
Municipal Domestic Wastewater Management Plan





2017 - 2020

March 2018





Northern Grampians Shire Council
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Executive summary

The proper management of domestic wastewater in the Northern Grampians Shire is important to protect public health, and the environment moving forward. The management of domestic wastewater is particularly important in the increasingly dry conditions, with periods of excessive rainfall as well as an increase in demand to develop smaller allotments or subdivide land.

This *Municipal Domestic Wastewater Management Plan 2017-2020* (MDWMP) outlines the management strategies and actions planned by Northern Grampians Shire Council (Council) to address identified issues with wastewater management across our communities.

The MDWMP links to other Council Plans to ensure a coordinated and united approach to water management over the next few years.

Northern Grampians Shire Council looks forward to implementing this plan in partnership with stakeholders including the community to achieve the ultimate goals and objectives.

Part A: Strategy 2017 – 2020

1. Introduction

1.1 Domestic wastewater management

Domestic wastewater management is one of the public health functions delegated to local government under the Environment Protection Act 1970. Under the legislation Council is the permit authority for the installation and use of septic tank systems. There are also further responsibilities outlined in the State Environment Protection Policy (Waters of Victoria).

Poorly treated wastewater from onsite systems is a major pollutant, which threatens public health, the environmental value of surface and groundwater, and local amenity. Poorly managed domestic wastewater presents a threat to public health and the environment in addition to the associated economic and legal risks to councils. Council's Environmental Health Officers (EHO) implement the requirements of the legislation on behalf of Council.

As the licensing body, Council has a responsibility to manage risks, including the enforcement of legislation. The common strategy utilised to achieve this is the development and implementation of a Domestic Wastewater Management Plan. The development of such a plan requires integration with current Council strategies including environmental, public health, and stormwater management. There are several local, environmental, and resource policy issues that need to be considered as part of that planning process.

This plan is based on the 'Model Municipal Domestic Wastewater Management Plan July 2005', developed by the Municipal Association of Victoria.

1.2 Major elements (objectives)

In line with the terms of reference, the major elements of this plan are:

1. The identification of the key stakeholders within council and external organisations, and the development, implementation and review of domestic wastewater management within the municipality;
2. The assessment of the current wastewater situation with the development of a local wastewater management profile for the municipality;
3. An outline of the process involved in developing the plan; and
4. An outline of the management strategies and action plans to address priorities identified within specified timeframes.

1.3 Goal

The goal of the MDWMP is to identify actions, relevant stakeholders, and necessary timelines to manage domestic wastewater sustainably in the Northern Grampians Shire Council municipal area.

2. Background

2.1 Risks associated with domestic wastewater

Domestic wastewater is waste generated by household activities including toilet, bathroom, clothes washing and kitchen cleaning activities, and contains high levels of micro-organisms and chemicals that are capable of causing illness.

This waste is either transported away from the property for treatment (centralised sewerage system) or treated on-site via a domestic wastewater system such as a septic tank and effluent disposal trench.

Wastewater poses a public health, environmental, legal and economic risk. Review of the scientific literature available clearly establishes these risks including decisions made by the courts in relation to councils' responsibilities and their management of statutory duties. The risks associated with domestic wastewater have been summarised in the following table:

Type of risk	Risk summary
Public Health	<ul style="list-style-type: none">● Drinking water supplies becoming contaminated with chemicals, bacteria, protozoa and viruses from effluent as a result of poorly drained soils; small lot sizes; high usage; ageing septic tanks; and lack of proper maintenance of septic tanks. Illnesses that are contracted from effluent contaminated water include Gastroenteritis, Shigellosis, Giardiasis, Cryptosporidiosis and Hepatitis.● Recreational Water - Statistically significant risk of illness if people come into contact with contaminated water used for recreational purposes. Illnesses include ear and eye infections and respiratory infections.
Environmental	<ul style="list-style-type: none">● Septic tanks contribute high rates of nitrogen and phosphorus to water catchments due to surface runoff;● Septic tanks create direct bacterial contamination of the environment with ten times the amount of E coli (a disease producing bacteria found in animal/human waste) found in catchments near residential areas compared to catchments without residential areas;● The highest levels of faecal coliforms were found in catchments serving septic tanks compared to other disposal systems● A number of environmental contamination incidents have occurred in Australia and Victoria e.g. Benalla, Venus Bay.
Economic	<ul style="list-style-type: none">● From an economic perspective trying to alleviate years of environmental contamination is costly and involves overcoming a host of practical issues. Management should be focussed on prevention.

	<ul style="list-style-type: none"> ● In the event of contamination of ground and other waters there is the cost of advising residents, visitors and tourists to the area of the risk, managing community anxiety, and the indirect costs associated with the perception that the area is unsafe.
Legal	<ul style="list-style-type: none"> ● Council has quite clearly established statutory duties under the provisions of the Environment Protection Act 1970 and Public Health and Wellbeing Act 2008. ● Council has a duty to exercise its enforcement powers where it knows there is a breach of the legislation and there is a likelihood of injury. ● Two court cases have determined that a failure to act will be a breach of the duty of care owed by the Council and it will be liable in negligence for any damages caused by the breach of the duty of care

2.2 Regulatory framework

Council has a number of public and environmental health legislative requirements to administer however, there is specific legislation for the management of domestic wastewater management systems.

Environment Protection Act 1970

The management of domestic wastewater is regulated by Part IXB the *Environment Protection Act 1970*. This part applies to all septic tanks systems designed to discharge less than 5,000 litres per day and, amongst other things, requires a permit from council for the installation and use of systems, compliance with any permit conditions, and the maintenance of systems by the occupier. Council must refuse to issue a permit if the proposed septic tank system is not of a type approved by the Environment Protection Authority (EPA), contrary to any State environment protection policy or waste management policy, or does not treat all sewage and is located in a specific part of the municipality declared under section 53K. As can be seen domestic wastewater management is delegated to local government where the Council acts as the 'permitting' authority and approves the installation and use of the septic tank system. There is no statutory requirement for councils to monitor compliance after approvals have been issued although, as the permitting authority, council has a responsibility to monitor compliance.

An important change in statutory septic tank approval arrangements has seen the EPA approving the types of septic systems only that may be used in a domestic setting. Applicants for permits must now provide council with a certificate of conformity from a JAS-ANZ certified conformity assessment body (CAB) for their particular system brand or model, unlike previously when all systems required EPA approval. Greywater systems are yet to be ratified under the Australian Standard but interim

requirements are in place. As a consequence of the approval change the EPA no longer provide standard conditions for the installation and use of systems and council must develop their own standard conditions in line with the following Australian Standards:

1. Australian Standard AS/NZS 1546.1: On-site domestic wastewater treatment units — Part 1: Septic Tanks.
2. Australian Standard AS/NZS 1546.2: On-site domestic wastewater treatment units — Part 2: Waterless composting toilets.
3. Australian Standard AS/NZS 1546.3: On-site domestic wastewater treatment units — Part 3: Aerated wastewater treatment systems.
4. Australian Standard AS/NZS 1546.4 – Greywater Treatment Systems (noting that this standard is yet to be ratified).
4. Australian Standard AS/NZS 4130: Polyethylene (PE) pipes for pressure applications.
5. Australian Standard AS/NZS 1319: Safety signs for the occupational environment.
6. Australian Standard AS/NZS 3500 [set]: Plumbing and Drainage.
7. Australian Standard AS/NZS 1547: On-site domestic-wastewater management.

If required any land capability assessment must also be conducted to council's satisfaction.

State Environment Protection policies (SEPP)

Division 1 of the Act provides for the formulation and adoption of state environmental protection policies (SEPPs) by government and allows for the declaration of an environment protection policy

“... to be observed with respect to the environment generally or in any portion or portions of Victoria or with respect to any element or elements or segment or segments of the environment.”

Under the SEPP it is recognised that municipal councils play an important role in protecting surface waters through a number of responsibilities including stormwater, floodplain, drainage, and vegetation management, domestic wastewater management, local road management and land use planning.

Generally a SEPP identifies the beneficial uses of the environment to be protected, environmental objectives appropriate to those uses, and plans and programs for the attainment of those objectives.

The SEPP (Waters of Victoria) sets a statutory framework for the protection of the uses and values of Victoria's fresh and marine water environments.

The SEPP sets out requirements for managing domestic wastewater. Under this SEPP councils are responsible for ensuring new residential subdivisions are provided with reticulated sewerage at the time of subdivision or that the allotments are capable of treating and containing all domestic wastewater within the boundaries of each allotment.

The occupiers of premises have the responsibility to manage their system in accordance with the permit conditions and the EPA Code of Practice – Onsite Wastewater Management (2016). The SEPP also requires that owners of on-site domestic wastewater systems maintain their systems.

The SEPP also outlines the need for councils to:

- Assess the suitability of the land for an on-site system prior to approving a development;
- Ensure that sewerage is provided at the time of sub-division if the use of on-site systems would result in wastewater being discharged beyond allotment boundaries or would impact on groundwater beneficial uses;
- Ensure that permits are consistent with guidance provided by the EPA and the Code of Practice – Onsite Wastewater Management (Publication 891.4 July 2016). The Code is the guideline for best practice management of onsite wastewater systems and associated land capability assessment;
- Identify existing unsewered allotments incapable of preventing wastewater from being discharged beyond allotment boundaries and/or preventing impacts on groundwater beneficial uses; and
- Where relevant develop a domestic wastewater management plan.

The SEPP states:

It is important that all relevant municipal councils develop these plans to reduce the impact of failing on-site domestic wastewater management systems on water environments. Assessment of domestic wastewater systems could include site visits by municipal councils or could be limited to requiring owners of septic tanks to have them regularly checked (by a plumber) and then sending a certificate of compliance to the relevant municipality.

2.3 Links to other council policies

Council Plan 2017-2021

The 2017-2021 Council Plan was developed by Council in partnership with the community in the early months of 2017. It is a legislative requirement that a Council Plan be prepared when a new Council is elected.

There are two parts to the Plan: Part 1 outlines the strategic direction Council will take to improve its services and build the community and economy. Part 2, the Strategic Resource Plan, explains how Council will use its resources to achieve these objectives.

The Council Plan includes our objectives: -

1. Enhance lifestyles and communities;
2. Boost economic growth;
3. Provide sustainable infrastructure; and
4. Improve organisational effectiveness.

Municipal Public Health & Wellbeing Plan

The Northern Grampians Shire Council Municipal Public Health and Wellbeing Plan (MH&WP) is a key part of Council's Planning Framework. The plan is informed by local health and wellbeing data, the Victorian Public Health and Wellbeing Plan 2017–2021 and the Council Plan. The strategic directions of this plan will

lay the framework for the development of detailed implementation plans and service plans resulting in a collective impact approach to improving the health and wellbeing of the Northern Grampians.

The plan is produced to document Council's strategies and programs to protect and improve the health and wellbeing of the local community and is a key response to Council's responsibilities under the *Public Health and Wellbeing Act 2008*.

Sewerage to small towns

While centralised sewerage systems are considered best management practice, they are not practical in areas with a low population density. For this reason, there are many unsewered townships. Failing septic systems on small blocks, and an increasing density of septic installations have been identified as causing environmental and health problems.

The lack of sewerage also hampers the potential development of townships because new dwellings must contain all wastewater onsite, and this necessitates larger building blocks. It is recognised that each municipality needs to identify and develop priorities for the provision of either reticulated sewerage or alternative wastewater management options for small towns.

Goal Area	Objective	Strategy	Key Performance Indicator	Responsibility
Improvement in waste water management options for small towns	To improve wastewater management.	To apply for funding to develop Domestic Wastewater management plan for small towns without access to sewerage. On receipt of appropriate funding implement the plan.	Plan developed. Strategies implemented.	Director of Infrastructure and Environment

Northern Grampians planning scheme

The Northern Grampians Planning Scheme:

- must seek to further the objectives of planning in Victoria;
- include strategic plans, policy statements, codes or guidelines relating to the use or development of land;
- must specify separately state standard provisions and local provisions;
- any other provision which the Minister directs; and
- Allow for amendments.

Wimmera waterway strategy 2014-2022 – Wimmera Catchment Management Authority

The purpose of the Wimmera Waterway Strategy (WWS) is:

The WWS is the planning document for the management of rivers, creeks and wetlands (including lakes) in the region as required under the *Water Act 1989* and the Victorian Waterway Management Strategy (VWMS). It has been developed in consultation with a wide range of stakeholders and the broader community.

2.4 Stakeholder roles and responsibilities

2.4.1 Environment Protection Authority Victoria (EPA)

This document identifies high value and priority waterways and establishes long term goals for waterway condition underpinned by an eight-year regional work program listing a number of management activities to attract and direct government and philanthropic investment.

The document outlines council's roles and responsibilities in relation to on-site wastewater management; the development and implementation of an urban stormwater plan; and, the incorporation of waterway and catchment objectives, priorities and actions into the strategic and statutory planning processes.

The Environment Protection Authority (EPA) has the statutory responsibility of overseeing the management of domestic wastewater management in Victoria. The EPA sets the regulatory framework for wastewater and provides advice and guidance to support this framework.

2.4.2 Local Government

Councils' responsibilities for domestic wastewater management are:

- Ensuring new residential subdivisions are provided with reticulated sewerage or that the allotments are capable of treating and containing domestic wastewater onsite
- Issuing permits to install new wastewater management systems
- Refusing permits if the site is unsuitable and / or the area available for the treatment and disposal of effluent is not sufficient
- Refusing permits if the wastewater management system is not of a type approved by the EPA
- Issuing certificates to use wastewater management systems
- Monitoring the operation of existing wastewater management systems and the compliance with permits and certificates
- Submitting an annual return to the EPA, including information on:
 - The number and type of systems in use;
 - The number and type of systems installed during the year;
 - Whether these systems have off-site discharge or contain on-site;

- Details of assessments for any permits for systems with off-site discharges which have been issued; and
- Identifying townships where reticulated sewerage or an alternative sewerage system should be installed.

2.4.3 Water authorities

Water Authorities are responsible for the provision of water and reticulated sewerage services. GMMWater is the authority responsible for the provision of reticulated sewerage in the Northern Grampians Shire. There are 4 designated sewerage districts within the Northern Grampians Shire that GMMWater manages which include Stawell, St Arnaud, Halls Gap and Great Western. Section 173 of the *Water Act (1989)* sets out the function of GMMWater within these districts. GMMWater has developed a 'Water Plan 2013 – 2018'.

2.4.4 Landholders

A land holder's responsibilities are:

- Connecting to a sewerage system where it is available (unless otherwise exempted);
- Obtaining a permit to install a wastewater system before a building permit is issued and installing a system;
- Obtaining a certificate to use the systems once installed;
- Obtaining a permit to make alterations to an existing wastewater management system;
- Maintaining existing systems, in accordance with the conditions of the Approval to use the Wastewater System; and
- Ensuring effluent absorption area remains clear from development, unsuitable vegetation, impermeable surfaces etc.

2.4.5 Catchment Management Authorities

There are three Catchment Management Authorities (CMAs) in our municipality being the Wimmera CMA, the North Central CMA and the Glenelg Hopkins CMA. The prime responsibilities of the CMAs are the health of land and water in their catchment region and promoting sustainable and productive land use practices.

3. Development of domestic wastewater management plan

3.1 Development process

This MDWMP has been prepared using guidelines prepared by the Municipal Association of Victoria (MAV) and incorporated into the MAV Model Municipal Domestic Wastewater Management Plan.

Council undertook to investigate and document domestic wastewater management processes in the Shire and to provide guidelines for improving the management process.

The process for completing this MDWMP generally involved the tasks listed below:

- Review of existing systems and processes for domestic wastewater management.
- Review of the characteristics of the locality including the location of existing septic tanks, identification of planning zones and growth areas, and the identification of areas of environmental, heritage, cultural and recreational value.
- Risk assessment of the potential for domestic wastewater to impact on public health and the environment, especially in the areas of special value identified in the previous step.
- Development of specific management strategies for areas where there were domestic wastewater management risks identified.
- Development of action plans to guide the development and implementation of the management strategies.
- Compilation of the results of each process into this MDWMP.

3.2 Council's current management of domestic wastewater

Council Environmental Health Officers manage domestic wastewater under the provisions of the *Environment Protection Act 1970*, the EPA Septic Tanks Code of Practice and EPA Certificates of Approval. There are generally four situations where Council manages domestic wastewater:

3.2.1 Planning permit application

- Planning Department refers application to Environmental Health as part of the internal management of applications requiring referral for comment (i.e. new dwelling, house extension, subdivision).
- Under Clause 65.02 of the Victorian Planning Provisions, a land capability assessment addressing onsite wastewater management should be conducted as early as possible in the planning phase.
- Under Clause 66.02-5 of the Victorian Planning Provisions an application to use, subdivide or consolidate land, to construct a building or construct or carry out works, or to demolish a building or works that are within a Special Water Supply Catchment Area listed in Schedule 5 of the Catchment and Land Protection Act 1994 and which provides water to a domestic supply must be referred to the relevant water board or water supply authority pursuant to Section 55 of the Planning and Environment Act 1987 as a determining authority.
- Environmental Health Officer assesses application and inspects site as necessary.
- General conditions and comments for the site are formulated. These may include requirements to connect to sewer, to undertake a land capability assessment (LCA), that the wastewater must be treated before disposal, the general buffer distances from significant features such as waterways or that the site is unsuitable for wastewater disposal. Further information may be sought from the applicant that they can demonstrate

that land is suitable for development by providing an LCA.

- The Planning Permit is either approved with conditions or refused.

3.2.2 Building permit application

- Building Department advises applicant that permit to install wastewater system is required with application for building permit and directs to Environmental Health Department for further advice.
- Wait for advice from Environmental Health that permit to install a wastewater system or consent and report has been issued and Building Permit can be issued.
- Occupancy Certificate issued once 'Approval to Use a wastewater system' is ready for Issue.

3.2.3 Wastewater system permit process

- The application to install a wastewater system is received and the written application assessed.
- An LCA will be required to be submitted in all circumstances where the land is in a special water supply catchment used for potable water supply (see item 3.2.1).
- A site inspection is carried out by the Environmental Health Officer either with or without the applicant or land owner.
- The proposed system is assessed as to whether it conforms to all legal requirements and whether it is suitable for the area and its proposed use.
- A 'Permit to Install' with conditions is issued or the permit is refused.
- Inspections are carried out during installation as requested by the plumber or applicant before backfilling.
- An 'Approval to Use' the system is sent to the applicant either:
 - a) After the final inspection is completed and all conditions of the permit have been met, or
 - b) After written notification has been received from the plumber installing the system that the system is compliant to use, or
 - c) Further maintenance conditions are issued with the Approval to Use

3.2.4 Failing wastewater management system

- A complaint or request for advice is received concerning a failing wastewater management system.
- The Environmental Health Officer assesses the situation, gives advice or if required, issues an order to abate the nuisance and repair the wastewater management system.

4. Implementation

The implementation of the MDWMP will be the responsibility of Environmental Health team in

consultation with the Director of Infrastructure and Environment with approval from council.

5. Evaluation

The Coordinator Development Services shall evaluate, assess and prepare an internal report on the actions undertaken at 12 months intervals.

6. Domestic wastewater profile

Northern Grampians Shire is located in Central West Victoria, and spans over 5,918 square kilometres. The area is well known for a mixture of industries such as textiles, gold mining and broadacre cropping. The Grampians National Park is also a popular tourist destination with over 1 million visitors each year. The Northern Grampians Shire is driven by a highly skilled and multidisciplinary workforce. Amongst the frontrunners of the region, it is responsible for environmentally sound and innovative growth and development particularly in grain, sheep and viticulture. The shire also fosters a range of professionals in textiles, health, hospitality and trade.

Prominent industry sectors include wool, broad acre grazing, cereal cropping, viticulture, olive growing, tourism, manufacturing, textiles, retail trade, health and community services, landcare and catchment management and professional services.

Industry is generally concentrated in the key townships of Stawell and St Arnaud, where retail and commercial operations are mainly of a local service nature. These centers service the region's needs for shopping, business and commercial services and host other activities including brick making, meat processing, steel fabrication, feed production, supply and service of farm machinery and small service industry.

The Grampians region encompasses a diversity of microclimates and environments and a very livable climate with four distinct climatic conditions. The environment comprises of rich fertile soils, dryland areas, mountain ranges, large scale open plan pastoral areas, parks and lakes.

6.1 Current population

Northern Grampians Shire comprises just over 11,471 residents living in 6,150 dwellings. Population rates are in a slight decline which reflects on the fact that there is little development occurring within the municipality.

The majority of the municipality's population resides in the major towns and villages of Stawell, St Arnaud, Halls Gap, Marnoo, Navarre and Great Western.

6.2 Residential development projection

Currently the municipality is experiencing a negative growth pattern. There are not any foreseeable high residential developments for the area.

6.3 Reticulated sewerage

The management and type of domestic wastewater treatment varies across the municipality. Larger townships of Stawell, St Arnaud and Halls Gap are serviced with reticulated sewerage. The town of Great

Western has some properties connected to town sewerage since 2014.

6.4 Septic tanks

Historically the management of domestic wastewater systems within the Northern Grampians Shire has been difficult. Local Councils are the regulatory authority for Domestic Wastewater Management. Councils have generally been limited by time and financial support from implementing effective MDWMP actions. Council has mainly focused on an approval scheme for new systems and a basic system monitoring program, as time permits.

Council has the following information on septic tank systems locally:

System Type	Number of systems on record
Septic Tank systems	273
Secondary treatment with sub surface irrigation	43
Secondary treatment with surface irrigation	6
Aqua Nova	3
Biocycle	30
Worm Farms	2
Other	37 (reed beds, root zones, sand filter, biolytix)

It is recognised that many existing septic systems within the area are several decades old and/or are located on properties/parcels that may be unsuitable for Domestic Wastewater Management. Existing systems may be undersized or have direct grey water discharge off-lot, in many cases approved by Council at the time they were installed. These systems can have an adverse impact on public amenity and these may cause a nuisance. Some septic tank systems can also cause pollution from effluent discharges into waterways downstream. The number of installations that are discharging off site (whether with or without approval) is currently unknown.

While it is now clear that such practices are no longer appropriate and may be creating unacceptable risks, it is acknowledged that many of these problems will take time to rectify. There are financial implications for owners who have a failing septic system and are required to complete upgrade works. New systems can be expensive and some owners may not have the finances to undertake works immediately, resulting in continuing system failures.

With this in mind, there is increasing pressure on all Councils within Victoria to improve Domestic Wastewater Management so that existing and future development does not have an impact on public health and the environment. Priority Towns Back in 2005, funds from the Victorian Water Trust were

utilised to conduct an evaluation of townships within the municipality without reticulated sewerage and water. From the preliminary assessments conducted on these townships further assessment of the three towns was undertaken to assist council to identify townships of highest risk.

Ranking of the townships was undertaken utilising the criteria documented in these matrices, taking into account the number of allotments and houses in a township, size of allotments, age of septic systems, soil characteristics and vicinity to a natural environment of significance. Consideration was also given to the level of complaints received in respect to offensive conditions and odours being created by wastewater, discharges to the streets and neighbouring properties.

A summary of findings is tabled below:

Town	Ranking		Threats
	Wastewater	Reticulated Water Supply	
Glenorchy	2	Untreated	Flood plain of Wimmera River, septic systems inundated by water during flooding. High Risk public health and stream contamination.
Great Western	1	Treated	Wimmera Catchment, Concongella Creek close, Small lot size, heavy clay soil very low permeability. Difficult to contain wastewater onsite. Reticulated sewerage has recently been provided in the area. Houses are currently in process of connecting.
Halls Gap (outside sewerage district)	3	Treated	Unsewered area of Halls Gap. Highly permeable sand. Feeds into Lake Fyans. Very wet after rain event. Properties located on the outskirts of Halls Gap do have bores on them which may create a potential threat to groundwater.
Marnoo	7	Untreated	Poor absorbing clay soils with little or no topsoil. Fairly flat area.

Navarre	6	Treated	Offsite discharges. Poor soil type, little absorption. The area is within the floodplain of Wattle Creek.
Stawell (outside sewerage district)	5	Treated	Unsewered area of township with offsite discharges. Clay soil. Rezoning of land for residential purposes outside of the sewered areas. Currently reticulated sewerage ends at the top of the rise in Darlington Road. The last four houses are not connected to sewer.
Stuart Mill	4	Untreated	Low lying township around Strathfillan Creek (Avoca River catchment). Water logged area in wetter months.

Council should continue to undertake further discussions with Water, EPA and Catchment Management Authorities to identify areas of significance and cluster areas, in particular around sewered districts, where impacts on the environment and public health will be greatest. The identification of these areas will enable further investigation of existing wastewater systems to be undertaken as a priority.

Part B: Action Plan

7. Strategies

The revised MDWMP priorities will be focused on the development of council's capacity to manage and monitor wastewater systems in order to discharge its obligations under the State Environment Protection Policy (Waters of Victoria) and therefore meet the expectations of other stakeholders reliant on council doing so.

7.1 Management approach

Council's management strategies for wastewater are informed by three factors:

1. Council's statutory duty
2. Council's capacity to undertaken wastewater management services
3. The risks posed by ineffective septic tanks systems

Council currently has limited capacity to undertake these activities and services require a range of resources including:

- the collection of appropriate data at the point source through an ongoing monitoring program, development of a domestic wastewater information management system,

and analysis of this information;

- review and development of operating policies and procedures,
- to ensure that the MDWMP is strategically linked to other Council plans, and;
- the development of, and access to, a range of information by owners of septic tank systems and other stakeholders.

7.2 Information management

There is a need to develop an accurate and complete septic tank system profile of the municipality that is integrated with Council's Geographical Information System (GIS).

Budgets for these strategies will need to cover the following:

- Resources to develop a register of systems, potentially including the development of a customer survey/response form and site inspections;
- Develop and utilise suitable GIS/database software, and;
- Council staff time to incorporate the register of domestic wastewater systems into the GIS database.

7.3 Wastewater policies and procedures

This MDWMP proposes the development of operational policies and procedures to ensure that Council has a consistent and transparent way of approaching all new installations and ensuring they are all in compliance with the legislation.

Compliance and enforcement strategies could include:

- Conditions on planning permits to install and maintain appropriate domestic wastewater systems.
- Requirements for regular and compulsory maintenance and inspection programs in specific areas.
- Requirements to connect to a sewer network where available.
- Introduction of a domestic wastewater charge or levy to cover the costs of domestic wastewater management and enforcement programs.
- Introduction of random inspection of domestic wastewater systems and audit of maintenance records.

These guiding documents will provide officers with workflows to approve systems and set out specific requirements relating to land size, capability and overlays. This will ensure that a consistent approach is taken and that all decisions made by Council officers are supported by approved organisational policies.

7.4 Compliance auditing and monitoring of septic tank systems

As the permitting authority Council needs to develop activities to ensure compliance with conditions on permits and other requirements on applicants/owners after the system has been installed. This is particularly critical in identified high risk areas. This consideration will need to include the options

available for resourcing these activities, and legislative constraints. These compliance activities need to be risk based.

A monitoring program will assist Council to gather data to ensure that all new installations and alterations to existing systems are compliant is a more efficient way of managing the risks associated with wastewater. All new applications, planning referrals and complaints are assessed against current legislation and landowners are provided details of what they are required to do in order to ensure the system is compliant.

Prior to determining if all onsite wastewater systems should be audited for compliance Council officers can determine the level of risk through the audit of a randomly selected sample of older onsite wastewater systems. The results of this audit will determine if Council should consider a 100% audit of systems within the municipality. Council may choose to consider the appointment of an officer to complete this project.

7.5 Community development and compliance

Although owners of septic tank systems have a legal responsibility under the *Environment Protection Act 1970* to comply with permit conditions, there is evidence that there is a need for ongoing education of owners.

These strategies focus on education and awareness to assist in managing the potential risks identified. These strategies are the most preferred as they are based on a foundation of encouragement and assistance to the customer rather than either capital cost or enforcement of regulations and permit conditions.

To ensure systems are being installed in accordance with the relevant legislation and Australian Standards, communication and education for the community should be a key priority. The development of a suite of septic tank management information for landowners (website, newsletter, pamphlets) highlighting ownership responsibilities regarding Onsite Wastewater Management Systems may reduce the number of failing systems and minimise the impact to health and wellbeing and the environment.

Education and awareness strategies include:

- a. Extensions of existing guidelines for managing domestic wastewater in the form of information sheets or brochures covering topics such as new home ownership responsibilities.
- b. Reminder bulletins to undertake inspection and maintenance of systems which can be added to Council rates notices or other Council mail outs.

Budgets for the implementation of these strategies would need to cover the following:

- Council staff time to develop new information brochures;
- The dissemination of these education materials in line with Council's current policy around the use of information technology as a communication tool.

7.6 Planning Strategies

These strategies focus on planning processes within Council as well as the intra-agency processes. These strategies are aimed to clarify and thereby improve processes in relation to wastewater management.

This has become apparent in recent years where the demand to develop land and smaller blocks is higher than availability, leading to increased pressure to develop less desirable land.

Having clear planning processes in place will become increasingly important if dry conditions continue and the safe reuse of wastewater (including greywater) become critical issues.

Planning strategies include:

- a. Development of processes within Council and with external stakeholders to ensure effective wastewater management on all developments in unsewered areas.
- b. Development of approval process for wastewater management systems within a sewerage district.
- c. Approval process for wastewater management systems within water catchments.
- d. Management of developments outside but adjacent to sewer districts.
- e. Establishment of a consultative process for considering extending of sewerage district.
- f. Process for initiating new town sewerage scheme.

7.7 Strategic management and review

Council's other strategic documents will need to be considered to ensure that they reference this MDWMP and relevant legislation, where appropriate. This will provide currency to the new plan and ensure that consideration needs to be made to onsite wastewater management at a Strategic level.

This MDWMP will also be required to be reviewed on an annual basis as well as at the end of the life of the plan. This will ensure that all actions are being addressed and completed within the allocated timeframes.

8 Action planning

The development of an Action Plan ensures that there is accountability for the management strategies identified in this plan. The Action Plan involves the review of each management strategy to assign a priority for implementation, the nomination of a responsible person (whether they be Council staff or external agencies) who will champion the implementation of the strategy, the identification of key stakeholders who can assist in the implementation, the identification of budget/funding options, and a nominated completion or review date.

The action plan in line with the management strategies highlighted in the previous section.

- To develop and maintain a comprehensive wastewater management database;
- To develop a community engagement, education and information for the management of septic tank systems, and;
- To maintain currency of domestic wastewater management plan.

The priorities will be determined after further consultation with stakeholders.

Table 1- Action Plan - Domestic Wastewater Management

Year 1	Action Steps	Team / Partners	Due date:	Monitoring & Performance Indicators
<p>1. Strategy:</p> <p><i>Undertake an education campaign on the management, operation and maintenance of domestic wastewater systems</i></p> <p>Objectives:</p> <p>To reduce loading on septic tank systems and reach the designed age for system</p> <p>To increase owner's awareness of the importance of managing septic tank systems</p> <p>To improve compliance with permit conditions</p> <p>To prevent alterations exceeding the design capacity of existing approved systems</p> <p>Provide fair, accurate and accessible information on good wastewater management principles, practices and improvement options.</p>	<p>Develop a communication strategy</p> <p>Consultation with internal staff (customer service, communications)</p> <p>Develop information material – environmental lines</p> <p>Dissemination via dedicated website and hard copy materials</p>	EH Team	December 2017	Completion of communication strategy
	<p>Develop education program identifying acceptable reuse options available</p>	EH Team	June 2018	Better access to information by owners and other stakeholders
	<p>Develop education program highlighting residents' responsibilities and maintenance of wastewater systems (waterlogged areas), determining location of septic tank system</p>	EH Team	June 2018	Increased awareness of basic septic tank maintenance requirements and wastewater management issues.
	<p>Develop program of inspections for domestic wastewater management systems</p>	EH Team	December 2018	<p>Compliance audits conducted</p> <p>Improve compliance with relevant legislation and policy</p>

Year 1	Action Steps	Team/ Partners	Due date:	Monitoring & performance indicators
<p>1. Strategy:</p> <p><i>Improve the quality and quantity of wastewater related information captured.</i></p> <p>Objectives:</p> <p>Identify & collect the appropriate information required for all installed septic tank systems.</p> <p>Data capture processes to be reviewed to ensure efficiency of data entry and appropriate use of data fields for reporting and document processing purposes.</p> <p>Develop & maintain partnerships and reporting agreements with service agents to improve reporting accuracy and efficiency.</p>	<p>Maintain register of domestic wastewater systems in municipality</p>	<p>EH Team</p>	<p>June 2018</p>	<p>Accurate database of septic tank systems.</p> <p>Streamlined process to reduce administrative burden</p>
	<p>Use existing information about land types and locations of sensitive areas to identify high-risk management areas</p>	<p>EH Team</p>	<p>June 2018</p>	<p>Identification of suitable data sources for groundwater levels, soil types, effective transpiration rates and treatment ability to identify high-risk area.</p> <p>Improved data for strategic planning and decision making.</p>
	<p>Link database of wastewater system permits to GIS application</p>	<p>EH Team and GIS</p>	<p>December 2018</p>	<p>GIS map of septic tank systems in municipality</p>
	<p>Use GPS handheld device for recording location and attributes of new systems for display on GIS application.</p>	<p>EH Team and GIS</p>	<p>December 2018</p>	<p>Identification of exact location of septic tank systems using GPS technology</p>

Year 2	Action Steps	Team/ Partners	Due date:	Monitoring & performance indicators
<p>1. Strategy:</p> <p><i>To influence the regulatory framework in which Council must operate to manage wastewater and develop Council policy and procedures utilising available tools</i></p> <p>Objectives:</p> <p>Influence and assist Government agencies and other stakeholders to improve the regulatory framework within which Council operates.</p> <p>Alternative or innovative uses of existing legislative provisions to enhance wastewater management processes</p> <p>Develop Council wastewater policy through evidence based investigation.</p>	<p>Influence government agencies to better coordinate wastewater and water supply policy and legislation.</p>	<p>Executive</p>	<p>December 2019</p>	<p>Improved relationships with government agencies and potential funding bodies</p> <p>Improved capability to implement wastewater management initiatives.</p>
	<p>Seek the development and implementation of improved wastewater management legislation and guidelines.</p>	<p>Executive and EH Team</p>	<p>December 2019</p>	<p>Better coordination of policy and legislation to protect public health.</p> <p>Reduced impact on amenity.</p>
	<p>Where appropriate, standardise guidelines and processes with neighbouring Councils, and water authorities.</p>	<p>EH Team</p>	<p>February 2019</p>	<p>Better information for decision making and educational activities.</p> <p>Consistency in regulation across the region.</p>
	<p>Investigate funding options to undertake Land Capability Assessments of priority townships and implement findings into Council strategic and statutory policies and programs.</p>	<p>EH Team</p>	<p>June 2019</p>	<p>Improve service delivery.</p> <p>Improve compliance with relevant legislation & policy</p>

Year 3	Action Steps	Team/ Partners	Due date:	Monitoring & performance indicators
<p>2. Strategy:</p> <p><i>Plan for the long-term sustainability of townships through appropriate development controls of land and infrastructure.</i></p> <p>Objectives:</p> <p>Reduce risks through available mitigation remedies.</p> <p>Liaise with appropriate departments to ensure that planning and infrastructure proposals adequately address wastewater management needs for townships.</p> <p>Investigate alternative, community scale treatment systems for priority townships, and availability of funding</p>	Investigate health protection measures to address high-risk open and accessible contaminated storm water drains or ground waters were found.	EH Team and sustainability/ environmental team	June 2020	Improved relationships with government agencies and potential funding bodies Improved capability to implement wastewater management initiatives.
	Review Planning Scheme and other relevant Council policies to identify opportunities for improvements to existing wastewater management clauses and/or policies.	EH and Planning Team	December 2020	Better coordination of policy and legislation to protect public health. Reduced impact on amenity.
	Continue to investigate and update appropriate design standards for high risk townships so as to inform any future improvement plans.	EH and Planning Team	December 2020	Better information for decision making and educational activities. Consistency in regulation across the region.
	Develop clear policy guidelines for future developments within unsewered townships and for un-sewered allotments within sewerer townships.	EH Team and strategy team	June 2020	Better information for decision making.
	Investigate sustainable onsite wastewater treatment and water cycle management solutions in partnership with key stakeholders	EH Team	June 2020	Better coordination of policy and legislation to protect public health.

9. REFERENCES

Model Municipal Domestic Wastewater Management Plan, July 2005, Smartseptic solutions

<http://www.mav.asn.au/policy-services/environment/water/domestic-wastewater/Documents/Model%20municipal%20domestic%20wastewater%20management%20plan.docx>

Domestic Wastewater - Municipal association of Victoria

<http://www.mav.asn.au/policy-services/environment/water/domestic-wastewater/Pages/default.aspx>

Towards Better Onsite Wastewater Management in Victoria – Community Education Series, Loddon Shire, Latrobe University and EHPA

<https://ehpa.org.au/towards-better-onsite-wastewater-management-in-victoria-community-education-series/>

Wimmera Waterway Strategy 2014-2022 – Wimmera Catchment Management Authority

<http://wcma.vic.gov.au/docs/default-source/riversdocs/waterwaystrategy/wimmera-cma-waterway-strategy-2014-2022.pdf?sfvrsn=2>

Wimmera Regional Catchment Strategy 2013-2019

[http://www.wcma.vic.gov.au/docs/default-source/corporatedocs/RCS/wimmera-regional-catchment-strategy-\(rcs\)-2013-19.pdf](http://www.wcma.vic.gov.au/docs/default-source/corporatedocs/RCS/wimmera-regional-catchment-strategy-(rcs)-2013-19.pdf)

North Central Waterway Strategy 2014-2022

http://www.nccma.vic.gov.au/sites/default/files/publications/north_central_waterway_strategy_2014-2022.pdf

North Central CMA Regional Catchment Strategy 2013-2019 -

http://www.nccma.vic.gov.au/sites/default/files/publications/nccma-78628_north_central_cma_rcs_-_may_2013_web_0.pdf

Glenelg Hopkins CMA Regional Catchment Strategy 2013-2109 -

http://ghcma.vic.gov.au.ascet.co/media/uploads/11259_GHCMA_RSC_WEB.pdf

Glenelg Hopkins Waterways Strategy 2014-2022

<http://ghcma.vic.gov.au.ascet.co/master-nav/publications/plans/glenelg-hopkins-waterway-strategy/>

Appendix A

Legislation, Policies and Standards Relevant to Domestic Wastewater Management

Acts and Regulations

The following Acts and Regulations impact domestic wastewater in Victoria.

- *Environment Protection Act 1970*
- *EPA State Environment Protection Policy (Waters of Victoria)*
- *EPA Code of Practice – Onsite Wastewater Management*
- *Public Health and Wellbeing Act 2008*
- *Water Act 1989* (Part 9 s.180 Septic Tank Permit Applications)
- *Local Government Act 1989*
- *Building Act 1993*

Australian Standards and Other Requirements

Below are the Australian standards relevant to wastewater disposal systems.

- AS1319 - Safety signs for the occupational environment.
- AS/NZS 1546.1:2008 - On-site Domestic Wastewater Treatment Units, Part 1 (Septic Tanks).
- AS/NZS 1546.2:2008 - On-site Domestic Wastewater Treatment Units, Part 2 (Waterless Composting Toilets).
- AS/NZS 1546.3:2008 - On-site Domestic Wastewater Treatment Units, Part 3 (Aerated Wastewater Treatment Systems).
- AS/NZS 1547:2012 - On-site Domestic -Wastewater Management.
- AS2698 - Plastic pipes and fittings for rural applications.
- AS3000 - Wiring rules, electrical installations, buildings, structures and premises.
- AS3500 - Plumbing and drainage code.

Local Laws

Councils can implement Local Laws regarding domestic wastewater management.