

Frankston City Council

Domestic Wastewater Management Plan 2021 - 2025



Lifestyle Capital of Victoria

Contents

Executive Summary.....	3
Introduction	4
1.0 Domestic Wastewater and Risk Management	5
2.0 The Purpose and Objectives of the Frankston City Domestic Wastewater Management Plan (DWMP)	7
3.0 Legislation and government policies	11
3.1 Environment Protection Act 2017.....	11
3.2 State Environment Protection Policies- Waters of Victoria June 2003.....	12
3.3 Ministerial Direction No 6 - Guidelines for Rural Residential Development.....	12
3.4 EPA Code of Practice- Septic Tanks 2016.....	12
3.5 Public Health and Wellbeing Act 2008.....	13
3.6 Water Industry Act 1994 - South East Water.....	13
4.0 Council Policy Context	14
4.1 Council Plan 2021-2025.....	14
4.2 Municipal Strategic Statement 2015.....	15
4.3 Frankston Planning Scheme	15
4.4 Frankston City Council Integrated Water Action Plan 2016-2026.....	16
5.0 Municipal Characteristics and Septic Tank System Profile	17
5.1 Locality and Characteristics.....	17
5.2 Land Use Characteristics	19
5.3 Sub Catchments within the Municipality.....	21
6.0 Domestic Wastewater Profile	22
6.1 Summary of Septic Tank Performance within the Municipality	22
6.2 Receiving Environmental Values	28
6.3 Domestic Waste Water Threats	30
7.0 Key findings.....	32
8.0 Domestic Wastewater Management Priorities	33
9.0 Management Strategies and Actions Plans	34
Appendices	39
Terms of Reference	39
Functions	39
References	51

Executive Summary

Our Water Our Future – Securing Our Water Future Together is a significant policy of the Victorian government relating to water and wastewater. This program provided state government funding to assist local government in developing Domestic Wastewater Management Plans (DWMP). The development of the DWMP by councils has been called for under the State Environment Protection Policy (SEPP) (Waters of Victoria).

Council is committed to responsible domestic wastewater management practices in unsewered areas throughout the municipality. Health and environmental issues associated with domestic wastewater are highlighted in numerous Council policies and initiatives including the Council Plan, Municipal Strategic Statement, Environment Strategy and Stormwater Management Plan. This has come from concerns about inappropriate development, contamination of ground water, and the associated risks to health and the receiving environment caused by offsite discharges from failing septic tank systems.

The DWMP provides a management framework for stakeholders including policy makers, planners and regulatory and enforcement staff to implement management strategies for domestic wastewater systems on an integrated basis.

Council has been collecting data on Frankston's existing domestic wastewater profile since 2003. Currently there are approximately 1,500 septic tank systems within the municipality with approximately 20 applications to install new systems or to alter existing septic systems being received annually.

Key recommendations of the Plan will include the development of Council's Wastewater Management Policy, improvements to service delivery, and the development of specific strategies and actions to manage identified risks.

Introduction

The Frankston City Council Domestic Wastewater Management Plan aims to minimise the impact of domestic wastewater on human health and the local receiving environments within the municipality.

The preparation of the Domestic Wastewater Management Plan is based on the Environment Protection Authority (EPA)/Municipal Association Victoria (MAV) Model Municipal Domestic Wastewater Management Plan.

Council is committed to responsible domestic wastewater management practices in unsewered areas throughout the municipality. Health and environmental issues associated with domestic wastewater are highlighted in numerous Council policies and initiatives including the Council Plan, Municipal Strategic Statement. Council has already invested considerable time and resources into the development of a comprehensive data base of the existing septic systems within the municipality.

The DWMP provides Council with a:

- planning tool to enable long term strategies to be developed for septic tank management;
- framework for making decisions about individual installations including enforcement and compliance options, and
- a strategic framework for costing and funding septic management within the municipality.

1.0 Domestic Wastewater and Risk Management

Wastewater is water generated by domestic and commercial activities including toilet, bathroom, clothes washing and kitchen cleaning activities. Wastewater contains high levels of micro-organisms, chemicals (nutrients) and other contaminants capable of causing human illness and adversely impacting on the local environment.

Currently there are approximately 1,500 septic tank systems in use within the Municipality. Council has listed 65 of these as defective systems, largely due to owners failing to adequately maintain the systems as per the conditions on their septic tank permit, or in a small number of cases the septic systems are failing resulting in potential threats to public health and pollution of local waterways.

For dwellings where the septic system has been listed as defective a condition has been placed against the property. This has enabled Council to identify these properties in the Land Information Certificates issued to purchasers when the property may be sold and provides an opportunity for Council to enforce compliance.

The environmental impacts associated with domestic wastewater are due to the many pollutants it contains. Bacteria, viruses, lint, food and human waste products, along with chemicals derived from detergents and other cleaning products can impact greatly on the environment. These pollutants can build up in the soil damaging the soil structure, altering soil pH balances and harming plant growth. Failed septic tank systems can result in effluent discharge at ground level resulting in odour nuisances and the potential for disease transmission. Microbial contaminants such as bacteria, viruses and algal blooms pose a significant public health risk.

The environmental impacts of domestic wastewater pollution may not be confined to the property where it originates. Septic tank systems

that have failed, or systems that have been installed in inappropriate soils, may result in effluent being discharged into storm water drains, rivers and streams, contributing to the pollution loads in these environments.

Wastewater can pose a potential risk to public health as well as a potential environmental, legal and economic risk. Council has a primary responsibility to manage these risks through monitoring and enforcement of legislation.

2.0 The Purpose and Objectives of the Frankston City Domestic Wastewater Management Plan (DWMP)

The SEPP (Waters of Victoria) sets out requirements for managing domestic wastewater. Under this SEPP (Waters of Victoria), which came into effect on 15 March 1988, 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 SEPP also outlines the need for councils to:

- Assess the suitability of the land for an on-site system prior to approving a development Land Capability Assessment (LCA);
- 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 Septic Tank Code of Practice (Publication 891.4);
- 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 Waste Water Management Plan.

The purpose of the Domestic Wastewater Management Plan then is to:

- Identify the main environmental values and wastewater threats in the municipality;

- Assist with long term planning and development of unsewered areas in the municipality; and
- Improve public health and environment protection.

The intended outcomes of the Domestic Wastewater Management Plan are:

- The development of Council Domestic Wastewater Management Policies;
- The development of management action plans that respond to current wastewater issues including the identification of opportunities for joint action with other stakeholders;
- The development of specific policies relating to inappropriate development in unsewered areas;
- The development of operating policies and procedures for the surveillance, monitoring, and enforcement of permit conditions for existing septic tank systems within the municipality.

The specific objectives of the DWMP are to:

- Develop Council's policy for the management of domestic wastewater and for consistent decision making for specific sites;
- Develop short and long term, reactive and proactive strategies for the management of septic tank systems and greywater re-use;
- Develop and implement options for the upgrade of existing systems and/or the installation of new wastewater technology;
- Develop a case for the connection of all unsewered properties to sewer where reticulated sewer is available;
- Develop a strategy for the management of domestic wastewater in areas of the municipality where the provision of sewer is not possible;

- Provide a systematic approach for assessing the costs, impacts and barriers to managing domestic wastewater; and
- Provide a framework for internal liaison between Council units, and external liaison with the public and relevant Organisations.

An important part of the Domestic Wastewater Management Plan process is input from key stakeholders including the community throughout the project and occupiers of unsewered properties within the municipality.

In 2003 a Project Working Group (PWG) was established to develop Council's Domestic Wastewater Management Plan. The Project Working Group initially comprised of Council's Amenity Services Manager, Environmental Health Officer, a newly appointed Wastewater Management Officer and Council's GPS/Mobile Computing Analyst. The terms of reference for the project management team were:

- To develop, implement, monitor and review the Domestic Wastewater Management Plan for Frankston City Council;
- To develop an electronic data base of septic tank systems using Graphical Information System (GIS) technology;
- To ensure that other relevant staff are aware of and participate in the implementation of the Domestic Wastewater Management Plan;
- To identify relevant staff or organisations and their roles in implementing the Domestic Wastewater Management Plan;
- To provide all relevant staff with regular updates on domestic wastewater management;
- To provide leadership and direction for Council's domestic wastewater management;
- To review and amend the Domestic Wastewater Management Plan as required.

Through regular meetings of this group a GIS Septic Tank program was developed and mapping of all septic tank systems within the municipality has been completed.

Once this process was completed the PWG has been expanded to include Council representatives from the Planning and Environment Department, and representatives from the EPA and South East Water.

3.0 Legislation and government policies

The following outlines the pertinent legislative and State Government policy that relate to domestic wastewater and its management.

3.1 *Environment Protection Act 2017*

The *Environment Protection Act 2017* (The Act) will come into effect on 1 July 2021.

The centre piece of the Environment Protection Act 2017 is that it will impose a “General Environmental Duty” on all Victorians that conduct activities that pose a risk to human health and the environment.

Regulations made under (The Act) specifically addresses the issue of domestic wastewater. The new regulations place significant responsibility on the owner of septic tank systems to:

- maintain their systems as per the permit conditions;
- notify Council if and when they become aware that their septic system is failing;
- maintain records of maintenance and pump outs;
- take all reasonably practicable steps to eliminate or minimise environmental risks from their septic system.

The new regulations provide clarity on what may constitute a failing system or lack of maintenance and will provide Council with a simpler regulatory framework to enforce compliance.

Under this new legislation Council will still be responsible for approving the installation and use of septic tank systems designed to discharge up to 5,000 litres of effluent per day. Systems exceeding this volume will be licensed by the EPA. Council’s approval process includes the consideration of local factors that would impact the designed performance of the system such as allotment size and number of people using the system etc.

3.2 State Environment Protection Policies- Waters of Victoria June 2003

The Environment Protection Act provides for the formulation of State Environment Protection Policies (SEPPs). SEPPs are statements of government policy which provide direction for state government agencies, local government, the private sector and individuals in decision making.

SEPP (Waters of Victoria) which came into effect on 15 March 1988, identifies beneficial uses of the environment that must be protected. It also requires local government to ensure new residential subdivisions are provided with reticulated sewerage at the time of subdivision, or that the allotments created are capable of treating and containing domestic wastewater within the boundaries of each allotment.

3.3 Ministerial Direction No 6 - Guidelines for Rural Residential Development

This Direction was issued under the Planning and Environment Act 1987 and must be implemented by all planning authorities. It requires Councils to undertake appropriate land assessment prior to rural residential subdivision. The Direction primarily addresses the subdivision and rezoning of areas into lots ranging from 0.4 hectares to 2 hectares.

3.4 EPA Code of Practice- Septic Tanks 2016

EPA has produced a Septic Tanks Code of Practice (detailed in EPA publication 891.4 of 2016) to guide in the design and installation of septic tank systems for the treatment and safe disposal of effluent in small wastewater systems (the reuse of effluent is detailed in other EPA publications).

3.5 Public Health and Wellbeing Act 2008

Section 24 states that it is the function of council to prevent disease and promote public health through organised programs which prevent or control environmental health dangers and disease. The Act requires Council's to remedy, as far as is reasonably possible, all nuisances in the municipal district. Nuisances are defined as something which is dangerous to health or offensive.

3.6 Water Industry Act 1994 - South East Water

The Water Corporation for Frankston under the Water Act 1989 is South East Water and as such South East Water also has a statutory role in overseeing effective wastewater disposal in unsewered areas of the municipality. Under the Statement of Obligations issued by the Minister for Water under Section 41 of the Water Industry Act, 1994, South East Water has the role of extending reticulated sewerage to unsewered areas and to work with Council in the development of its DWMP.

Under Section 65 of the Water Industry Act 1994, property owners can be required to connect to sewerage if it is available, if the water or sewerage licensee is of the opinion that it is necessary for this to be done in the interests of health or the environment.

4.0 Council Policy Context

4.1 Council Plan 2021-2025

The goal of the Council Plan is to partner with the community in preserving and enhancing the City's natural environment for current and future generations. Three specific objectives of the Council Plan that relate to wastewater management are conservation of water resources, reduction in the generation of waste, and sustainability. These objectives and the strategies designed to achieve these objectives are outlined in the following table:

Table 1. Council Plan objectives and strategies relating to Domestic Wastewater Management

Council Plan Objective	Related strategies
3.2 Build a local community culture of good stewardship of the environment	<ul style="list-style-type: none">• Educate industry and residents to reduce energy and water use and waste to landfill• Protect and maintain Council assets• Determine a long term waste management solution, including a waste recycling centre

4.2 Municipal Strategic Statement 2015

The City housing development that relies on on-site waste disposal is concentrated in the eastern and southern parts of the Langwarrin urban area, on land zoned Low Density Residential. One of the purposes of that zone is to provide for low density residential development on lots which, in the absence of reticulated sewer, can treat and retain all wastewater.

Essentially land use criteria require that the area has soils that are suitable for on-site waste disposal. In Langwarrin, the bulk of the Low Density Residential Zone, is located outside the sewerage area catchment. Subdivision controls in the zone require a minimum lot size of 1 hectare so as to provide year round effective on-site waste disposal. The issue of on-site waste disposal is specifically addressed in the Strategies which states that an adequate waste water system must be provided for the maintenance of public health and the management of effluent in an environmentally friendly manner and must be consistent with an approved Domestic Wastewater Management Plan.

4.3 Frankston Planning Scheme

The Frankston Planning Scheme sets both policies and requirements in relation to the disposal of domestic wastewater. Subdivision on residential or rural living scale lots in unsewered areas generally requires the consideration of the capability of the lot to treat and retain all wastewater. Minimum lot size requirements for such areas are largely established on this principle and an application for subdivision should include a land assessment, which demonstrates that each lot is capable of treating and retaining all wastewater in accordance with the State Environment Protection Policy (Waters of Victoria) under the Environment Protection Act 1970 (Land Capability Assessment) and a dwelling must be connected to a reticulated

sewerage system or if not available, the waste water must be treated and retained on-site in accordance with the State Environment Protection Policy (Waters of Victoria) under the Environment Protection Act 1970. Planning policies include:

Clause 14.02-2S Water quality.

Ensure that land use activities potentially discharging contaminated runoff or wastes to waterways are sited and managed to minimise such discharges and to protect the quality of surface water and groundwater resources, rivers, streams, wetlands, estuaries and marine environments.

Clause 21.06 Environmental and landscape values.

Key issues

Managing the competing demands between environmental protection, landscape amenity and facilitating development, within the municipality's rural hinterlands, residential areas, waterways and wetlands and the Port Phillip Bay foreshore.

The DWMP complements achieving the policies and provisions of the Frankston Planning Scheme.

4.4 Frankston City Council Integrated Water Action Plan 2016 - 2026

Frankston City Council's Integrated Water Action Plan (IWAP) is a ten year plan to facilitate a strategic and practical approach to integrated and sustainable water management. The IWAP will deliver economic, environmental and social benefits to Frankston City and the wider region. The IWAP builds on work previously undertaken by Council during the development and implementation of its Stormwater Management Plan (2001), Sustainable Water Use Plan (2006), as well as the completion of Frankston City's Integrated Water and Pollutant Balance Study (2014). The IWAP focuses on actions that Council can achieve and has control of to improve integrated water management outcomes for the municipality. There are 37 actions to be undertaken by Council to improve processes to enable efficient and effective integrated water management. Action 15 listed requires the Domestic Wastewater Management Plan to be developed and implemented.

5.0 Municipal Characteristics and Septic Tank System Profile

5.1 Locality and Characteristics

Frankston City Council occupies an area of 130km² and has a population in excess of 142,000 people. The municipality is situated on the eastern edge of Port Phillip Bay and features approximately 10km of coastal foreshore. Over 50% of the municipality is developed, with progressive development of new residential and industrial areas occurring at Carrum Downs and Langwarrin.

The municipality features a number of locally and regionally significant environments that provide ecological habitat, recreational and aesthetic amenity. These areas include Kananook Creek, Frankston foreshore (near the mouth of Kananook Creek), Seaford Wetlands, Frankston Reservoir, the Pines Flora and Fauna Reserve and Langwarrin Flora and Fauna Reserve.

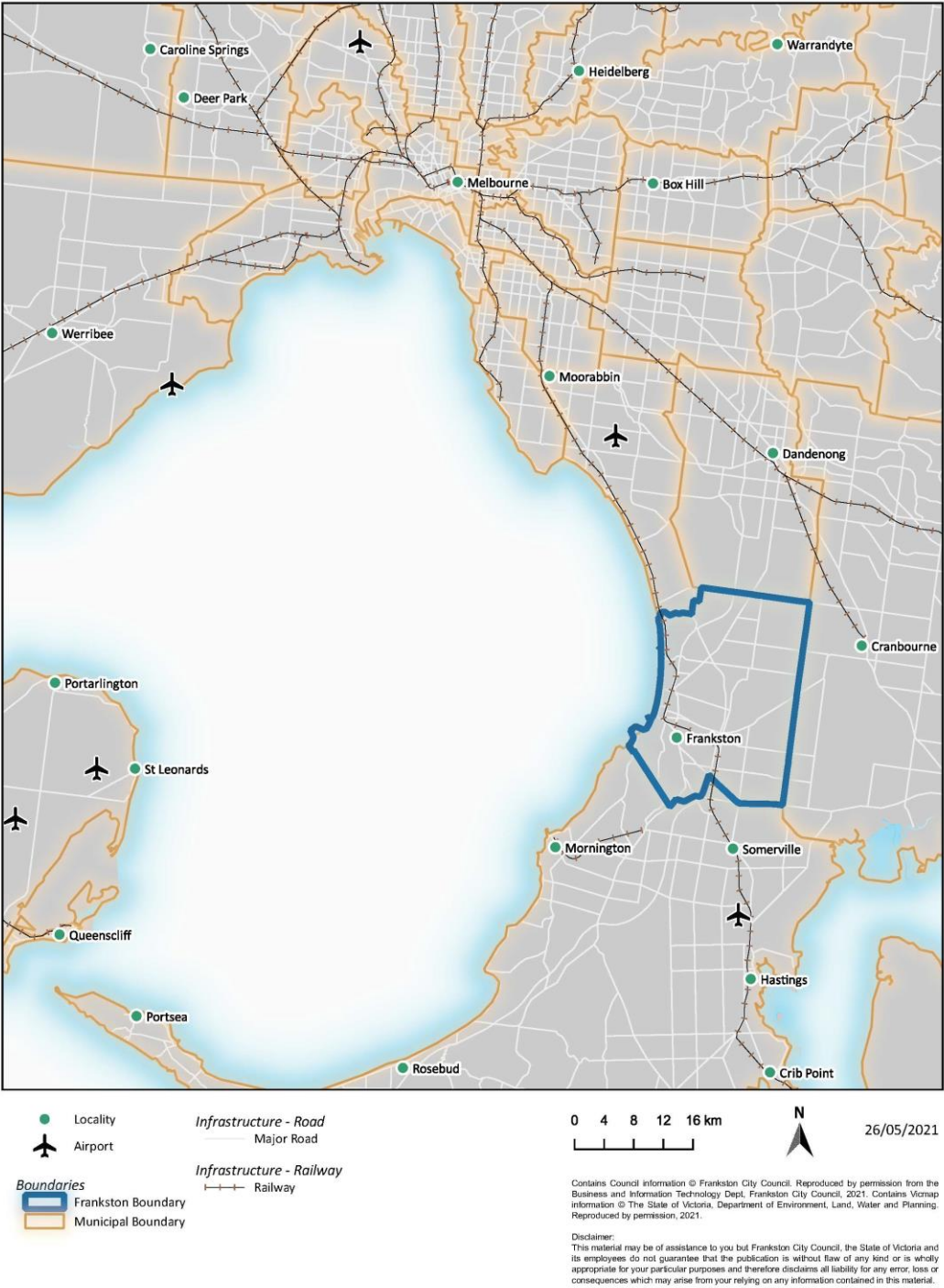
Stormwater runoff from the municipality discharges into three major receiving environments as follows:

- Port Phillip Bay, via Sweetwater Creek, Kananook Creek and Boggy Creek. This includes over 70% of the municipality;
- Western Port, via Watsons Creek and various minor tributaries contained in the City of Casey and Mornington Peninsula Shire Council; and
- Patterson River Catchment in Greater Dandenong via the Eastern Contour Drain.

The majority of stormwater runoff from Frankston is generated within the municipality, with negligible inflows from areas outside the municipality. Figure No.1 shows key features within the municipality including major waterways and transport corridors. Relevant subsections that follow provide more details of land use and waterway characteristics.

Figure 1. Frankston City Council Locality Plan

Frankston City Council
Locality Plan



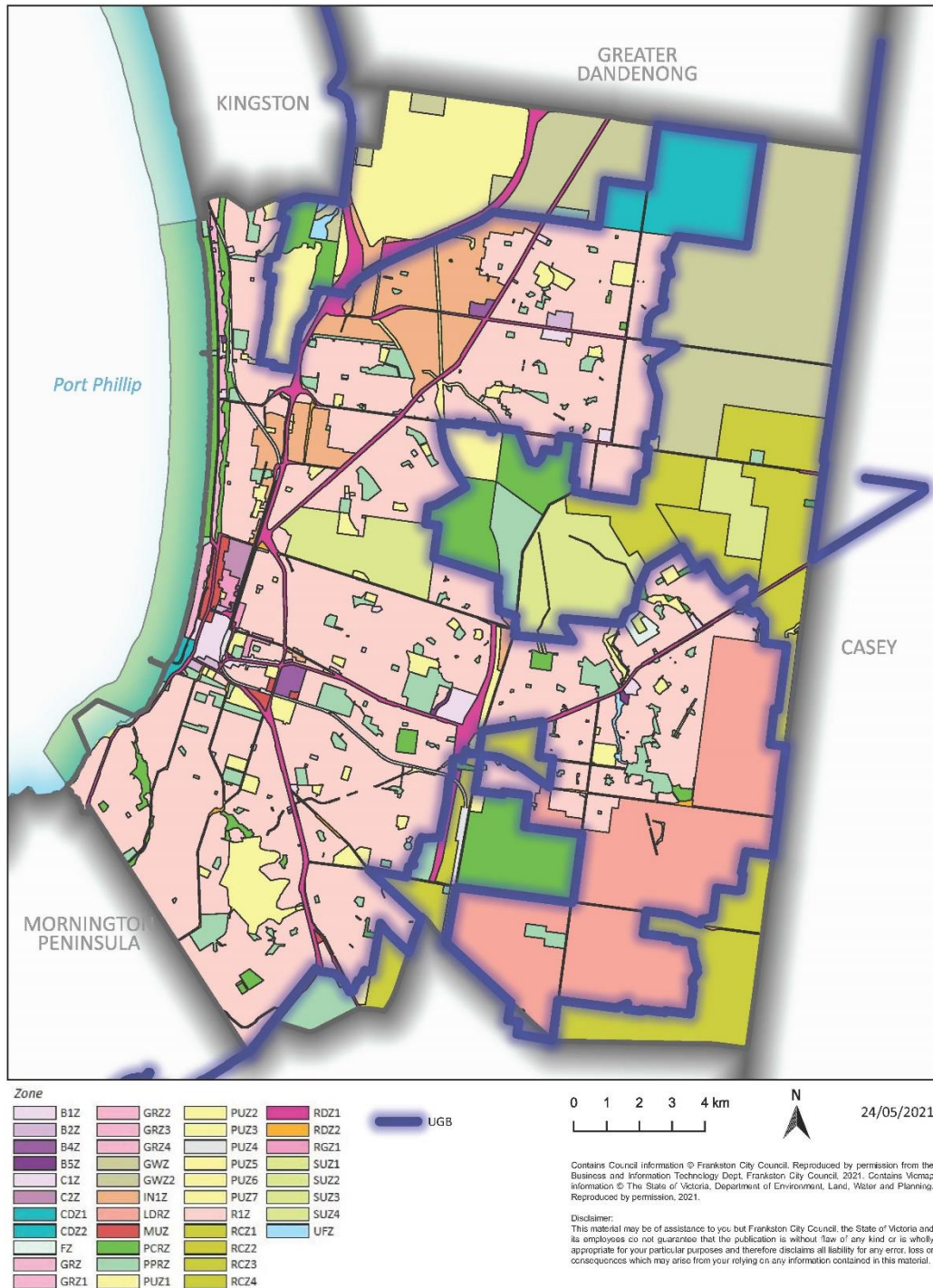
5.2 Land Use Characteristics

Figure 2 shows the distribution of land uses throughout the municipality. Established residential land use occupies approximately 50% of the municipality, with other major land uses including public open space (approximately 10%) and rural (approximately 32%). Designated growth areas are located in Carrum Downs and Langwarrin. Both areas support ongoing residential and semi-rural development, with significant areas in Carrum Downs designated for future industrial development.

Figure 2. Land Use

Frankston City Council

Planning Zones



5.3 Sub Catchments within the Municipality

For the purposes of this DWMP the municipality has been separated into a series of sub-catchments, or reaches, to simplify assessments and provide a basis for developing management strategies. The breakdown of study sub- catchments has been based on hydrological catchment boundaries and major land use precincts. Eight (8) separate sub catchments have been defined as outlined below:

Table 2. Waterway Reaches (sub-catchments)

Reach Number	Reach Name	Waterway	Description
1	Sweetwater Creek	Sweetwater Creek	Entire Catchment
2	Lower Kananook Creek	Kananook Creek	Overton Road to Port Phillip Bay
3	Middle Kananook Creek		Moresby Avenue to Overton Road
4	Upper Kananook Creek		Mornington Peninsula Freeway to Moresby Avenue
5	Lower Boggy Creek	Boggy Creek	McClelland Drive to Mornington Peninsula Freeway
6	Upper Boggy Creek		Headwaters to McClelland Drive
7	Patterson River	Eastern Contour Drain	Entire catchment to Municipal Boundary
8	Westernport Catchments	Various	Entire catchment to Municipal Boundary

6.0 Domestic Wastewater Profile

6.1 Summary of Septic Tank Performance within the Municipality

The total number of septic tank systems in the municipality is approximately 1,500. The tables below provide a quantitative description of the distribution, allotment size, age and type of septic tank systems within the municipality.

Figure 3a. Numbers of septic tanks systems across catchments

Frankston City Council

Septic Tanks

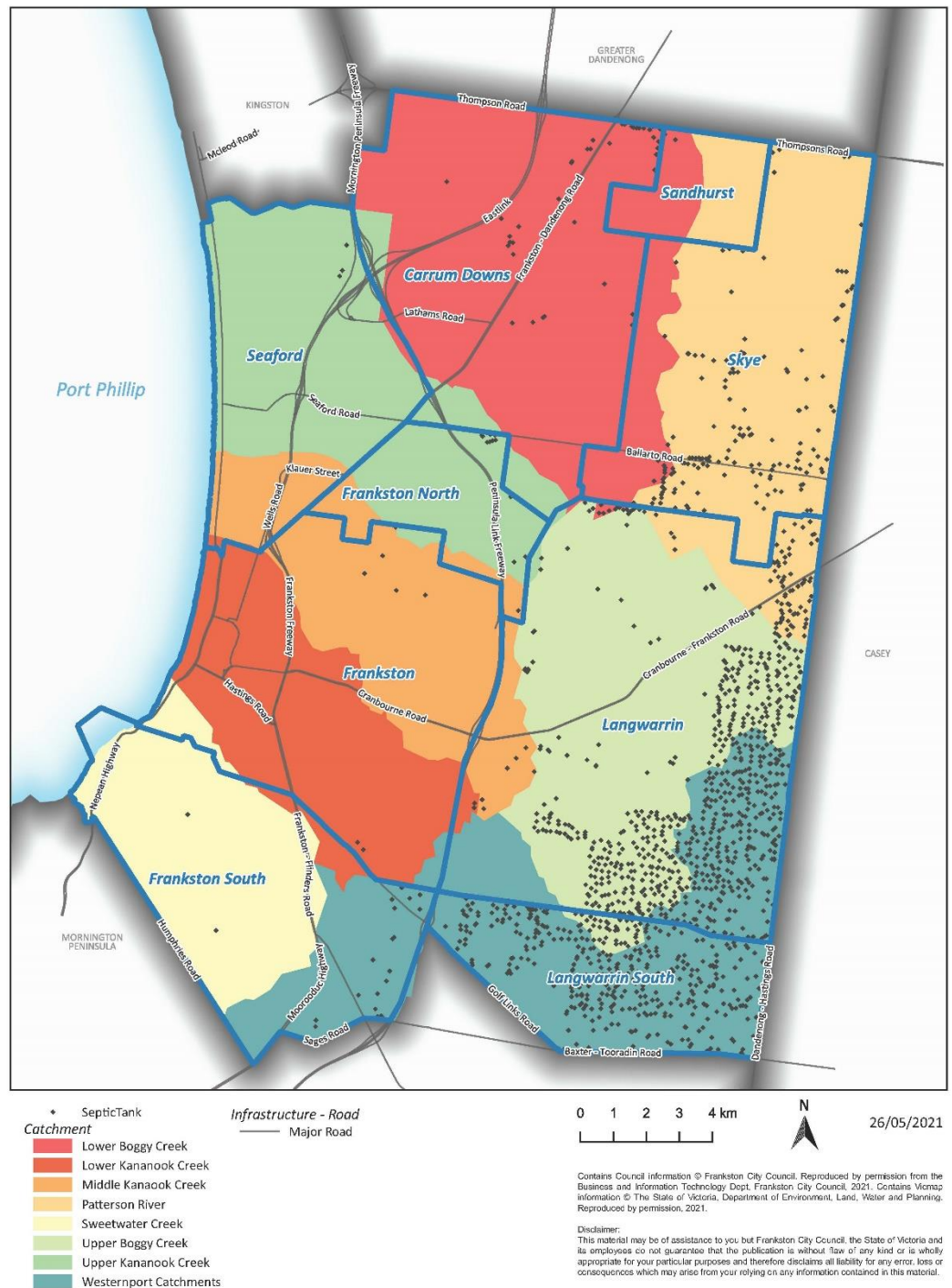


Table 3b. Numbers of septic tanks systems in each catchment

Catchment	No. of Septic Systems	No. Offsite Discharges
Westernport	649	10
Patterson River	221	0
Upper Boggy Creek	452	2
Lower Boggy Creek	105	0
Middle Kananook Creek	16	0
Lower Kananook Creek	5	0
Upper Kananook Creek	13	0
Sweetwater Creek	20	0
Null	16	
Not Determined	1	
Total	1,498	

The total number of properties with septic tank systems is approximately 1,400 with at least 90 properties having two septic tanks (Properties with two tanks may have more than one dwelling). Most of the systems are located in the Westernport

Catchment and Upper Boggy Creek. The two catchments account for over 75% of the systems in the municipality.

Figure 4a. Number and size of allotments with septic tank systems

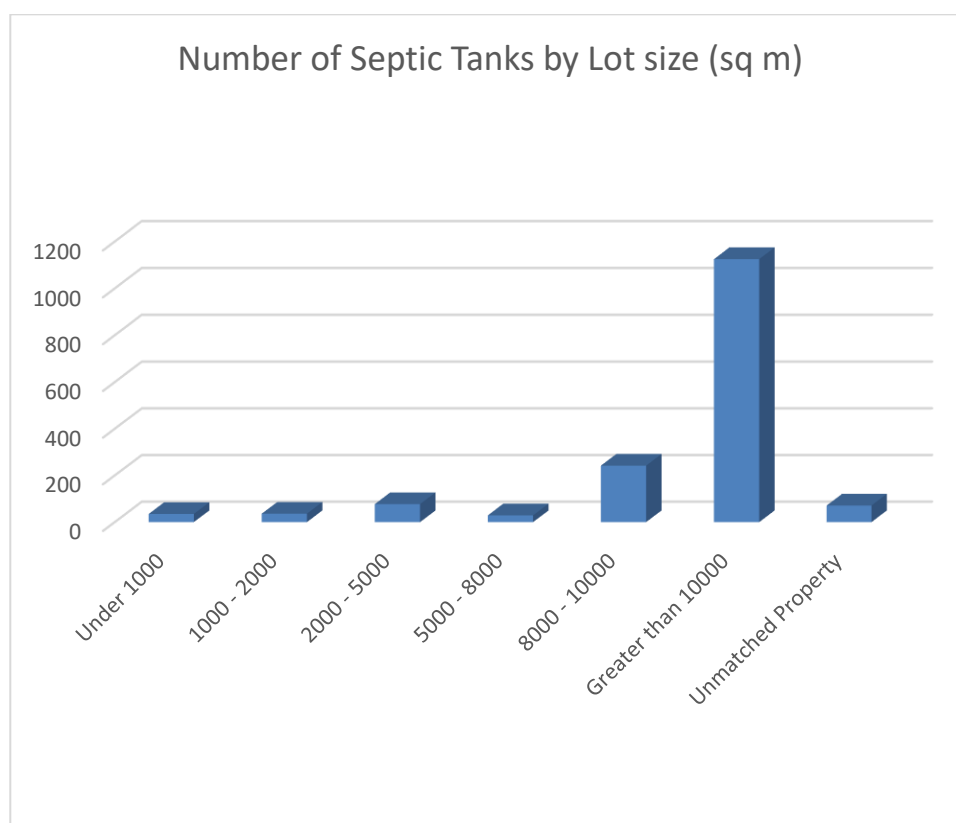


Table 4b. Number and size of allotments with septic tank systems

Area	Number of systems
Under 1000m	35
1000m ² to 2000m ²	36
2000m ² to 5000m ²	77
5000m ² to 8000m ²	29
Greater then 8000m ²	1,250
Unclassified	71
Total	1,498

The majority of systems are located on allotments greater than 8000m².

Figure 5a. Age of septic tank systems

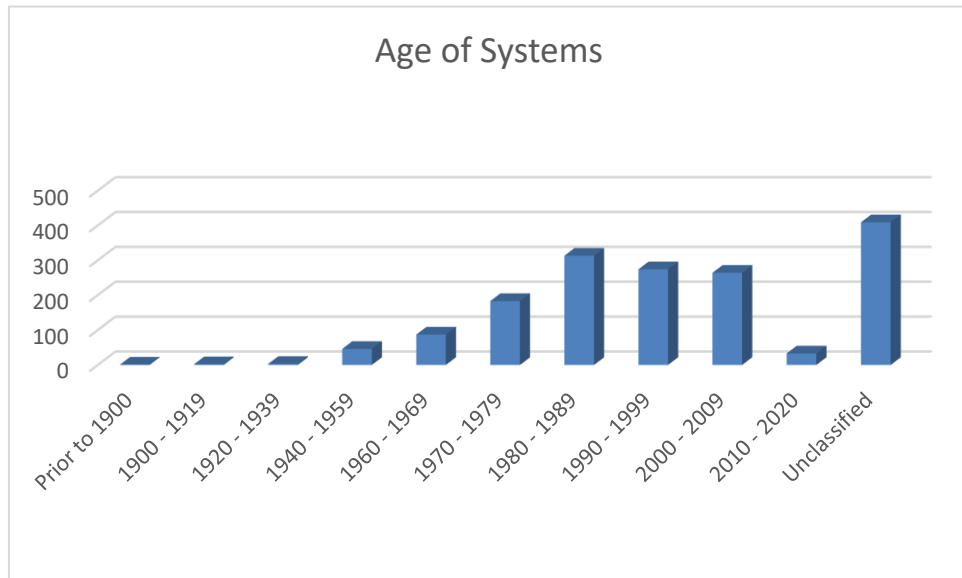


Table 5b Age of septic tank systems

Age of System	Number
Prior to 1900	1
1900-1919	2
1920-1939	3
1940-1959	46
1960-1969	87
1970-1979	183
1980-1989	313
1990-1999	267
2000-2009	254
2010-2020	33
Not Determined	309
Total	1,498

Table 6. Septic Tank Type by Catchment											
Type of Tank	Catchment										Total
	Lower Boggy Creek	Upper Boggy Creek	Lower Kananook Creek	Middle Kananook Creek	Upper Kananook Creek	Patterson River	Sweetwater Creek	Westernport Catchments	Null	Not determined	
Null	4	3						8	1		16
1800 Lt All Purpose Septic Tank	17	98	1	1	4	38	2	153			314
3200 Lt All Purpose Septic Tank	39	246	3	9	6	97	12	326	5	1	744
Aqua Nova Sewage Treatment System	9	8	1		1	10	1	18	1		49
Biocycle Sewage Treatment System	4	17		1		10		10			42
Biolytix Treatment System		2									2
Composting Toilet	1	4						1			6
Not determined	9	15		4	2	16	1	30			77
Ozzi Klean Treatment System							1	4	2		7
Septech 2000 Sewage Treatment System	15	34				28	3	32	2		114
ST Envirosep Treatment System		1				2		9		1	13
ST Worm Farm						1		1		3	5
Taylex Sewage Treatment Plant	5	21		1		17		50		1	95
Worm Farm	2	3				2		7			14
Total											1498

6.2 Receiving Environmental Values

Values reflect the perception of public health and the protection of beneficial uses of the receiving environment. Value categories include public health (infectious disease transmission and exposure to disease), environmental (surface water, land and groundwater quality), amenity (aesthetic values), economic (development potential, property value) location (density of systems and effluent), land capability (soil characteristics), indigenous values, and agricultural values.

Table 7. Receiving Environmental Values (unsewered areas)

Sweetwater Creek	Sweetwater Creek supports a number of locally and regionally significant values associated with its complex geomorphology, riparian habitat and recreational amenity values. These values reflect the relatively natural state of the main waterway corridor. High groundwater values exist within this subcatchment, reflecting the beneficial uses for potable water identified in the State Environment Protection Policy (SEPP) (Groundwaters of Victoria). The Local and Regional Receiving Environments also have <i>High</i> values associated with the Frankston foreshore and Port Phillip Bay.
Westernport Catchment	<p>The Westernport Catchment Includes the areas along the south and eastern periphery of the municipality that ultimately drain to Westernport. The potable water use objectives defined in the SEPP (Groundwaters of Victoria) result in high groundwater values. The local receiving environment of Westernport is considered to have significant environmental values associated with estuarine and coastal environments at the lower end of Watsons Creek.</p> <p>Values of Public Health (Infectious Disease Transmission) and Amenity (odour/mosquito breeding/visual) are of concern due to the number of septic tank systems within this catchment.</p>

<p>Patterson River</p>	<p>The Patterson River subcatchment is located in the North East portion of the municipality and discharges to Eumemmering Creek, which ultimately flows to the Patterson River. The waterways of the subcatchment are characterised by a network of constructed open channels and informal floodplains, flowing through predominantly cleared rural lands. In accordance with this, environmental values, associated with in-stream habitat and riparian condition, tend to be low due to the extensive modification that has occurred.</p> <p>In accordance with the potable water use objective identified in the SEPP (Groundwaters of Victoria), groundwater values are considered to be high.</p>
<p>Lower Boggy Creek</p>	<p>Lower Boggy Creek consists of a series of heavily modified urban waterways that discharge to the upper end of Eel Race Drain and into Upper Kananook Creek. Areas of remnant vegetation upstream of Ballarto Road have been identified as being of State biological and zoological significance. Recreational opportunities associated with Pines Flora and Fauna Reserve contribute to moderate recreational values. The local receiving environment for this subcatchment is Upper Kananook Creek, which has very high environmental values associated with the Seaford Wetlands.</p>
<p>Upper Boggy Creek</p>	<p>Upper Boggy Creek contains significant areas of remnant native vegetation within and adjacent to the waterway corridor. The creek itself is identified as being of Regional Botanical and Zoological significance and is identified within the Environment Significance Overlay of the Frankston Planning Scheme. The Creek's role in providing recreational and visual amenity is somewhat less significant due to limitations in accessibility. However, the intact native flora is considered to present passive recreational opportunities, with recreational amenity being rated as moderate accordingly.</p> <p>The local receiving environment for this subcatchment is Upper Kananook Creek, which has very high values associated with the Seaford Wetlands. Values of Public Health (Infectious Disease Transmission) and Amenity (odour/mosquito breeding/visual) are of concern due to the number of septic tank systems within this catchment.</p>

6.3 Domestic Waste Water Threats

The DWMP needs to assess the potential threats from domestic wastewater, the values of the receiving environments and the final risk assessment, having regard to both. All wastewater generation and/or discharges are seen to be a threat with potential harm to human health or damage to the receiving environment. The table below depicts the generic threats posed by domestic wastewater:

Table 10. Generic Wastewater Threats (Frankston Specific)

Threat	Cause	Key Impacts
Failed systems with off-site Discharge LOW	<ul style="list-style-type: none">• Damaged effluent disposal drains/trenches• Increased loading from extensions to dwellings• Design criteria not complied with• Faulty installation• New works & activities impacting on disposal envelope• Age of the system• Septic tank full• Poor maintenance	<ul style="list-style-type: none">• Nutrients• Pathogens• Odour• Visual amenity• Oxygen depleting material• Local land degradation• Pollution of water courses• Pooling of water causing mosquito breeding
Treated off-site effluent Discharge LOW	<ul style="list-style-type: none">• Permitted system	<ul style="list-style-type: none">• Pollution of water courses• Local visual amenity
Treated on-site effluent Discharge MEDIUM	<ul style="list-style-type: none">• Permitted system	<ul style="list-style-type: none">• Local visual amenity• Pollution of groundwater

Untreated off-site sullage (grey water) discharge LOW	<ul style="list-style-type: none"> • Poorly maintained system with sand filter not functioning, sand filter bypassed to stormwater, septic tank full • Permitted system 	<ul style="list-style-type: none"> • Nutrients & pathogens • Odour • Visual amenity • Oxygen depleting material • Local land degradation • Pollution of water courses
Ineffective regulation HIGH	<ul style="list-style-type: none"> • Failure to comply with permit conditions • Ineffective database • Non-connection to sewer • Unclear regulatory responsibilities 	<ul style="list-style-type: none"> • Liability • Increased incidence of preventable pollution and environmental degradation • Increased risk to public health

For the purposes of this DWMP the values outlined in the Urban Stormwater Management Plan have been adopted.

7.0 Key findings

The major risk posed by septic tanks in Frankston City is failing or poorly maintained on-site systems located in the Westernport, Upper Boggy Creek, Lower Boggy Creek and Patterson River catchments.

- Over 95% of systems within the municipality are located within the Westernport, Patterson River, Upper Boggy Creek and Lower Boggy Creek catchment areas. Priority must be given to the monitoring of septic tank systems within these catchments
- It is estimated that at least 10% of the systems within the municipality have already reached or exceeded their designed life. Significant numbers of systems may fail in the coming years, and a domestic waste water maintenance program is essential if failed septic systems are to be detected and rectified in a timely manner
- The majority of systems are located on allotments greater than 8,000m². This indicates that the systems that exist within the municipality are here to stay for the long term as the provision of reticulated sewer to these properties is unlikely
- It is evident that a very low rate of compliance with permit conditions for system maintenance is achieved without Council intervention and monitoring. The compliance rate for septic systems that require quarterly maintenance has improved greatly since Council has actively enforced this requirement
- A major cause of inadequate maintenance of a septic tank systems is the owner's lack of knowledge on how to care for and maintain their system. The provision of information is critical in achieving improved maintenance of existing septic tank systems

8.0 Domestic Wastewater Management Priorities

The key findings identify a number of management actions that need to be implemented so as to improve the effectiveness of septic tank systems:

1. Capacity development – information management

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

2. 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.

3. Community development and compliance

Under the new Environment Protection Regulations owners of septic tank systems have a heightened legal responsibility to comply with permit conditions, maintenance and reporting obligations. As such there will be a greater need for Council to provide ongoing education to owners of these responsibilities and the consequences of non-compliance with the new General Environmental Duty.

4. Environmental monitoring and protection

Together with inspections of individual septic tank systems/installations, there is a need to investigate, with other agencies, the overall impact that systems have collectively on the receiving environment. Current information suggests that there is septic tank effluent infiltrating into water courses.

5. Review

An annual review of the DWMP management actions will be required to ensure they remain consistent with any State Government Policy and/or legislative changes.

9.0 Management Strategies and Actions Plans

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

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

Council has a statutory duty as it issues permits for the installation of septic tank systems. Further, under the State Environment Protection Policy (Waters of Victoria) there is a requirement on Council to:

- ensure that strategic and statutory planning tools are consistent with the SEPP;
- improve the management of urban stormwater and domestic wastewater (waste from septic tanks);
- consider the capability of land, in unsewered areas, to contain wastes when making land use planning decisions and that such use is sustainable;
- assess compliance of septic tank performance with permit conditions through a maintenance program.

Current wastewater management within Frankston City indicates that Council is undertaking a monitoring role of septic tank systems in addition to conducting permitting activities and complaint investigation.

The capacity of council to undertake these activities and services requires a range of resources including:

- the ongoing collection of appropriate data through a monitoring program, maintenance of its current information management system, and analysis of this information;
- review and development of operating policies and procedures;
- the development of and access to information by owners of septic tank systems and other stakeholders.

The major risk posed by septic tanks in the municipality is failing or poorly maintained on-site systems located in the Westernport, Upper Boggy Creek, Lower Boggy Creek and Patterson River catchments.

Management Action Plans

<u>Action</u>	<u>Action Steps</u>	<u>Team/Partners</u>	<u>Responsible Person</u>	<u>Due Date:</u>
<p>1. Strategy:</p> <p><i>Community information and education on septic tank maintenance and management</i></p> <p>Objectives:</p> <ul style="list-style-type: none"> • to reduce loading on septic tank systems • to increase owners' awareness of the importance of managing septic tank systems • to improve compliance with permit conditions • to minimise the volume of wastewater generated from septic tank systems 	<p>a) Provide all septic tank owners within the municipality an updated Septic Tank Fact sheet outlining the legal requirements contained within the new Environment Protection Regulations. The updated fact sheet should also include information on maintenance and ways to minimize the volume of wastewater generated.</p> <p>b) Provide all new owners of unsewered properties a copy of the updated Septic Tank Fact Sheet.</p> <p>c) Ensure a copy of the Septic Tank Fact sheet is provided on Councils Website</p>	<p>Environmental Health Unit</p> <p>Environmental Health Unit</p> <p>Environmental Health Unit</p>	<p>Coordinator Environmental Health</p> <p>Coordinator Environmental Health</p> <p>Coordinator Environmental Health</p>	<p>30 September 2021</p> <p>Ongoing</p> <p>30 September 2021</p>

<p>2. Strategy:</p> <p><i>Information and Data Collection on the Environmental Impacts of Septic Tank Systems on Receiving Environments</i></p> <p>Objectives:</p> <ul style="list-style-type: none"> • To monitor and analyse the effectiveness of wastewater management strategies • To develop a profile of current values of ground water quality and surface water quality within the municipality • To minimise the impact of septic tank systems on the receiving environment 	<p>a) Initiate discussions with other authorities (Melbourne Water, EPA, South East Water) on testing for human pollution in Watsons Creek and Kananook Creek</p> <p>b) To undertake (with others) the collection and collation of surface water and ground water quality data</p> <p>c) Maintain a data base of nuisance complaints resulting from wastewater systems within the municipality</p> <p>d) Continue to develop and maintain Council's Pathway and GIS data base of septic tank systems within the municipality</p>	<p>Environmental Health Unit</p> <p>Environmental Health Unit</p> <p>Environmental Health Unit</p> <p>Environmental Health Unit</p>	<p>Coordinator Environmental Health</p> <p>Coordinator Environmental Health</p> <p>Coordinator Environmental Health</p> <p>Coordinator Environmental Health</p>	<p>30 September 2021</p> <p>30 June 2022</p> <p>Ongoing</p> <p>Ongoing</p>
<p>3. Strategy:</p> <p><i>Development and review of operational policies and procedure</i></p> <p>Objectives:</p> <ul style="list-style-type: none"> • To ensure Council is meeting its Statutory obligations in the process of issuing Septic Tank Permits • To ensure consistency in the application of assessment criteria and enforcement of permit conditions 	<p>a) Review operating procedures with internal service units (planning, building) on planning permits (sub-divisions, infill development)</p> <p>b) Exploration of common protocols with neighbouring councils</p> <p>c) Review the Unit's operational procedures in RIAMS</p>	<p>Environmental Health Unit</p> <p>Environmental Health Unit</p> <p>Environmental Health Unit</p>	<p>Coordinator Environmental Health</p> <p>Coordinator Environmental Health</p> <p>Coordinator Environmental Health</p>	<p>30 September 2021</p> <p>30 June 2022</p> <p>30 September 2021</p>

<p>4. Strategy:</p> <p><i>Development a domestic waste water maintenance compliance program for septic systems classified as defective</i></p> <p>Objectives:</p> <ul style="list-style-type: none"> • To manage council's statutory duty in relation to enforcement activities • To minimise the impacts from domestic waste water on the environment and protect public health • To comply with legislative expectations of government 	<p>a) Develop a domestic waste water maintenance compliance program for all septic tank properties, including enforcement tools/options for those who do not comply with the legal obligations under the new Environment Protection Regulations.</p> <p>b) Conduct an onsite inspection of all septic systems that have been identified as defective due to system failure or lack of maintenance and initiate the appropriate enforcement action as supported by the new Environment Protection Regulations</p>	<p>Environmental Health Unit IT Department</p> <p>Environmental Health Unit</p>	<p>Coordinator Environmental Health</p> <p>Senior Environmental Health Officer Environmental Health Officers Business Support Officers</p>	<p>1 July 2022</p> <p>1 July 2022</p>
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Appendices

Appendix 1.

Terms of Reference

The Advisory Committee for the municipality's Domestic Wastewater Management Plan will consist of representatives from the Frankston City Council and other agencies including:

Committee Members

Manager Community Safety
Coordinator Environmental Health
Senior Environmental Health Officer
EPA – Manager Operations Strategy
GIS Mobility Officer
Senior Drainage Engineer
Subdivisions Officer

The committee will advise and assist in the implementation and review the plan.

Functions

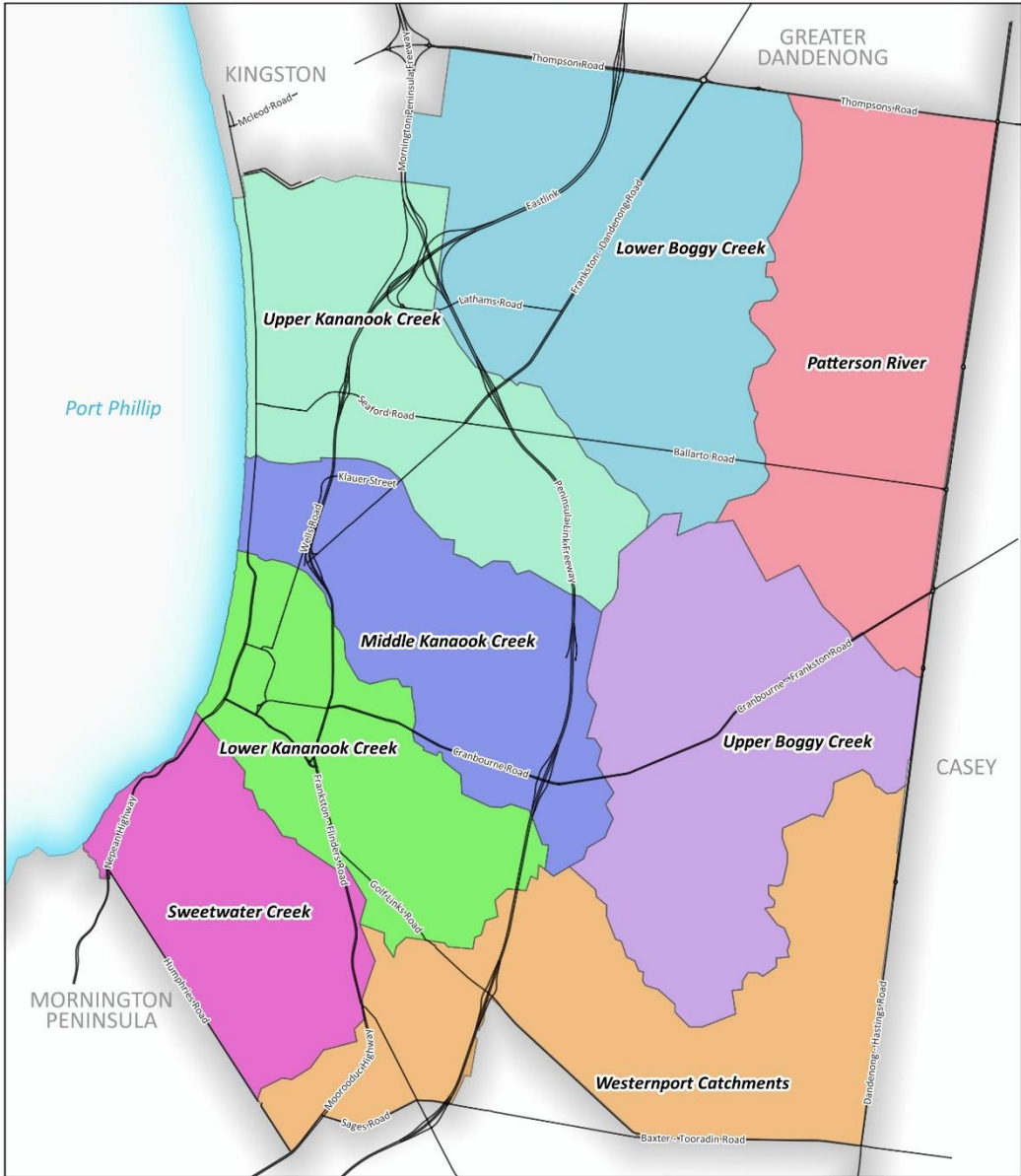
The objectives and responsibilities of the Committee are:

1. To provide information and data relevant to the development of the DWMP;
2. To advise on the development, implementation and review stages of the DWMP;
3. To assist and liaise with the appointed consultants and provide specialist advice; and
4. To identify relevant agencies and their roles in implementing the Domestic Wastewater Management Plan.

Appendix 2 - Catchment Maps

Frankston City Council

Catchments



- | | | |
|---------------------------|-------------------------|------------------------------|
| Catchment Boundary | Sweetwater Creek | Infrastructure - Road |
| Lower Boggy Creek | Upper Boggy Creek | Major Road |
| Lower Kananook Creek | Upper Kananook Creek | |
| Middle Kananook Creek | Westernport Catchments | |
| Patterson River | | |



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Frankston City Council

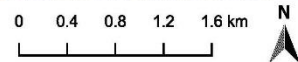
Sweetwater Creek Catchment



- Septic Tank
- Catchment Boundary

Hydrography
— Waterway

Infrastructure - Road
— Major Road



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Frankston City Council

Upper Kananook Creek Catchment



- Septic Tank
- Catchment Boundary
- Hydrography**
- Waterway
- Infrastructure - Road**
- Major Road

0 0.4 0.8 1.2 1.6 km



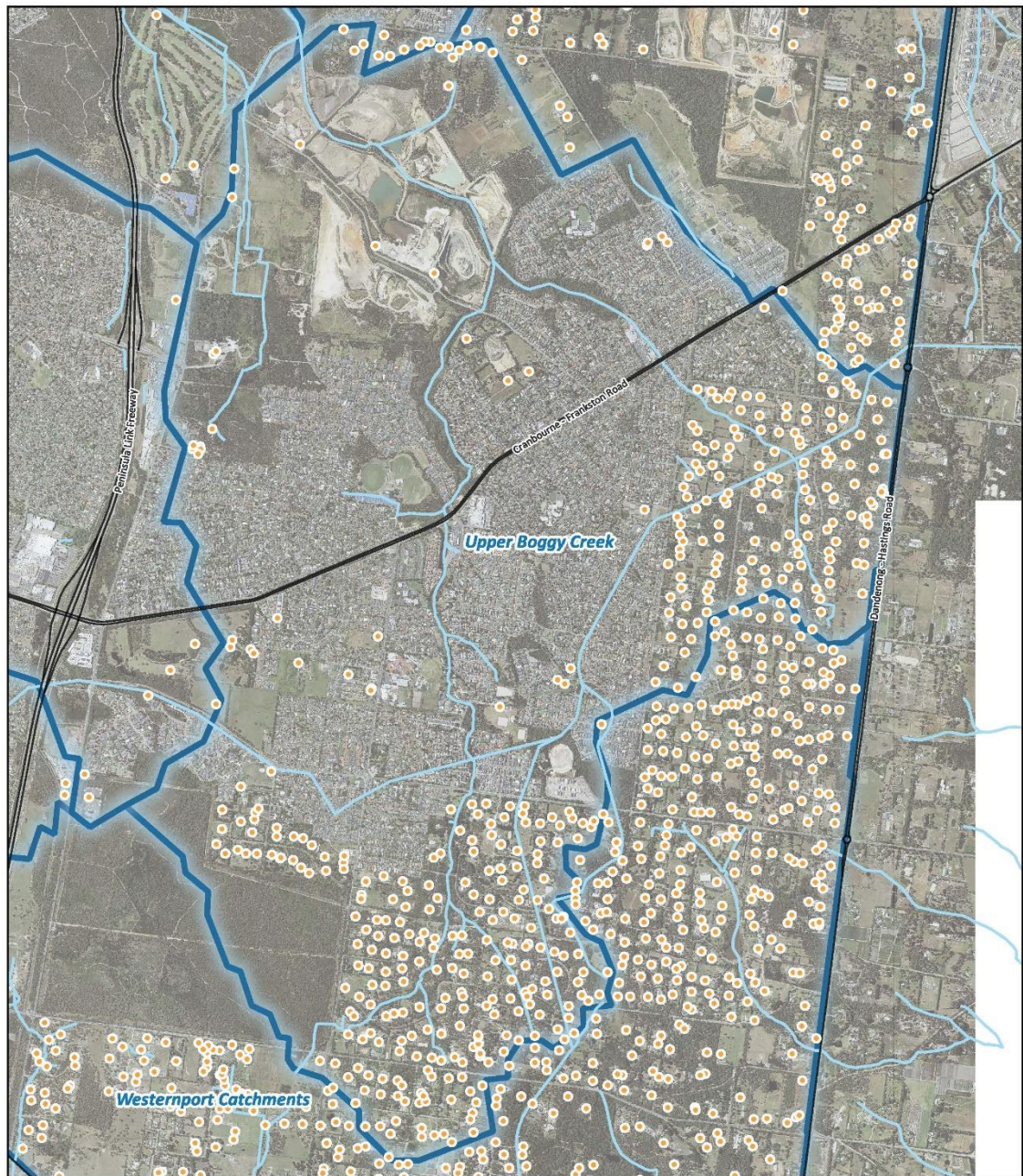
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Frankston City Council

Upper Boggy Creek Catchment



- Septic Tank
- Catchment Boundary

Hydrography
— Waterway

Infrastructure - Road
— Major Road

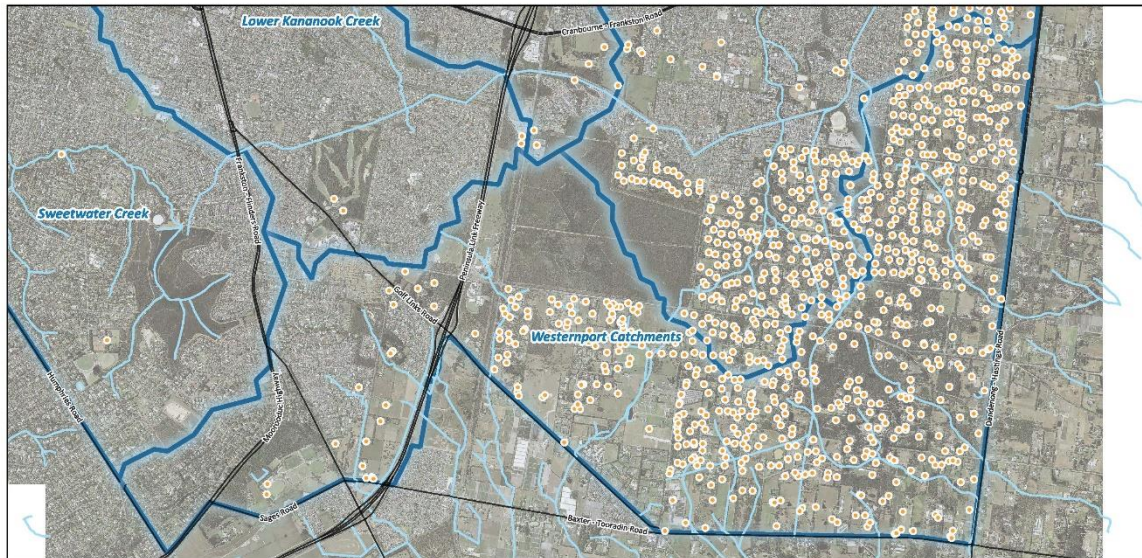
0 0.4 0.8 1.2 1.6 km



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- Septic Tank
- Catchment Boundary
- Hydrography**
- Waterway
- Infrastructure - Road**
- Major Road

0 0.6 1.2 1.8 2.4 km N
25/05/2021

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Frankston City Council

Middle Kanaook Creek Catchment



- Septic Tank
- Catchment Boundary
- Hydrography**
- Waterway
- Infrastructure - Road**
- Major Road

0 0.4 0.8 1.2 1.6 km



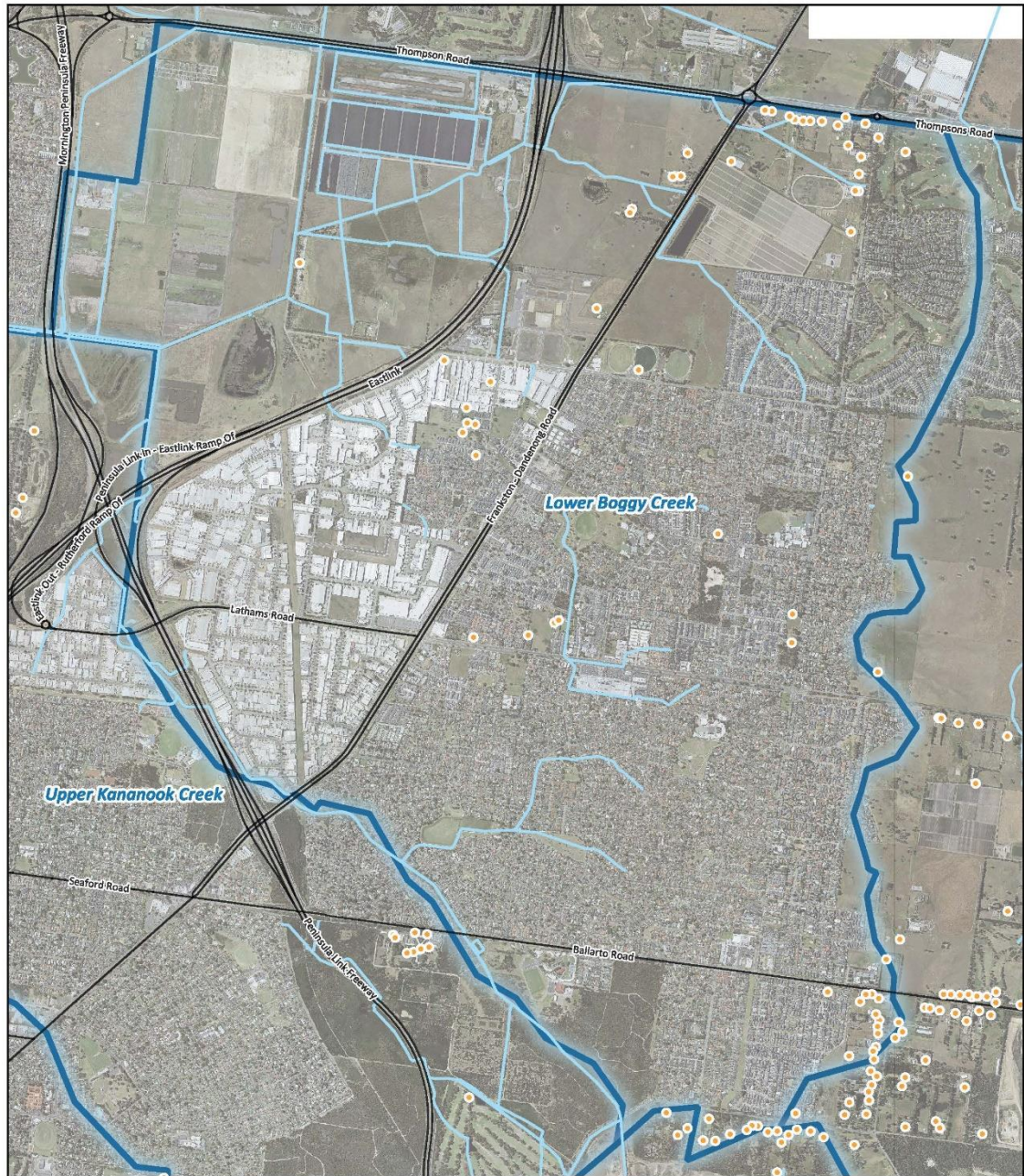
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Frankston City Council

Lower Boggy Creek Catchment



- Septic Tank
- Catchment Boundary
- Hydrography**
- Waterway
- Infrastructure - Road**
- Major Road

0 0.4 0.8 1.2 1.6 km



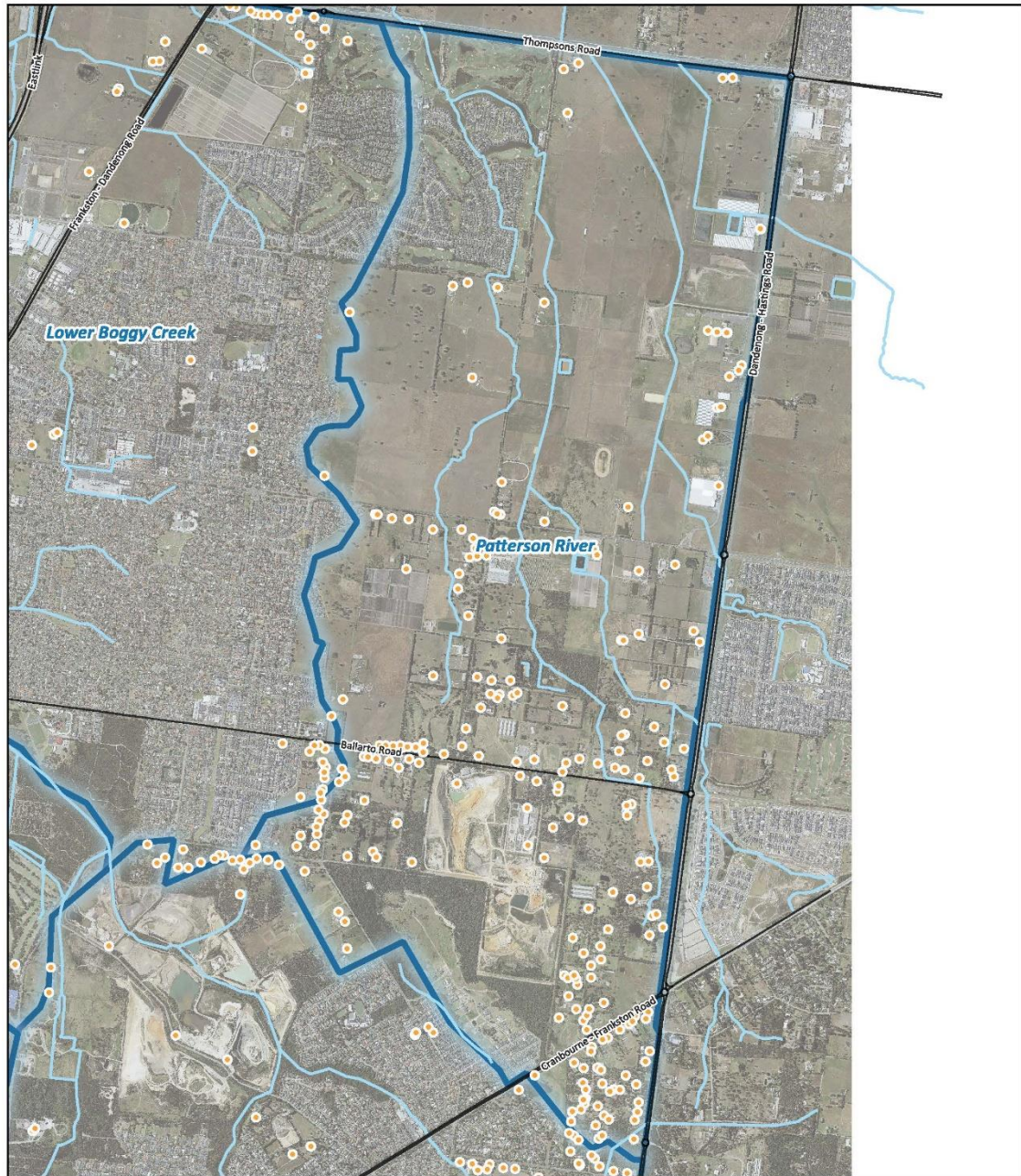
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Frankston City Council

Patterson River Catchment



- SepticTank
- Catchment Boundary
- Hydrography**
 - Waterway
- Infrastructure - Road**
 - Major Road

0 0.6 1.2 1.8 2.4 km

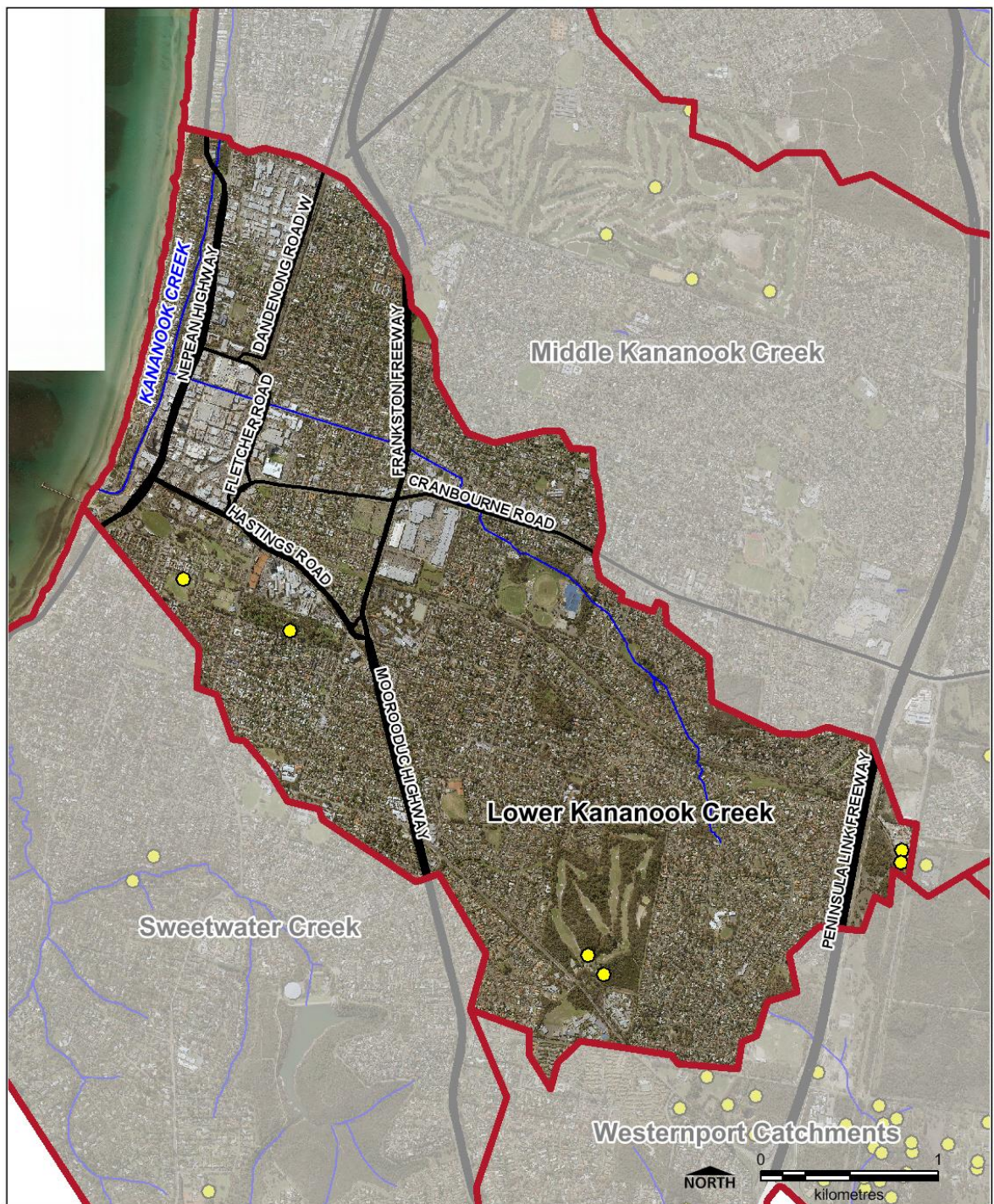


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Lower Kananook Creek Catchment



- Septic Tank
- Waterway
- Freeway/Highway/Major Road
- Catchment Boundary

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21/11/2016

Glossary

Desludging: The removal of sludge and sediment from the wastewater treatment system

Domestic Wastewater: wastewater arising from a domestic dwelling Domestic wastewater can comprise of black water (toilet waste) or greywater (sullage waste from bathrooms, laundry and kitchen appliances), or a combination of both

DWMP: Domestic Wastewater Management Plan

Effluent: Organic waste products produced from a domestic residence and within the wastewater going to and coming from the septic tank

EPA: Environment Protection Authority

GIS: Geographic Information System

Greywater: Domestic wastewater that does not contain toilet waste. Also known as sullage. Nillumbik Shire Council Domestic Wastewater Management Plan 40

Land Capability Assessment: A method used to assess the capability of land to manage on-site wastewater disposal, which recommends whether effluent can be adequately treated and retained on site. The process is outlined in detail in EPA publication 746

MAV: Municipal Association of Victoria

MWC: Melbourne Water Corporation

Percolation: The filtration of liquid through soil

Permeability: The rate at which water moves through a soil profile. Fast permeability rates will not allow for adequate remediation, slow rates may give rise to soil waterlogging

SEPP: State Environment Protection Policy

Septic System: A system for the bacterial, biological, chemical or physical treatment of sewage, includes all tanks, beds, sewers, drains, pipes, fittings, appliances and land used in the connection with the system

Sewage: Any waste containing human excreta or domestic wastewater. Also called black water

Sewerage: The infrastructure system (drains etc.) used to carry, treat and dispose of sewage

SMP: Stormwater Management Plan

Sullage: See greywater. Household greywater that does not contain toilet waste, but may still contain many of the harmful pathogens, nutrients and other chemicals contained in black water waste, presenting a similar hazard

YVW: Yarra Valley Water

WISS: Water Industry System Solutions

References

MAV Model Municipal Domestic Wastewater Management Plan, October 2001

MAV Municipal Domestic Wastewater Management Planning, Issues & Options Paper, February 2002

MAV Domestic Wastewater Management, a planning guide for Local Government

Nillumbik Stormwater Management Plan, January 2002

EPA Publication 812, Re-use Options for Household Wastewater

Septic Tank Code of Practice 1996

Septic Tank Code of Practice 2003

EPA Publication 629, Development Approvals in Sewered & Unsewered Areas 1998

SEPP (Waters of Victoria), amended June 2003