the immediate buffer area of the treatment plant to safeguard ongoing operation of treatment plant and protect nearby landowners and occupants from potential off-site amenity impacts.
45.05 Restructure Overlay	Development/Subdivision
52.07 Emergency Recovery	Temporary accommodation requirements
52.10 Reconstruction After An Emergency	Development/subdivision requirements. Use exemptions apply to reconstruction of a dwelling.
66.02-5 Special water supply catchment area	Referral & notice provisions

3. Management

3.1 Plan Development

This plan has been developed in association with DEECA as part of the Onsite Domestic Wastewater Management Grants Program.

The project group, comprising Project Officer - ODWM Improvement, Manager of Planning and Development, and the Strategic Planning and Environmental Health teams, have prepared this plan using a combination of the guidelines prepared by the MAV, new legislation, guidelines, and frameworks prepared by EPA and DEECA, and a review of neighbouring council plans.

The project's principal objectives are to enable Council to improve its wastewater database records, reduce the risk to human health and environment through improved wastewater management and prepare a new OWMP.

The methodology associated with the development of the plan were:

- Review of 2015-2018 plan.
- Internal consultation with Council's Planning and Environmental Health teams.
- Draft recommendations.
- Draft 2024-2028 OWMP prepared.
- Consultation and engagement with stakeholders.
- Final plan development.
- Adoption by Council.

An extensive review was completed of the 2015-2018 plan, looking at all aspects to determine whether the actions set were achieved, as well as an analysis of the data relating to the septic monitoring and compliance inspections.

Discussions were held with the project group around what elements of the plan should be retained, whether the current risk classification model is appropriate to continue to use, and what recommendations should be included in the new plan. Consideration was also given to the significant changes in legislation, regulations, guidance, and Council strategic plans that have recently occurred.

3.2 Stakeholder and Community Engagement

Stakeholder consultation with the EPA, Local Water Corporations, CMAs, neighbouring councils, and other key stakeholders as outlined below was undertaken and feedback sought on the new plan. Stakeholder views were considered and used to inform the final plan.

Key stakeholder groups that were engaged to support the development and implementation of the plan were:

- Pyrenees Shire – Strategic Planning, Environmental Health, and Information and Communications Technology departments
- Central Highlands Water (CHW)
- Goulburn Murray Water (GMW)
- Grampians Wimmera Mallee Water (GWMW)

- Southern Rural Water (SRW)
- North Central Catchment Management Authority (NCCMA)
- Glenelg-Hopkins Catchment Management Authority (GCMA)
- Corangamite Catchment Management Authority (CCMA)
- Wimmera Catchment Management Authority (WCMA)
- Environment Protection Authority (EPA)
- Department of Energy, Environment and Climate Action (DEECA)
- Victorian Building Authority (VBA)
- Department of Health (DH)
- Municipal Association of Victoria (MAV)
- Developers and individual landowners
- Land Capability Assessors
- Plumbers and installers of OWMS
- Residents, owners, and operators of OWMS
- Neighbouring local councils

Strategies for engagement varied depending on the type of organisation and the potential impact on resources.

Key stakeholders were engaged with in person, via phone and/or video conferencing prior to the release of the draft plan for official consultation.

Engagement with other stakeholders occurred once the draft was completed via:

- Project presentation on Council's Engagement Hub for feedback.
- Social media and print media communications.
- Updates on Council's website.

Feedback from engagement was considered and changes were made prior to publishing this OWMP.

3.3 Management of domestic wastewater

The management of domestic wastewater can be broadly divided into the following categories:

Existing Systems Unsewered	This is of highest risk as there is often limited information recorded on Council's database regarding older systems. The risk is much higher where systems are clustered together in townships or located close to waterways.
Existing Systems Sewered or Sewer available	There are very few existing onsite systems within the sewered areas of the shire.
Future Systems Unsewered	The risk associated with future developments is reduced by the legislative requirements that regulate the installation of an onsite wastewater system in unsewered areas. Adherence to the planning scheme and other legislative requirements will minimise the risk of allowing any poorly designed OWMS that could lead to non-compliant systems in the future.
Future Systems Sewered or Sewer available	Development within and on the fringe of sewered areas should be connected to sewer where it is available. CHW is the authority for managing and operating the sewer systems in Beaufort, Avoca, Waubra, and Snake Valley. Council will seek guidance from CHW on the availability and possibility of the provision of sewerage to development (existing and proposed) within those sewer districts.

When is an onsite wastewater treatment system required?

The current trigger for a permit to install or alter an OWMS is:

- A planning permit for new development. If a planning permit is required for a new development, specific wastewater requirements are addressed throughout the planning permit referral process. A Land Capability Assessment (LCA) is generally required to inform a development application where a new install or alteration is required to an OWMS. An LCA will always be required if the development is located within a SWSCA.
- Once a planning permit is issued, an application to install or alter can be submitted to Council's Environmental Health department for assessment.
- For development that does not require a planning permit an application to install or alter can be directly submitted to Councils Environmental Health team for assessment.
- The application is entered into Council's wastewater database.
- A completed application will include contact details of the applicant, owner and plumber, details of system type and size, a detailed floor plan and site plan including location of the wastewater system, current copy of title, LCA (if required) and any other requested information, and payment of the application fee.
- Once a complete application is received a decision to issue the permit will be made within 42 business days. Further information and a site inspection may be required prior to a permit being issued, which may extend the time taken to issue a permit.

- Applications will be assessed according to legislative requirements, guidelines, any planning permit and LCA requirements.
- All permits are issued with 24-month expiry. Applicants can apply to renew their permit if they require more time to complete the installation. They can also apply to amend or alter the permit if required.
- Once a system is installed an inspection with Council's Environmental Health Officer (EHO) should be arranged by the plumber/installer prior to backfilling or adequate photos provided if the EHO is unable to attend.
- A final inspection will be conducted by Council's EHO once the installation is complete, and the plumber/installer has provided a copy of the certificate of compliance and an as constructed plan. For Secondary systems, a certificate of commissioning is also required.

3.4 Implementation and Evaluation

The implementation of the OWMP is the responsibility of Environmental Health team under the direction of the Manager of Planning and Development.

The Environmental Health team will meet with internal Council stakeholders every three months to discuss the plan and its implementation to ensure that the actions set out herein are kept in focus and continue to progress.

The Environmental Health team shall prepare an annual report to be distributed to key stakeholders, detailing the outcomes of the compliance and monitoring program, key achievements throughout the year, as well as statistics on number of permits issued and inspections undertaken.

A full review of the OWMP shall be conducted out no more than five years from publication to evaluate the achievements of the plan and determine if it is appropriate to continue with the current plan or develop a new plan. A report on the review and implementation of the OWMP will be published on Council's website.

4. Assessment of the current wastewater situation

All wastewater generation and/or discharge carries a threat with potential to harm human health or damage the environment. This plan will address the threats to potable water supplies and ecosystems through the effective monitoring of existing systems and adherence to legislative requirements for new developments. Specific monitoring will focus on systems within SWSCA and high-risk unsewered townships.

Each year Council issues on average 44 new permits to install or alter a wastewater system and 36 approvals to use a finished installation. Council's current database of OWMS contains 1576 records. Of these properties, 679 are located within SWSCA.

Based on a comparison of the number of rateable properties with a dwelling and the current known onsite wastewater systems and sewered properties, there are potentially a further 300 OWMS not yet recorded on the database.

4.1 Implementation of the 2015 DWMP

An internal review of the implementation of the 2015 DWMP indicates a high level of compliant systems across both the SWSCA and high risk unsewered townships. Table 1 and 2 below detail actual inspection statistics from 2015 to present.

The data shows that:

- A total of 792 inspections were completed.
- Overall, 17 systems were found to be non-compliant (2%).
- The highest level of non-compliance was in the high-risk unsewered township category where 8 out of 218 inspections were not compliant. EHO's communicated with property owners and ensured required works were completed.
- Gaining access to all the properties requiring inspections was challenging. 19% of the inspections were not completed due to officers being unable to access the property.
- The number of inspections undertaken in 2021 was impacted by the COVID-19 Pandemic and associated restrictions.

Table 1: Annual DWMP inspections 2015 -2023

Year	Inspections - SWSCA	Inspections - Township & Other	No Access - SWSCA	No Access - Township	Total Inspections
2015	0	0	0	0	0
2016	40	0	0	0	40
2017	19	0	0	0	19
2018	51	74	16	10	151
2019	21	80	12	7	120
2020	69	41	8	10	128
2021	52	0	0	0	52
2022	174	14	24	1	213
2023	53	2	14	0	69

Table 2: Total Inspections and Compliance by Risk Area 2015 – 2023

Risk Area	Number of Inspections	Compliant	Marginal	Non-Compliant	No System	No Access
SWSCA Low Risk						
Loddon River (Laanecoorie)	213	73%	9%	2%	4%	12%
McCallum Creek	6	33%	33%	0%	0%	33%
Trawalla Creek	7	100%	0%	0%	0%	0%
Wimmera Systems (Malakoff Creek)	4	25%	0%	0%	75%	0%
Wimmera Systems	81	57%	0%	1%	17%	25%
SWSCA Medium Risk						
Loddon River (Laanecoorie)	8	88%	0%	0%	12%	0%
McCallum Creek	108	78%	17%	1%	0%	4%
St Enoch Spring	4	25%	50%	0%	25%	0%
Wimmera Systems (Malakoff Creek)	12	50%	17%	17%	8%	8%
Wimmera Systems	4	50%	0%	0%	25%	25%
SWSCA High Risk						
McCallum Creek	25	88%	8%	0%	0%	4%
Wimmera Systems (Malakoff Creek)	21	71%	5%	0%	5%	19%
Other						
High Risk Unsewered Townships	218	70%	8%	4%	4%	13%
No Access SWSCA	60	0%	0%	0%	0%	100%
Other	21	90%	5%	5%	0%	0%
TOTAL	**792**	**66%**	**8%**	**2%**	**5%**	**19%**

4.2 Wastewater township profiles

Pyrenees Shire has four townships with reticulated sewerage available - Avoca, Beaufort, Snake Valley, and Waubra. These sewerage systems are within sewer districts managed by CHW. The systems in Snake Valley and Waubra are smaller and more limited in coverage.

Sewered Townships

Avoca	85% properties are connected or able to connect to reticulated sewerage.
Beaufort	73% properties are connected or able to connect to reticulated sewerage.
Snake Valley	38% properties are connected or able to connect to reticulated sewerage.
Waubra	43% properties are connected or able to connect to reticulated sewerage. All properties within the township and surrounding area are located within McCallum Creek SWSCA.

Unsewered Townships

The remaining areas of the shire are unsewered with the townships of Amphitheatre, Landsborough, Moonambel, Raglan, and Redbank, identified as high-risk townships and monitored on a five-yearly inspection cycle implemented through the 2015 DWMP.

The townships of Evansford and Lexton are also unsewered and are monitored according to the SWSCA inspection cycles based on individual property risk levels as outlined in the 2015 DWMP.

Table 3: Total Inspections and Compliance in Unsewered Townships 2015 – 2023

Township	Compliant	Marginal	Non-Compliant	No System	No Access	Total
Amphitheatre	27	14	1	1	1	44
Landsborough	49	0	4	1	13	67
Moonambel	31	2	1	6	2	42
Raglan	23	3	1	0	7	34
Redbank	24	1	1	0	6	32

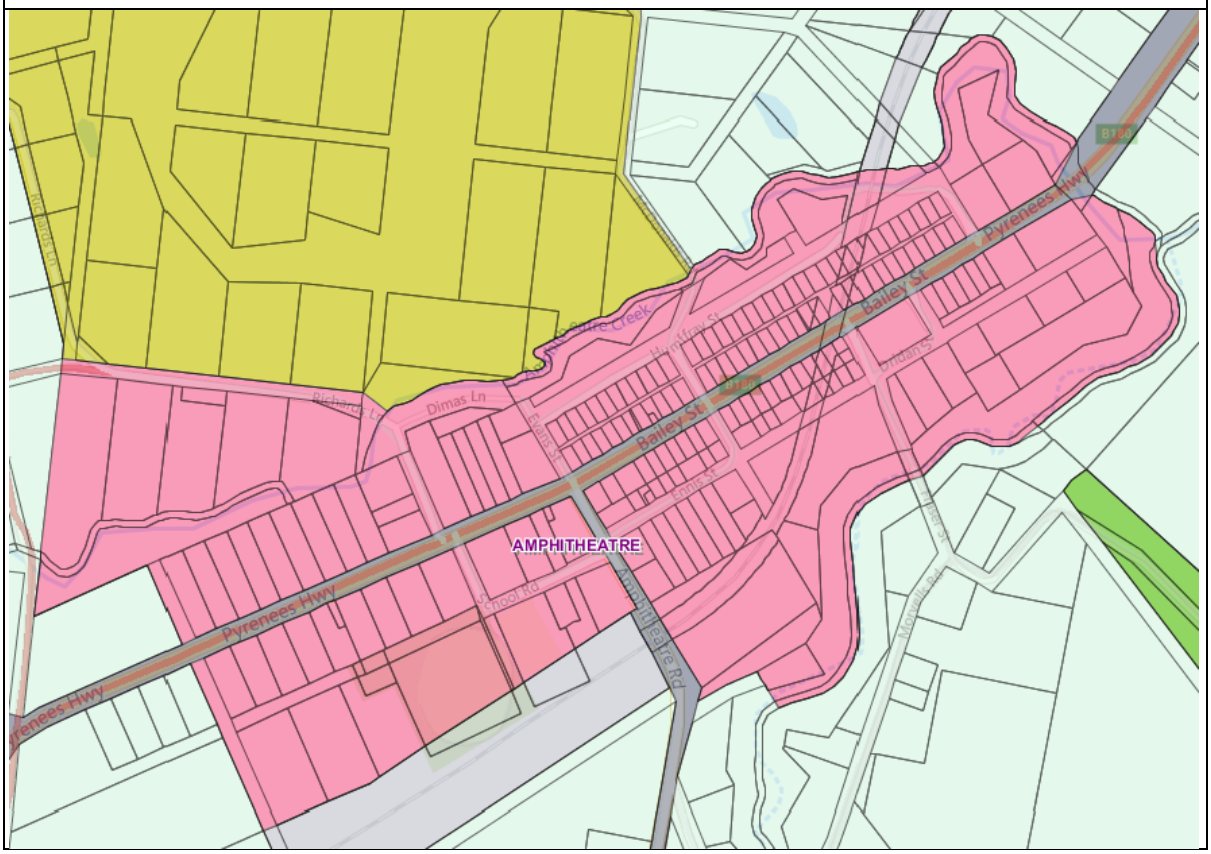
The following section provides details of the OWMS situation in the unsewered township areas.

AMPHITHEATRE

Amphitheatre is high-risk unsewered township with 46 properties monitored every 5 years as part of the high risk unsewered township inspection program.

Inspection data from the monitoring program reports that:

- 61% of systems were compliant.
- 32% had minor problems to address.
- 2% were non-compliant.
- 2% no system was present at property.
- 2% no access to property.



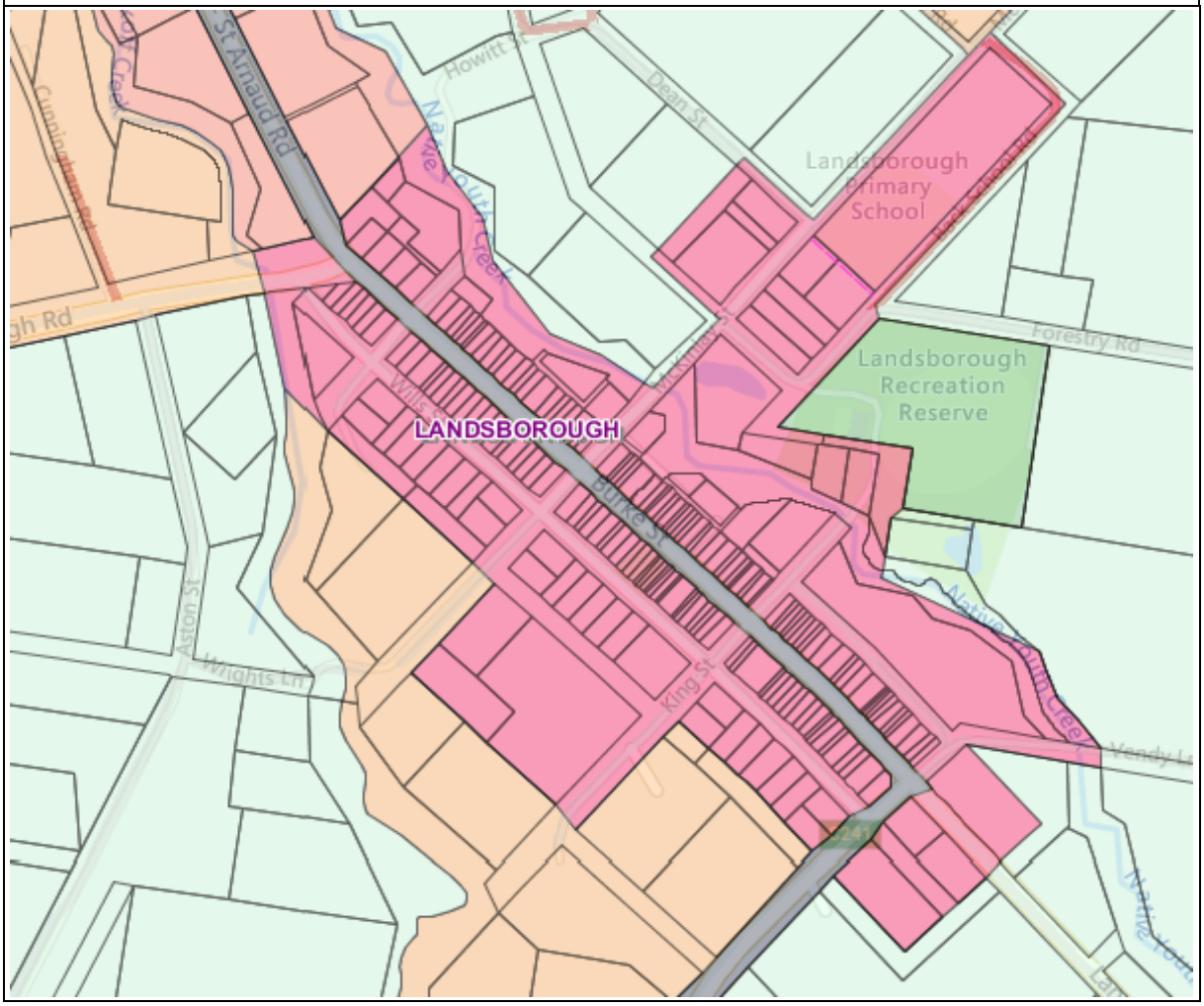
Planning Zone	Properties to be inspected
TZ - Township Zone	45 properties
FZ - Farming Zone	1 property
PCRZ - Public Conservation and Resource Zone	0 properties
RCZ - Rural Conservation Zone	0 properties
TRZ1 - Transport Zone 1-State Transport Infrastructure	0 properties

LANDSBOROUGH

The entire township of Landsborough is located within Wimmera Systems SWSCA and is also categorised as a high-risk unsewered township in the 2015 DWMP.
There are 57 properties monitored within the township area every 5 years and properties in the surrounding area are also monitored according to the SWSCA inspection cycles based on individual property risk levels.

Inspection data from the monitoring program reports that:

- 73% of systems were compliant.
- 6% were non-compliant.
- 1% no system was present at property.
- 19% no access to property.



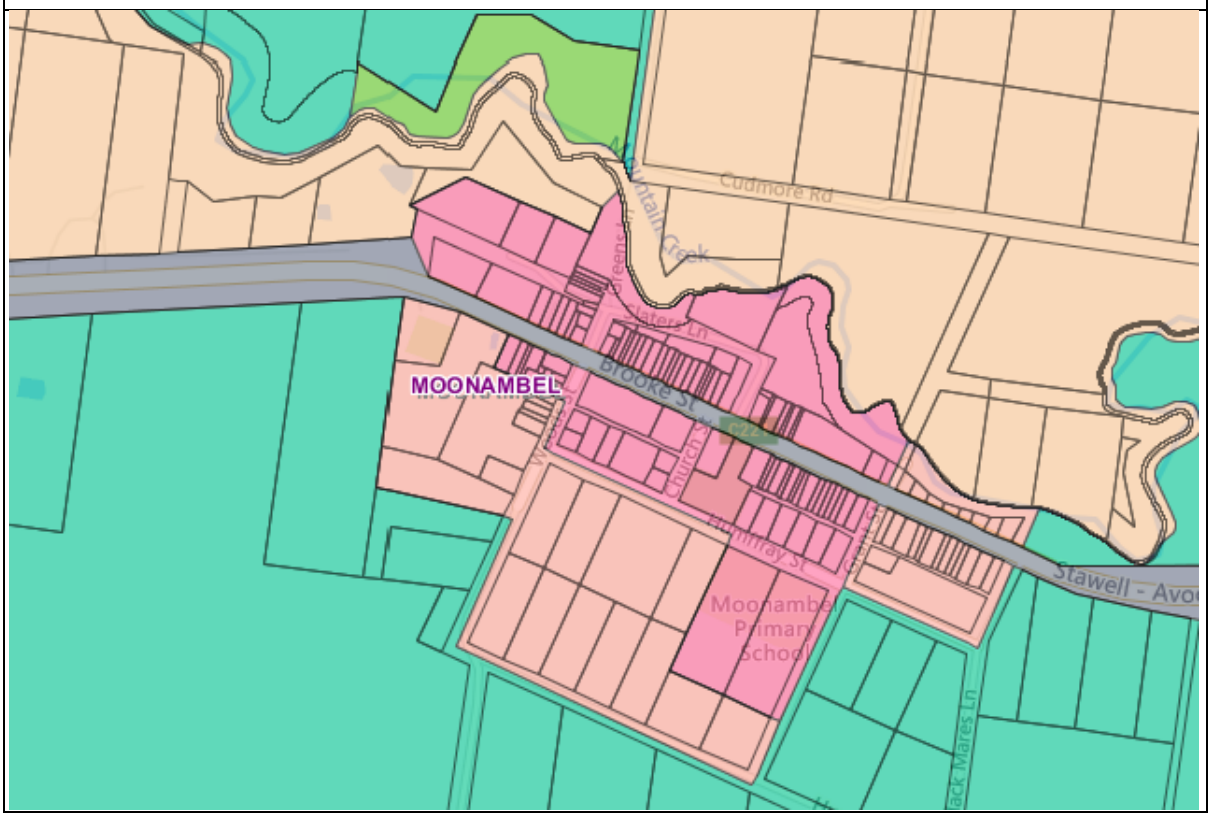
Planning Zone	Properties to be inspected
TZ - Township Zone	57 properties
FZ - Farming Zone	0 properties
RLZ - Rural Living Zone	0 properties
PPRZ - Public Park and Recreation Zone	0 properties
LDRZ - Low Density Residential Zone	0 properties

MOONAMBEL

Moonambel is a high-risk unsewered township with 40 properties monitored every 5 years as part of the high risk unsewered township inspection program.

Inspection data from the monitoring program reports that:

- 74% of systems were compliant.
- 5% had minor problems to address.
- 2% were non-compliant.
- 14% no system was present at property.
- 5% no access to property.



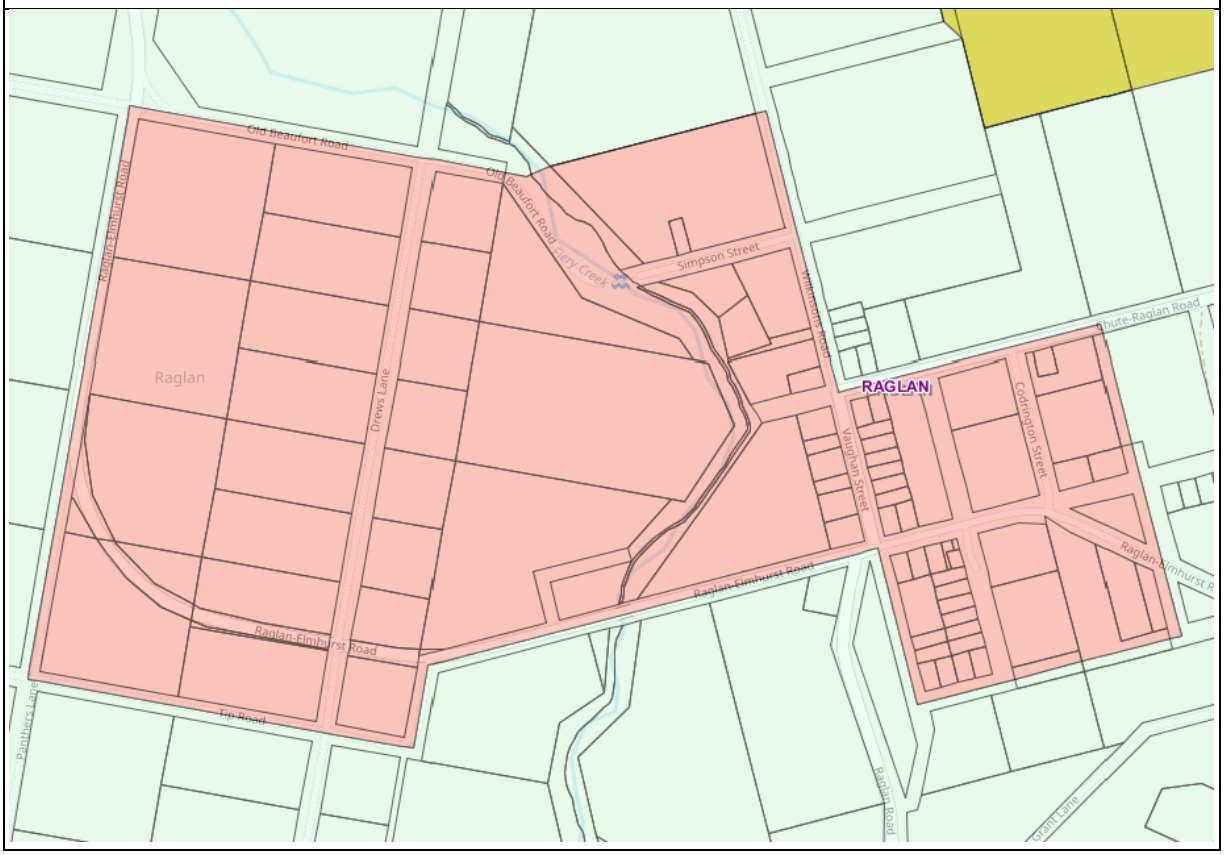
Planning Zone	Properties to be inspected
TZ - Township Zone	23 properties
LDRZ - Low Density Residential Zone	12 properties
RLZ - Rural Living Zone	3 properties
RAZ - Rural Activity Zone	2 properties
PCRZ - Public Conservation and Resource Zone	0 properties
TRZ2 - Transport Zone 2-Principal Road Network	0 properties

RAGLAN

Raglan is a high-risk unsewered township with 24 properties monitored every 5 years as part of the high risk unsewered township inspection program.

Inspection data from the monitoring program reports that:

- 68% of systems were compliant.
- 9% had minor problems to address.
- 3% were non-compliant.
- 21% no access to property.



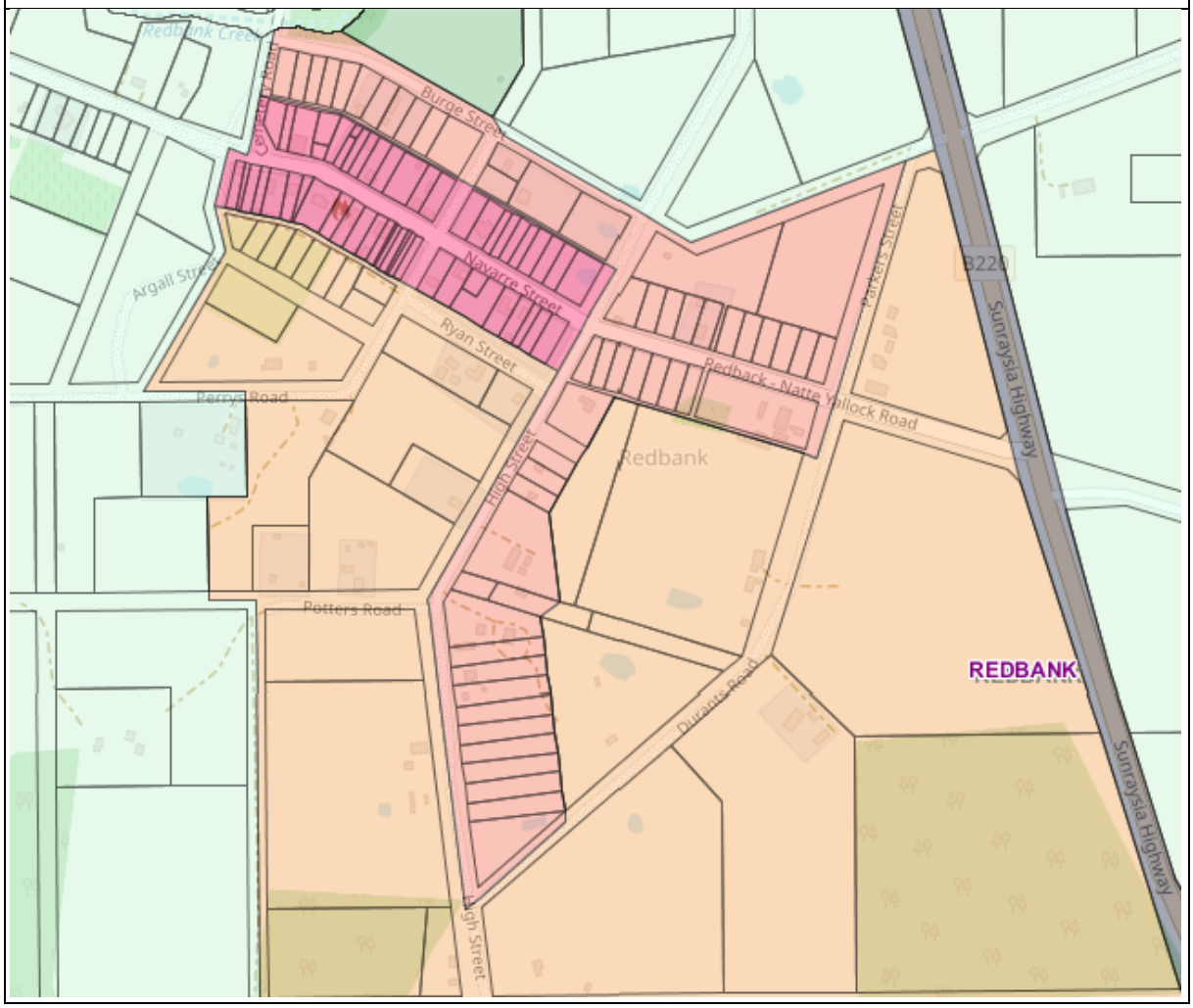
Planning Zone	Properties to be inspected
LDRZ - Low Density Residential Zone	22 properties
FZ - Farming Zone	2 properties
RCZ - Rural Conservation Zone	0 properties

REDBANK

Redbank is a high-risk unsewered township with 32 properties monitored every 5 years as part of the high risk unsewered township inspection program.

Inspection data from the monitoring program reports that:

- 75% of systems were compliant.
- 3% had some minor problems to fix.
- 3% were non-compliant.
- 19% no access to property.



Planning Zone	Properties to be inspected
TZ - Township Zone	16 properties
RLZ - Rural Living Zone	5 properties
LDRZ - Low Density Residential Zone	8 properties
FZ - Farming Zone	3 properties
PPRZ - Public Park and Recreation Zone	0 properties
TRZ2 - Transport Zone 2-Principal Road Network	0 properties

4.3 Risk Assessment

Special water supply catchment area (SWSCA)

The risk assessment methodology used to categorise risk level for properties with OWMS within SWSCA has been carried over from the previous plan. The method uses a detailed risk-based mapping approach based on the assessment methodologies developed and field tested through the Mansfield Shire DWMP pilot project (*Edis algorithm – refer* ***Appendix 3***).

A broad scale catchment wide analysis uses a three-tiered assessment method, with the following three key factors mapped and overlayed to identify the areas of high, medium, and low risk of causing adverse impacts on potable water quality utilising existing GIS data:

- Distance to reservoir or potable water off-take point
- Soil type
- Land slope

These factors were assessed using the following data layers from Councils GIS system:

- Accurate 10 metre contours
- Mapping the boundaries of the potable water supply catchments
- Tri-level waterway hierarchy data for rivers, creeks, and unnamed waterways
- Utilisation of the currently available soil type data from the Australian Soil Science database layer

The overall catchment wide risk ratings were then determined using the following scale and formula:

- Low risk rating = 1
- Medium risk rating = 2
- High risk rating = 3

FORMULA: *Overall minor catchment risk = (Distance to reservoir or potable off-take point risk rating x 2) + slope risk rating and soil risk rating*

Risk Factor	*Low (1)*	*Medium (2)*	*High (3)*
Distance to reservoir or Potable water offtake Point (km)*	> 15 km	*2 – 15km*	*< 2 km*
Slope	Grid points with median slopes <_ 10%	Grid points with median slopes 10 - 20 %	Grid points with median slopes > 20 %
Soil Type	Chromosols Ferrosols Dermosols	Vertosols Kurosols Kandosols Rudosols	Anthroposols Organosols Podosols Hydrosols Sodosols Calcarosols Tenosols

Source: Mansfield Shire Domestic Wastewater Plan Pilot Project

Using the above parameters, the following scoring was assigned to determine the overall risk category for properties within SWSCA:

- Very low risk catchment = overall score between 1-4
- Low risk catchment = overall score between 5-6
- Medium risk catchment = overall score between 7–9
- High risk catchment = overall score of 10 or more

The only change to the risk assessment in this plan is the introduction of a 'Very low risk' category for properties with a risk rating below 5 that were omitted from the previous plan.

Example risk calculation:

Distance to reservoir or potable off-take point risk rating *is >15km – Score = Low Risk (1)*
Slope risk rating *is Grid points with median slopes 10-20% = Medium (2)*
Soil risk rating *is Anthroposols = High (3)*
Overall minor catchment risk *= (1 x 2) + 2 + 3*
Rating *= 7 (Medium Risk)*

Land Capability Assessments

A Land Capability Assessment (LCA) is a report prepared by a qualified assessor to determine if a proposed development can sustainably contain all treated wastewater onsite, within allotment boundaries. An LCA may need to be submitted to Council as part of the wastewater system, planning or building permit application process.

The LCA should provide results of analysis and recommendations on:

- One or more options of the type of wastewater system that could be used;
- One or more acceptable methods of applying the effluent to the land, including how the land may need to be prepared or protected; and
- Ongoing management required to ensure proposed system operates within manufacturer specifications.

The LCA should refer to the:

- The Victorian Land Capability Assessment Framework (2nd Edition 2014);
- EPA Guideline for onsite wastewater management (2024);
- Australian Standard 1547 (2012), Onsite Domestic Wastewater Management;
- EPA Information Bulletin: Land Capability Assessment for Onsite Domestic Wastewater Management, Publication 746.1 (2003); and
- Local climate data from the Bureau of Meteorology (BOM).

For new developments, an LCA is always required if the works are located within a SWSCA area and will generally be subject to a planning permit.

Other unsewered properties

For properties not within SWSCA the following Lot Risk Assessment and Land Capability Requirements are considered appropriate to mitigate the risk of OWMS. Councils EHO will

consider the below factors in evaluating the risks associated with the installation of an individual wastewater system for a new development:

- Lot size
- Proximity to watercourse and surface/ground waters
- Flooding constraints (identified from existing planning and flood GIS layers)
- Soil type
- Slope

The assessment of the above factors will determine the need and requirements for an individual LCA to be provided. If the development required a planning permit, an LCA may have been required as part of the process. All LCAs are required to be prepared in accordance with the minimum standards outlined within the EPA Guideline for onsite wastewater management and AS/NZS 1547:2012. The Guideline provides scope for Councils EHO to determine what constitutes a satisfactory LCA.

Updating Risk assessment methodology

To update the risk assessment methodology, a case study for a specific area is required. Council would need to investigate the cost, resources, and benefits of undertaking a case study of an area within the Shire to determine whether it is viable to update the risk assessment model to the newly developed EPA/DEECA framework. A review would also be required to determine if Council has the required datasets available to effectively populate the risk calculation spreadsheet to inform the risk assessment process.

Community awareness of onsite wastewater management obligations and risks

The EPA's GED applies to all residents and property owners, requiring adequate maintenance of systems to protect water quality, the natural environment and public health. A lack of education and community awareness is a risk that needs to be addressed. Residents and properties owners are often unaware of their obligations to properly maintain onsite wastewater management systems.

5. Implementation

5.1 Monitoring and compliance program

Council will undertake an ongoing inspection program of existing OWMS in areas where they pose the greatest risk to the environment and public health. These areas are identified as declared SWSCA and high-risk unsewered township areas, discussed more specifically below.

Declared SWSCA

A total of 689 OWMS have been identified within the SWSCA. Figure 1 on page 8 shows the SWSCA risk map derived from Council's Spectrum Spatial mapping software. The number of systems in the SWSCA has been broken down in Table 4.

Table 4: Number of onsite wastewater systems identified in each SWSCA area.

SWSCA area	Very Low Risk 1-4	Low Risk 5-6	Medium Risk 7-9	High Risk 10+	TOTAL
Avoca Town Water Supply	0	0	0	0	0
Fiery Creek Tributaries (Beaufort)	0	0	0	0	0
Forest Creek (Amphitheatre)	0	0	0	0	0
Loddon River (Laanecoorie)	0	293	10	0	303
McCallum Creek	0	16	83	6	105
Musical Gully and Troy Reservoirs (Beaufort)	0	0	0	0	0
Redbank Creek (Redbank)	0	0	0	0	0
St Enochs Spring (Skipton)	0	0	5	0	5
Trawalla Creek	103	0	0	0	103
Wimmera Systems	132	16	0	0	148
Wimmera Systems (Malakoff Creek)	0	0	15	10	25
TOTAL	235	325	113	16	689

We have established there are potentially more properties to be added to council's database in the Wimmera Systems – Very low risk category. Work will continue throughout the implementation of this new plan to identify and update the database to include these properties.

It is also identified that there are 57 wastewater systems located in Landsborough township that are included in the high-risk unsewered township category for monitoring purposes but are also within Wimmera Systems – Very low risk SWSCA. These properties will continue to be monitored under the high-risk unsewered township category as originally set out in the 2015 DWMP.

Any new system installed within the SWSCA will be added to the database and the appropriate inspection schedule as required.

<u>Action 1</u>: Monitoring and compliance inspections - SWSCA
High risk Maintain annual inspections for 16 high-risk SWSCA properties.

Medium risk Maintain 3 yearly inspection cycle for 112 Medium-risk SWSCA properties (37 inspections per year).

Low risk Maintain 5 yearly inspection cycle for 325 properties SWSCA properties (65 inspections per year).

Very Low risk Add 235 newly identified SWSCA properties rated very low risk to inspection cycle incrementally over a five-year period (at a rate of 10 extra properties per year)

TOTAL 128 Annual Inspections in first year, 138 in second year, 148 in third year, 158 in fourth year – reaching 165 annual inspection goal at 5 years.

High-risk unsewered township areas

A risk-based monitoring program for existing septic tanks within the unsewered townships considered to be of highest risk will continue over the five-year time frame of this plan. Continued monitoring of these systems will allow Council to gauge the compliance and failure rates over time to ensure risk to public health and the environment is minimised.

The number of existing systems within each township has been updated since the previous plan based on updated data from Council's wastewater database:

- Amphitheatre – 46 systems
- Landsborough – 57 systems
- Moonambel – 40 systems
- Raglan – 24 systems
- Redbank – 32 systems

Any new systems installed in these township areas will be added to the database and the inspection program as required.

These township areas are considered high-risk due the following risk factors:

- No Permit to Install or Certificate for Use records exist on file for many properties.
- Systems are often older than 25 years of age.
- Many systems are located within 100 metres of a waterway.
- Due to small lot sizes, some existing systems currently discharge effluent off-site, potentially impacting public health.
- A large number of systems in close proximity increases the risk to public health and environment if failure occurs.

Requirements for further on-going inspections will be determined as part of the five-year review of the plan.

Action 2: Monitoring and compliance inspections - High-risk unsewered townships.

199 systems identified in this category - each system to be inspected once every 5 years.

TOTAL 40 Annual Inspections in High-risk unsewered townships

5.2 Inspection scheduling and staff resources

Based on experience from the implementation of the previous plan, work needs to be undertaken to improve the scheduling process for inspections.

Council's current wastewater database has limitations in its ability to create reports specific to when properties are due for inspections. To address this Council aims to:

- Make the required changes to database records where no inspection has been recorded to ensure that a future inspection can be scheduled.
- Investigate if use of excel spreadsheets to assist with inspection scheduling is the best option. A suitable software system should be implemented to address this.
- Resource further administrative support to manage the inspection schedule including the process of sending out letters and surveys for properties due for inspections and to assist EHOs in arranging inspection bookings.

Council also needs to ensure EHO staff resources are funded adequately to allow for an increase in the compliance and monitoring inspections required in Action 1 and 2.

Action 3: Improve inspection scheduling process and ensure staff resources adequate

5.3 Risk assessment framework

Whilst the existing risk mapping of the SWSCA will be maintained initially, Council will undertake work to update to the new risk assessment framework.

- Undertake project costing and data analysis to determine if Council has appropriate datasets to support the change.
- Conduct a case study using the updated risk framework for Waubra and compare the differences with the current risk levels. If appropriate, continue with a case study to undertake the same for Evansford and Lexton.

Bore field areas risk assessment:

- Consult with Water Corporations to determine the significance and risk level for all the bore field areas and what role Council should play in their management.
- Assess the risk associated with onsite wastewater systems in proximity to ground water bore field recharge areas.

- Add all the bore field areas to Council's Spectrum Spatial Health layer map.

Action 4: New risk assessment framework and risk mapping
Action 5: Bore field areas risk assessment

5.4 Database maintenance and improvements

Council will implement the following tasks to ensure that the wastewater database is accurate and current.

- Implement a weekly automatic update process to synchronise property owner changes from Council's rates database into the wastewater database.
- Audit and maintain the database to ensure daily synchronisation with Council's Spectrum Spatial mapping software is valid for all records.
- Check the database annually for expired Permits to Install, follow-up and archive any permits that did not go ahead.

Database improvement work that will require additional staff resources to achieve includes:

- Setup all wastewater systems on database. With consideration to the EPA's GED and for Emergency Management, Council's new OWMP should aim to manage existing and new systems throughout the entire municipality not just the SWSCAs and high-risk townships. Based on address and rating information there is potentially another 300 systems not yet recorded on our database.
- Audit database records with missing permit to install (PTI) or certificate for use (CFU) dates to determine if system was installed and remove duplicates and system entries where installations did not occur.
- Audit system types on Health Manager Wastewater to remove obsolete and duplicate system types and update to current EPA approved system types.
- Undertake audit of AWTS on our database to determine if the number of systems on Council's database is correct. There are some systems that currently have no PTI or CFU recorded.
- Explore opportunities to capture and record GPS coordinates and system information in the field.
- Re-categorise any properties in SWSCAs classified with a risk rating below 5 from current Low risk to create new risk category for Very low risk to allow for better scheduling and reporting.
- Develop a database and create a mapping layer to show where all the Section 173 agreements (*Planning and Environment Act 1987*) relating to wastewater are and determine if a reminder system is required to ensure property owners are adhering to agreements.
- Develop a database to capture properties that submit LCA's for future reference. Also consider undertaking a project to retrospectively capture LCA's into the database.

Action 6: Database Maintenance
Action 7: Database Improvements

5.5 Community Awareness and Engagement

Council will develop a communications strategy to increase awareness of onsite wastewater management systems, inspection requirements and property owner responsibilities to maintain their systems.

- Social media/ print media posts going out advising customers if their township or area is due to be inspected in the coming months.
- Increase community awareness about inspections and why they are occurring to improve the issues EHOs have had gaining access to properties.
- Improve wording on the letters sent out regarding inspections to achieve a better response rate.
- Develop a new residents pack so when property ownership changes in unsewered areas a new owner's information pack is sent out. Some residents have not lived in unsewered areas prior to moving to Pyrenees Shire and this pack could include information about the inspection process and how to care for their system.
- Maintain up-to-date information on Council's website in relation to OWMS, including links to EPA and information for both existing residents and potential new residents.

Council will engage with property owners with onsite wastewater systems to ensure they are aware of their obligations to:

- Submit de-sludge notifications every three to five years.
- For owners with aerated wastewater treatment systems (AWTS), quarterly maintenance reports from a qualified service provider are required.

Action 8: Community Education

5.6 Policy and Procedures

Council will formalise current internal processes to ensure new developments avoid the risk of approving any poorly designed or sited OWMS. This will include:

- Develop a Policy to oversee all procedures and processes relating to OWMP.
- Update existing procedure for onsite wastewater system permit assessment, including LCA requirements.
- Develop procedures for inspections and administrative tasks relating to OWMP.
- Develop procedure for database audit requirements.

Action 9: Develop policies and procedures to support implementation of OWMP

5.7 Reports and Auditing

Council's Environmental Health team and the Manager of Planning and Development will hold internal meetings every three months to review the implementation of the plan and progress of compliance inspections.

Stakeholder meetings will be held as required or annually to present the Annual Report and discuss implementation.

Annual report

An annual report will be prepared by Council's Environmental Health team to be presented to the EPA, Local Water Corporations and Catchment Management Authorities. Data to be included in the annual report:

- Number of permits to install and certificate for use.
- Compliance inspections results.
- Number of maintenance reports received.
- General progress against the actions of the plan.

Review Plan

A full review will be undertaken at an interval of no more than five years after adoption of OWMP and it will be updated as required. A report on the implementation of the OWMP will be published on Council's website.

Action 10: Annual reports
Action 11: Full Review

6. Action Plan

Council will implement a range of actions as outlined below to enable the effective implementation of this plan. Details of the action requirements were discussed in section 5. Implementation.

Action		Team / Partners	Timeline	Budget	Performance Indicator
1	**Monitoring and compliance inspections - SWSCA**	EH	Ongoing	Both existing and additional funding required	Annual inspection targets met.
2	**Monitoring and compliance inspections - High-risk unsewered townships**	EH	Ongoing	Existing	Annual inspection targets met.
3	**Improve inspection scheduling process**	EH, ICT	Ongoing	Both existing and additional funding required	Process improvement, time saved.
4	**New risk assessment framework and risk mapping**	EH, Planning, ICT, DEECA	2025	Funding required	Funding options considered and authorised. Case study completed.
5	**Bore field areas risk assessment**	EH, Planning, ICT, Local Water Corporations, CMAs	2025	Funding required	Funding options considered and authorised. Collaboration between agencies to determine risk assessment required.
6	**Database Maintenance**	EH	Ongoing	Existing	Process improvement, time saved.
7	**Database Improvements**	EH, Planning, ICT	2025	Funding required	Increased number of service reports.

8	**Community Education / Develop communications strategy**	EH, Comms	2024 and ongoing	Existing	Improved response to inspection requests. Increased number of service reports received.
9	**Develop policies and procedures to support implementation of OWMP**	EH	2024 and ongoing	Existing	Policies and procedures implemented and updated as required
10	**Annual report**	EH, Planning, Local Water Corporations, CMAs, EPA	Annual	Existing	Annual reports prepared and distributed with relevant stakeholders
11	**Full review every five years**	EH, Planning, Local Water Corporations, CMAs, EPA	2028	$25,000 every five years	Plan reviewed and updated every five years

Appendix 1

Legislation, guidelines, and strategic plans

New Legislation

- Environment Protection Act 2017 *(with emphasis on general environmental duty - GED)*
- Environment Protection Regulations 2021
- Environment Reference Standard 2021 (Water)
- Local Government Act 2020
- Building Regulations 2018
- Safe Drinking Water Regulations 2015
- Order for Obligations of managers of land or infrastructure (Urban stormwater management and On-site wastewater management) (EPA 2024)

New Guidelines

- Guideline for onsite wastewater management (EPA 2024)
- Guideline for onsite wastewater effluent dispersal and recycling systems (EPA 2024)
- Guidelines - Planning permit applications in special water supply catchment areas (DEECA 2024)
- Guidance for owners and occupiers of land with an onsite wastewater management system ≤ 5000 litres on any day (including septic tank systems) (EPA 2021)
- Regulating onsite wastewater management systems: local government toolkit (EPA 2022)
- Guidelines for Development in Flood Affected Areas (DELWP 2019)
- PPN55 Planning in Open Drinking Water Catchments (2023)
- Onsite wastewater management plans - Risk Assessment Guidance Final Report (Atom Consulting 2022)
- 2018 Victorian Auditor-General's Office Audit – Managing the Environmental Impacts of Domestic Wastewater
- AS/NZS 3500.1-4:2021 Plumbing and Drainage

New Council Strategic Plans

- Council Plan 2021-25
- Municipal Health & Wellbeing Plan 2021-25
- Municipal Emergency Management Plan 2020-23 Version 5.0
- Council Communications & Engagement Strategy 2022-2025

Existing/ongoing legislation and guidelines

- Water Act 1989
- Safe Drinking Water Act 2003
- Planning and Environment Act 1987
- Public Health and Wellbeing Act 2008
- Catchment and Land Protection Act 1994
- Crown Land (Reserves) Act 1978

- Building Act 1993
- Land Capability Assessment – Onsite Wastewater Management (EPA 2003)
- Victorian Land Capability Assessment Framework (Municipal Association of Victoria)
- Auditor General of Victoria (2006) Protecting our environment and community from failing septic tanks
- MAV Domestic wastewater management plan model 2005
- AS/NZS 1547:2012 Onsite Domestic Wastewater Management
- AS/NZS 1546.1-4 Onsite Domestic Wastewater Treatment Units
- Pyrenees Shire Planning Scheme

Revoked Legislation and Guidelines

- State Environmental Protection Policy (Waters) 2018
- Environment Protection Transitional Regulations 2021
- Environment Protection Act 1970
- EPA Code of Practice – Onsite Wastewater Management, Publication 891.4 (2016)
- Guidelines – Planning Permit Applications in Open, Potable Water Supply Catchment Areas (2012)

Appendix 2

Special Water Supply Catchment areas

Catchment and Land Protection Act 1994

Schedule 5—Special water supply catchment areas

Name of Catchment	Date of proclamation	Date of Govt. Gazette in which proclamation published	Area Sq. Km.
Avoca Town Water Supply	19/08/1975	27/08/1975	10
Fiery Creek Tributaries (Beaufort)	04/10/1988	12/10/1988	8
Forest Creek (Amphitheatre)	25/09/1990	26/09/1990	3
Loddon River (Laanecoorie)	24/09/1985	02/10/1985	1830
McCallum Creek	22/06/1982	30/06/1982	187
Musical Gully and Troy Reservoirs (Beaufort)	04/10/1988	12/10/1988	1
Redbank Creek (Redbank)	25/09/1990	26/09/1990	3
St Enochs Spring (Skipton)	25/06/1991	03/07/1991	79
Trawalla Creek	08/10/1963	16/10/1963	108
Tullaroop Reservoir	27/05/1980	04/06/1980	722
Wimmera Systems	02/09/1959	04/09/1959	4383

*Wimmera Systems (Malakoff Creek) - Declared Special Water Supply Catchment (formerly with Land Use Determination or Notice) on 16/04/1985 (not Gazetted).

Further information regarding the declared special water supply catchment areas and the background documents that supported their declaration:

- **Agriculture Victoria – Victorian Resources Online website** (Declared Special Water Supply Catchment Areas) (https://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/dwsc_areas)

Copies of the Proclamation Notices as published in the Victoria Government Gazette are available or can be searched online https://gazette.slv.vic.gov.au/search/advanced/

Appendix 3

Edis Algorithm and table used in the assessment of individual site risk.

Major Factors Influencing the Likelihood of Consequential Impacts of a Proposed On-Site Wastewater Management System

Risk rating for values of individual site factors (R)

Risk Factor	Low	Medium	High
Distance to Reservoir	15 km	2-15 km	<2 km
Soil type rating *	1	2	3
Distance to river	>80m	40-80m	<40m
Distance to stream	>80m	40-80m	<40m
Distance to drain	>40m	10-40m	<10m
Lot size	>10ha	2-10ha	0.2-2ha
Density (houses/km2)	<20/km^2	20-40/km^2	>40/km^2
LCA rating	1-2	2-3	3-4
System fail rate**	<5%	5-10%	>10%

Source: *Approaches for Risk Analysis of Development with On-site Wastewater Disposal in Open, Potable Water Catchments (Dr Robert Edis, April 2014)*

	Low (1)	Medium (2)	High (3)
Soil type	Chromosols Ferrosols Dermosols	Vertosols Kurosols Kandosols Rudosols	Anthroposols Organosols Podosols Hydrosols Sodosols Calcarosols Tenosols

Edis Algorithm weighs the following risk factors based on their potential impact on a potable water catchment:

(Rn) = (R Distance to reservoir/offtake point + **R** Soil type rating)
x **(R** Distance to river + **R** Distance to stream+ **R** Distance to drain + **R** Lot size)
+ **(**2 x **R** LCA**)**
+ **(**3 x **R** System fail rate X **R** Density))
/ (Divided by) **10**

The overall risk rating for an individual site is based on the following algorithm value:

Low Risk individual site rating: An Rn value less than 2.5
Moderate Risk individual site rating: An Rn value of 2.5 - 5
High Risk individual site rating: An Rn value greater than 5.

Source: *Mansfield Shire Domestic wastewater management plan pilot project (Mansfield Shire Council 2014)*

References

- Legislation, Guidelines and Strategic plans listed in ***Appendix 1***
- Pyrenees Shire DWMP 2015-2018
- Pyrenees Shire Planning Scheme
- Pyrenees Shire Spectrum Spatial Health and Planning mapping layers
- Pyrenees Shire Health Manager Wastewater Database and Reports
- Central Goldfields Shire DWMP 2023-2028
- Colac Otway DWMP Technical Document 2022
- Colac Otway DWMP Operational Document 2022
- Golden Plains Shire DWMP Final Report March 2023
- MAV Domestic Wastewater Management Plan Model 2005
- Mitchell Shire Onsite Wastewater Management Plan 2024-2029
- Mount Alexander Shire DWMP 2023-2027
- Northern Grampians Shire DWMP 2022-2027
- DEECA's Mapshare Vic tool – Special water supply layer (https://mapshare.vic.gov.au/mapsharevic/)