


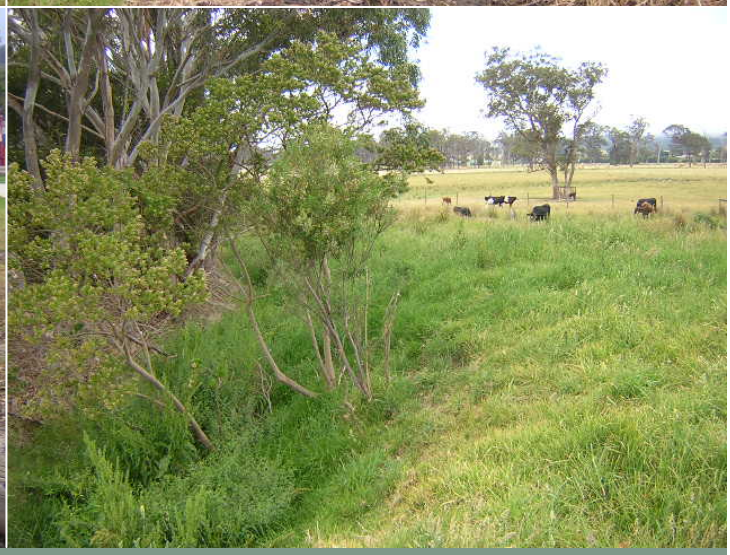

Municipal Domestic Wastewater Management Plan

December 2006

Latrobe City
a new energy

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Acknowledgements

Written by:	Jim Smith, Infocus Management Group
Assisted by:	Neil Dunbar, WDMS Pty Ltd Phill Clifford, Municipal Domestic Wastewater Management Plan Coordinator, Latrobe City Council
Research assistance:	Jaclyn Huntley, Infocus Management Group

Table of Contents

Executive Summary 5

Introduction 8

1. Background 9

2. The Purpose and Aims of the Latrobe City's Domestic Wastewater Management Plan (DWMP) 11

3. Development Process 12

4. Council Policy Context 13
- 4.1 Latrobe 2021 - The Vision for Latrobe Valley 13
- 4.2 Council Plan 2005-2009 13
- 4.3 Latrobe City Stormwater Management Plan 2001-2002 14
- 4.4 Latrobe City Community Plan (incorp. Municipal Public Health Plan) 14

5. Domestic Wastewater Profile 16
- 5.1 Number of Septic Tank Systems 17
- 5.2 Distribution of Septic Tank Systems 18
- 5.3 Priority Towns 19

6. Community Consultation 23

7. Assessment of Domestic Waste Water Threats 24

8. Key Findings 28

9. Domestic Wastewater Management Priorities 29
- 9.1 Regulation of septic tank systems 29
- 9.2 Community development and compliance 30
- 9.3 Sewerage services 30
- 9.4 Environmental monitoring and protection 30
- 9.5 Review 30

10. Management strategies and actions 31
- 10.1 Management approach 31
- 10.2 Management strategies 32
- 10.3 Action plans 33

Appendix 1 - DWMP Project Management Group Members 46

Appendix 2 - CTWS&SP Preliminary Assessment of Sewerage Needs For Tyers 47

Appendix 3 - Septic Tank Assessment Results for Tyers 51

Appendix 4 - Risk Assessment – MAV Model Municipal Domestic Wastewater Management Plan 56

Appendix 5 - Receiving Water Values Outlined in Stormwater Management Plan 58

Table of Contents

ADDENDUM - PROFILE OF WASTEWATER MANAGEMENT 60

Introduction – Regional approach 61

1. Domestic wastewater and its management 63

2. State Government policy context 63

3. Regulatory roles and responsibilities in domestic wastewater management 65

3.1 Regulatory policy 65
3.2 Septic tank systems 66

4. Water and sewerage 70

4.1 North East Water 72
4.2 Goulburn Valley Water 72
4.3 Coliban Water 73
4.4 Western Water 73
4.5 Gippsland Water 74

5. Rural Water Authorities 75

6. Catchment Management Authorities 76

6.1 North East Catchment Management Authority 77
6.2 Goulburn Broken Catchment Management Authority 77
6.3 West Gippsland Catchment Management Authority 78
6.4 Port Phillip and Westernport Catchment Management Authority 79
6.5 North Central Catchment Management Authority 79

7. Regional strategies 80

Appendix 1 - Project plan – North East Regional Domestic Wastewater Management Plan (Stage 1) 83

Appendix 2 - Water Authority Areas 85

Appendix 3 - Catchment Management Authority Areas 90

Document References 94

Executive Summary

Domestic wastewater is classified as wastewater arising from a domestic dwelling or a dwelling primarily used for domestic purposes. It can comprise of black water (toilet water), grey water (bath, laundry, basin, etc.) or both. Domestic wastewater must be adequately managed to prevent the transport of nutrients, pathogens and other pollutants to surface waters and to prevent any impacts on groundwater.

As the local public health authority, under current legislation, Council is responsible for ensuring domestic wastewater is appropriately treated onsite (e.g. with septic tanks) if it is not transported through the reticulated sewerage system controlled by a sewerage authority. Since government legislative/policy changes in 1988, council must ensure that household wastewater does not leave the property boundary and pose health and environmental threats. This is achieved through a permitting system, monitoring and compliance management for onsite wastewater treatment systems. Some older all-waste treatment type septic tank systems and some grey water does discharge off site and may cause environmental issues requiring closer council management.

In February 2005 the Municipal Association of Victoria (MAV) and the Department of Sustainability and Environment (DSE) invited Council to participate in the Country Towns Water Supply and Sewerage Program (CTWSSP). Participation in the program has enabled Council to access government funding (matched $ for $ cash and in-kind component from Council) to draft a Municipal Domestic Wastewater Management Plan (MDWMP) and commence implementation of the plan. The plan follows the Model Municipal Domestic Wastewater Management Plan 2006 in accordance with the funding agreement Council has with the MAV.

Latrobe City Council joined councils in the North East Victoria Regional Health Group towards the development and implementation of common approaches to domestic wastewater policies and practices.

One of the key objectives of any MDWMP is the coordinated planning and action by councils and stakeholders. The essence of taking this regional approach is to provide a mechanism for developing strategies that will support domestic wastewater service coordination and standardization between councils and stakeholders. By doing so, these strategies contribute to achieving the goals of councils in providing a safe, healthy and sustainable environment for their respective communities.

The purpose of Council's MDWMP is to allow the widely varying risks associated with domestic wastewater to be identified and corresponding management strategies developed, implemented and monitored.

Apart from the townships of Tyers and Traralgon South, all towns in Latrobe City have reticulated sewerage provided by Gippsland Water. All towns in the municipality have reticulated water connected.

Executive Summary

In this plan, three specific towns/areas have been identified for closer management:

- Tyers Township
- Traralgon South Township
- Other (combined) areas of the municipality serviced by property specific septic tank systems.

Tyers has been identified as the highest priority with respect to wastewater management.

The plan encompasses the investigation and monitoring works completed in association with Tyers Township (involving the community, Gippsland Water, West Gippsland Catchment Management Authority, Environment Protection Authority, Department of Sustainability and Environment and Department of Human Services as well as Council officers.) Tyers has been identified as urgently requiring a collective form of wastewater management which could be a full reticulated sewerage system through to a low cost alternative sewerage option. Specific management strategies and action plans have been included for Tyers Township in years 1 and 2.

Other management strategies and actions address wastewater management in other non-reticulation areas of Latrobe City. These strategies are spread across the first 3 years of this plan. Actions are as follows:

1a Tyers	Investigate innovative wastewater disposal strategies.
1b Tyers	Development of a community information and education strategy on septic tank management. Development of a community information and education strategy on water minimization/conservation.
1c Tyers	Obtain funding for continued septic tank and environmental monitoring.
2. Other	Develop a septic tank system monitoring program for council owned properties.
3. Other	Review domestic wastewater information management system.
4. Other	Develop and review operational policies and procedures.
5. Other	Develop a septic tank system monitoring program for Traralgon South and other localities.
6. Other	Review of Action Plan.
7. Other	Development of a compliance auditing regime. Extend septic tank monitoring program to other localities.
8. Other	Evaluation of MDWMP.

Executive Summary

Implementation of the management strategies and actions will require a commitment and application not only by the council but also by regional, state and federal agencies and authorities.

Innovative wastewater management solutions are required which will maximise benefits in a cost efficient and effective manner.

Introduction

Latrobe City has participated in a regional approach to domestic wastewater management which has been facilitated by the Australian Institute of Environmental Health North East Regional Group. This approach consisted of two stages.

The first stage was concerned with the development and implementation of common approaches to domestic wastewater practices across the Region. This has resulted in the development of a regional policy context paper and the development of a set of common operating policies and procedures addressing domestic wastewater, specifically permitting, compliance monitoring, and information management activities. These initiatives form part of the Management Action Plan of Council.

The second stage was the development of the local component for participating councils which, together with the material developed from the first stage, form Council's Domestic Wastewater Management Plan. It describes the circumstances surrounding the management of domestic waste water priorities within Latrobe City and contains a management action plan which addresses the identified domestic wastewater risks and priorities of unsewered towns in the municipality. It outlines Council's policy context, a preliminary profile of septic tank systems and related issues, an analysis of domestic waste water threats based on this information, and management strategies for these threats.

There is an ongoing need to collect data and other information that will provide the evidence base needed for further decision making. For this (and other) reasons the precautionary principle provides a guideline for the development of domestic waste water management strategies. The precautionary principle is based on the understanding that:

1. If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
2. Decision making should be guided by
    a) a careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and
    b) an assessment of the risk-weighted consequences of various options.

(Environment Protection Act 1970)

1. Background

The State Government, in its Our Water Our Future Action Plan, introduced the Country Towns Water and Sewerage Supply Program. As part of this program $2.3 million was set aside for eligible Councils to undertake water supply and sewerage infrastructure planning and to develop domestic wastewater management plans.

Latrobe City has received funding to develop a domestic wastewater management plan during the 2005/06 financial year. The development of this plan is required under the State Environment Protection Policy (Waters of Victoria) and the Environment Protection Authority Septic Tanks Code of Practice (March 2003). The plan is to assess the environmental and health risks posed by existing and proposed septic tank systems within the municipality and identify the options for minimising each of these risks. To assist Councils to develop a DWMP the MAV released a Model Domestic Wastewater Management Plan to be used as the basis for the development of the DWMP.

A description of the legislative and policy context for domestic wastewater management is contained later in this document in the “Profile of Wastewater Management.”

There are an estimated 3,850 septic tank systems in Latrobe City and it important that these systems are effectively managed by their owners. The discharge of domestic wastewater either does or has the potential to negatively impact on the natural environment and amenity, on human health as domestic wastewater contains disease producing micro-organisms and chemicals, and on the economic environment if not managed and monitored adequately. The reasons for these impacts are that:

- Septic tank systems contribute high rates of nitrogen and phosphorous to water catchments due to surface run-off; and
- Septic tank systems directly contaminate the environment with bacteria. Up to ten times the amount of E coli (a disease producing bacteria found in animal/human waste) has been detected in catchments near residential areas compared to those catchments without residential areas. The highest levels of faecal coliforms were found in catchments serving septic tanks compared to other disposal systems.

It is the type, concentration and location of the discharge that determines the degree of impact on human health and the health of the environment. Sewage can also pollute soils that are used for agriculture. Other evidence has revealed that many private systems are not managed or maintained properly, suggesting that consistent enforcement and monitoring of installation, maintenance and adherence to regulations is required to reduce contamination.

Most waterborne disease risks arise when wastewater contaminates drinking water and waters used for recreational purposes, or if there is direct human contact with effluent. Bacteria and viruses (and other micro-organisms) in the wastewater may cause a range of

diseases including Gastroenteritis, Shigellosis, Giardiasis, Cryptosporidiosis and Hepatitis' (James C Smith & Associates 2002 cited in Infocus Management Group 2004).

2. Purpose and Aims of the DMWMP

The DWMP is a document that articulates Council's risk management planning process for domestic wastewater. The goals of a DWMP are to:

- Protect public health and the physical environment in settled areas; and
- Promote environmental sustainability by reducing the impacts of domestic wastewater on the local receiving environments.

The key objectives are to:

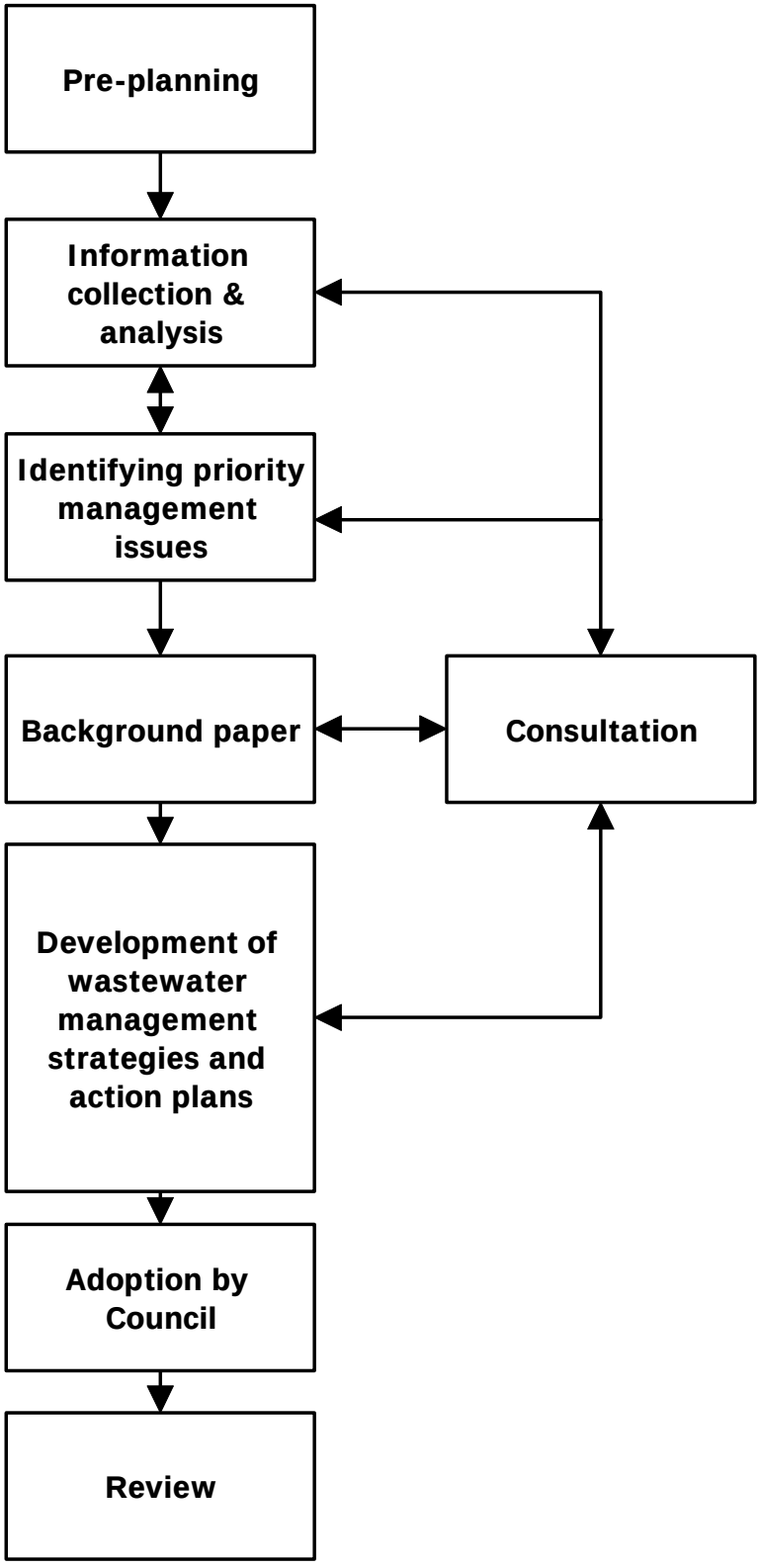
- Develop Council's policy for the management of domestic waste water;
- Identify wastewater management priorities and develop short and long term strategies for the management of these priorities;
- Provide a systematic approach for assessing the costs, impacts and barriers to managing domestic wastewater; and
- Provide a mechanism for coordinated wastewater planning and services by council and other stakeholders.

The key outcomes are:

- Protection of ground and surface waters in and around un-sewered townships and other areas from domestic wastewater
- The installation of appropriately designed and operated septic systems for difficult sites affected by slope, landslip, rainfall and poor soils
- Development of education and information strategies for owners of existing septic tank systems
- Development of assessment criteria for proposed sub-divisions in
- Un-sewered areas
- Development of operational policies for permitting, monitoring and compliance

3. Development Process

The development of the DWMP was managed by a project group consisting of Council officers and consultants (Appendix 1). The major planning process steps consist of the following:



4. Council Policy Context

This section outlines briefly Council's policies that relate to and inform the development of the DWMP.

4.1 Latrobe 2021 - The Vision for Latrobe Valley

Under this Vision the following ten aspirations of the Latrobe City community have been identified:

1. A safe environment for children
2. Good schools
3. Good public transport
4. Secure, satisfying, fairly paid jobs
5. Young people valued and having secure prospects in Latrobe City
6. Freedom from crime and violence
7. Respect for the environment and a clean, green, environment
8. Respect for different lifestyles
9. Care for the disadvantaged
10. Fit and healthy people

4.2 Council Plan 2005-2009

The Council Plan 2005-2009 was adopted in June 2005 and it articulates the City's strategic direction for the four years. The framework for this plan is the City's vision and mission which is as follows:

Vision

- A vibrant City, proud of its history and committed to environmental and economic sustainability;
- A caring and enterprising community sharing a lifestyle rich in choice;
- A harmonious community that nurtures its neighbourhoods,
- Recognises differences and engages and communicates with residents;
- A clean, safe, secure City in which to live, learn and work.

Mission

Latrobe City continues to implement the values, corporate directions and partnerships necessary to bring reality to Latrobe's Vision of sustainability, liveability, community capacity building and economic growth

Values

In working with, and for, the Latrobe community, Council is committed to:

- Planning strategically and acting responsibly;
- Providing responsive, sustainable and community focused services;
- Accountability transparency and honesty;
- Listening to, and working with, the community;
- Respect, fairness and equity.

There are four key strategic objectives being pursued by the Council Plan and these are sustainability, liveability, community capacity building, and governance. Of particular relevance to this DWMP are the strategic objectives of sustainability and liveability.

Sustainability

To promote the responsible and sustainable care of our diverse built and natural environment for the use and enjoyment of the people who make up the vibrant community of Latrobe Valley.

Liveability

To promote and support social, recreational, cultural and community life by providing both essential and innovative amenities, services and facilities within the municipality.

Clearly the concepts of safety, sustainability, and respect for the environment relate directly to the aims and objectives of this DWMP and thus require the integration of planning efforts in these areas particularly in the areas of biodiversity and native vegetation, protection of heritage features, and the general support for liveability and sustainability in small towns.

4.3 Latrobe City Stormwater Management Plan 2001/02

The aim of the stormwater management policy is to protect urban stormwater quality throughout the City. The plan focuses on urban stormwater in the three major towns of Moe/Newborough, Morwell and Traralgon and, apart from fringe areas of these centres, these towns are sewered. Consequently the potential impact of septic tank effluent run-off within the broader drainage catchments was not examined.

Issues pertinent to this DWMP are:

- An unnamed creek in Tyers is receiving septic tank system overflow and grey water
- Edward Hunter Reserve being impacted on by septic waste;
- Little Morwell River and O'Grady Creek in unsewered areas adjacent to Boolarra being impacted on by grey water sullage.

4.4 Latrobe City Community Plan 2004 - 2008 (incorporating Municipal Public Health Plan)

The Latrobe City Community Plan represents a major commitment to engage and work with the community to cooperatively achieve improvements to the social, cultural, economic, built and natural environments for improved wellbeing of the community.

In this plan the wellbeing objectives identified by the community are grouped into eight themes:

- To promote active living and participation in community life
- To improve the quality, amenity and access to the municipal environment and infrastructure
- To protect and enhance the natural environment
- To minimize adverse community impacts on the environment including waste disposal

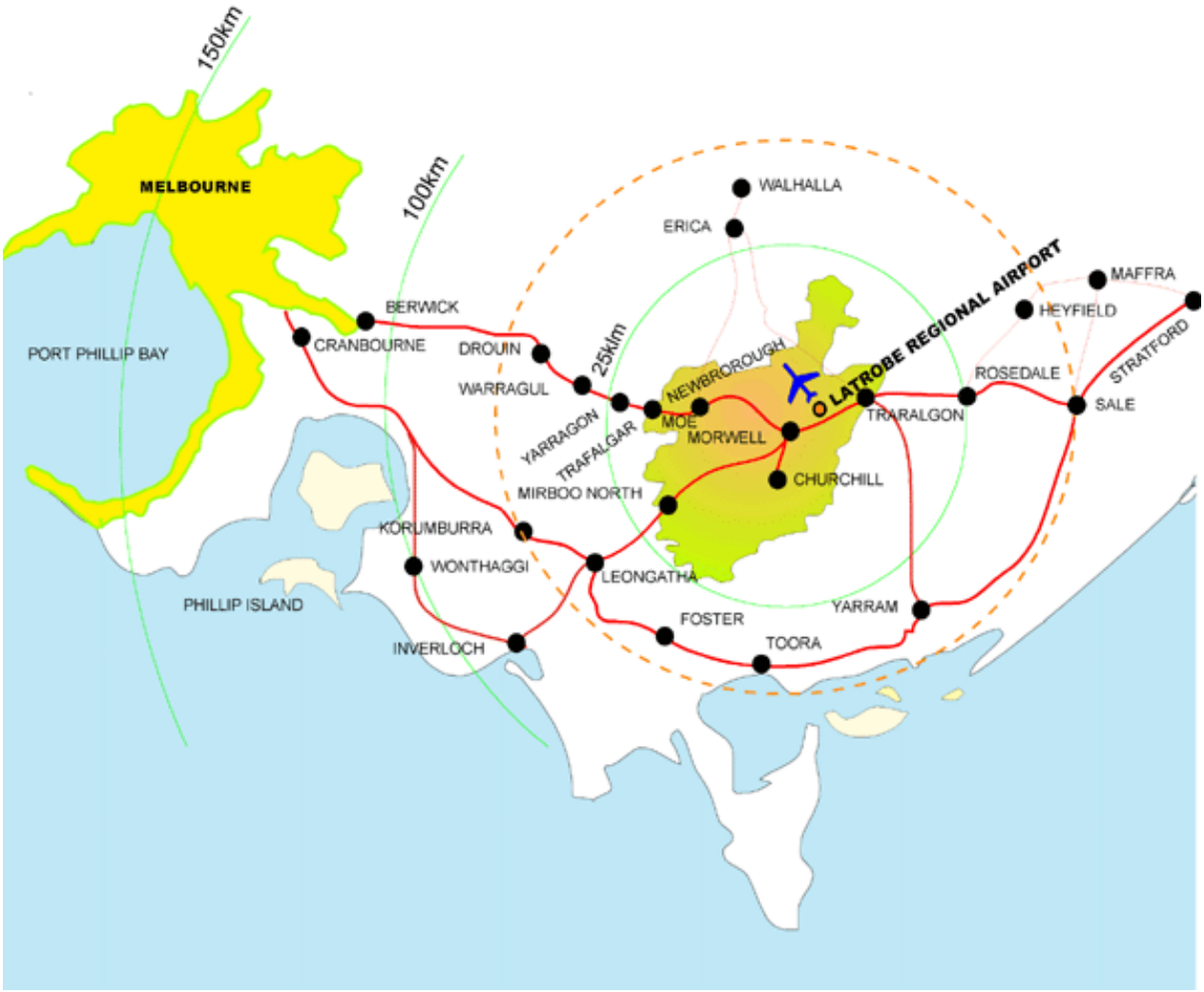
- To ensure quality services and support that promote social, physical, mental and spiritual health through all stages of life
- To build a strong, sustainable and diverse local economy and promote equity and access in participation
- To develop a strong sense of place and cultural values
- To facilitate positive leadership and stewardship throughout the community

Under each theme a range of actions derived from consultation processes have been proposed that will improve the wellbeing of the Latrobe City community. Latrobe City had three partners in this community planning process – Department of Human Services Municipal Public Health Plan as well as the Neighbourhood Renewal Program and the Environment Protection Authority Neighbourhood Improvement Plan.

5. Domestic Wastewater Profile

With a population of over 70,300 people, Latrobe City is a large municipality which is centrally located in Eastern Victoria, approximately 135 kilometres drive East of Melbourne. The City has four major centres located at Traralgon, Morwell, Moe/Newborough and Churchill, as well as a number of smaller outlying townships of Boolarra, Glengarry, Toongabbie, Traralgon South, Tyers, Yallourn North and Yinnar. Latrobe City encompasses an area of some 1,422 square kilometres. All towns except Tyers and Traralgon South are connected to a reticulated sewerage.

N.B. In this Plan the term locality is used to describe the general geographical area in which septic tanks are located and includes the defined township and surrounding rural areas.



5. Domestic Wastewater Profile

5.1 Numbers of septic tank systems

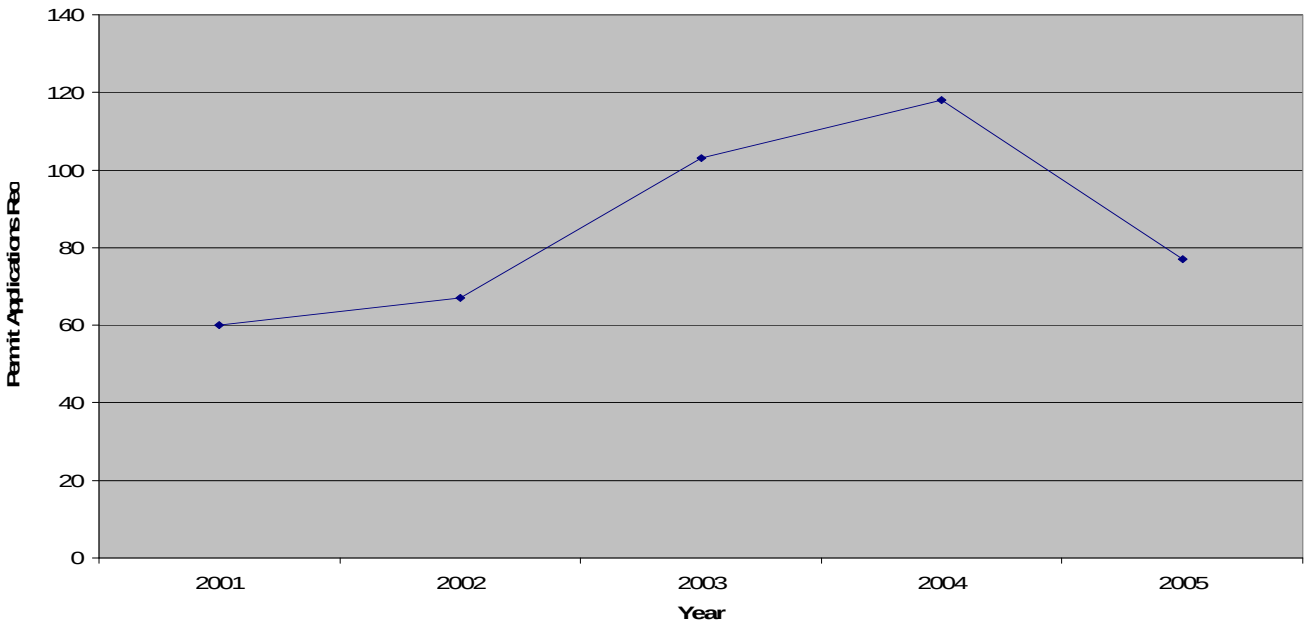
There are approximately 3,850 septic tank systems within the municipality. Table 1 details the localities in which these systems are distributed. Of these systems it is estimated that over 50% of installations are older than 20 years based on annual permit issues and available age profiles.

Based on the age of systems and permit history the majority of septic systems are conventional type systems with sub-surface disposal. The conventional septic tank systems installed after 1980 provided for all waste treatment while before this time systems provided for diversion of grey water, and these installations included provision for approved off-site discharge.

The number of installations that are discharging off-site (whether with or without approval) is unknown and will be more clearly defined following future monitoring and auditing.

The number of new septic systems being installed is expected to remain reasonably constant at around 70 a year compared to an average of 85 a year over the last 5 years. The following Chart shows the number of permits issued for installation and alteration of septic tank systems from 2001 to 2005. A total of 425 approvals have been issued during this five year period. It is estimated that 5% of permits issued are for alterations to existing systems.

Chart 1 - Septic tank system permit approvals 2001 to 2005



5.2 Distribution of Septic Tank Systems

Table 1 below details the distribution of septic systems by localities within the municipality.

Township/Locality	Septic Tanks
BOOLARRA	199
BOOLARRA SOUTH	65
BUDGEREE	60
CALLIGNEE	139
CHURCHILL	90
COWWARR	28
DRIFFIELD	34
FLYNN/FLYNNS CREEK	51
GLENGARRY	99
GLENGARRY NORTH	60
GLENGARRY WEST	32
HAZELWOOD	75
HAZELWOOD NORTH	402
HAZELWOOD SOUTH	95
HERNES OAK	118
JEERALANG	32
JEERALANG JUNCTION	208
JUMBUK	18
KOORNALLA	23
LOY YANG	9
MARYVALE	22
MIRBOO	29
MOE	72
MOE SOUTH	147

Township/Locality	Septic Tanks
MORWELL	97
NEWBOROUGH	108
TANJIL SOUTH	71
TOONGABBIE	135
TRARALGON/TRARALGON EAST	410
TRARALGON SOUTH TOWN AND ADJACENT	135
TYERS TOWN AND ADJACENT	287
YALLOURN / YALLOURN NORTH	146
YINNAR/YINNAR SOUTH	360
TOTAL	**3,856**

The majority of septic tank systems in the City are located in the localities of Hazelwood (14.8%), Traralgon/Traralgon East (10.5%), and Yinnar/Yinnar South (9.3%). Although these areas have the highest percentage of septic tank systems they are not classified as "Priority Towns" as they do not pose a major threat to the environment. This is because allotments are predominantly rural residential, large in size, and have a soil composition maximizing the chances that domestic wastewater is retained on site and resulting in decreased impacts on the environment. However, the concentration of septic tank systems within these localities will be examined in conjunction with the risk based compliance monitoring model being developed by Council (Table 3).

5.3 Priority Towns

The City has identified the following towns in order of priority for provision of reticulated sewer. Both Tyers and Traralgon South townships are serviced by reticulated water.

Table 2- Priority towns and septic tanks systems

Township	No. of septic tank systems	Timeframe for Sewerage
Tyers and surrounds.	287 (65 in township)	ASAP
Traralgon South and surrounds	135 (60 in township)	10 – 15 YEARS
Total	**422**	

The Township of Tyers has been subject to extensive monitoring with results confirming that approx 78% of these sites dispose of their waste offsite. Offsite disposal into "kerb and channel" produce poor local visual amenity and contribute to the statistically significant risk of disease to humans from contact with contaminated water. Statements made in the "Tyers Sewage – Scoping Paper" (2001) by residents of Tyers substantiate the significant risk of disease, stating that "polluted smelly waste water was discharging onto their land" (See appendices 2 and 3 for septic tank performance profiling).

Tyers township was not recognised as a priority town for a government subsidised conventional reticulated sewerage scheme in the most recent round (2005-2005) of funding by the state government.

Therefore, not only the immediate need to continue to monitor existing septic tank systems, but also to embark upon an immediate program of water use minimization in the town and the investigation (including funding options) into the installation of a low cost collection, treatment and disposal system to ameliorate the current issues and risks associated with wastewater discharge at Tyers. The monitoring of existing septic systems has been identified in the DWMP Action Plans.

5. Domestic Wastewater Profile

A preliminary risk assessment for monitoring has been undertaken of septic tank sites based on land use planning (see Table 3). Other parameters will be developed and included to derive a Model that can be used to develop monitoring and audit programs.

Tyers and Traralgon South located in the township zone are both in the high risk category for monitoring and auditing. Although located in this category, the size of the allotments and soil type in Traralgon South does assist better management of septic tank systems. The small allotment size and heavier soil type in the Tyers Township places it in the very high risk category.

Table 3 - Preliminary Risk Assessment for Compliance Monitoring

Zone Code	Zone Description	Septic Tanks	Risk	Total
B1Z	Business 1 Zone	8	High	
ERZ1	Environmental Rural Zone 1	4	High	
LDRZ	Low Density Residential Zone	61	High	
PCRZ	Public Conservation and Resource Zone	7	High	
PPRZ	Public Park and Recreation Zone	2	High	
R1Z	Residential 1 Zone	216	High	
TZ	Township Zone	124	High	
UFZ	Urban Floodway Zone	1	High	423
IN1Z	Industrial 1 Zone	5	Low	
IN2Z	Industrial 2 Zone	1	Low	
IN3Z	Industrial 3 Zone	3	Low	
MUZ	Mixed Use Zone	7	Low	
PUZ1	Public Use Zone 1	3	Low	
PUZ2	Public Use Zone 2	1	Low	
PUZ4	Public Use Zone 4	1	Low	
RDZ1	Road Zone 1	4	Low	
RLZ2	Rural Living Zone 2	5	Low	
RLZ3	Rural Living Zone 3	1,167	Low	
RLZ4	Rural Living Zone 4	490	Low	
RLZ5	Rural Living Zone 5	36	Low	

5. Domestic Wastewater Profile

Zone Code	Zone Description	Septic Tanks	Risk	Total
RLZ6	Rural Living Zone 6	101	Low	
RUZ	Rural Zone	1,409	Low	
SUZ1	Special Use Zone 1	122	Low	
SUZ2	Special Use Zone 2	1	Low	
SUZ5	Special Use Zone 5	68	Low	
SUZ7	Special Use Zone 7	9	Low	3,433
	Total			**3,856**

Summary

Risk Category	Septics	%
High	423	11
Medium	0	0
Low	3,433	89
Total	3,856	100

5. Domestic Wastewater Profile

Land Use Planning Zones are the primary indicator being used to develop a risk based model for determining future permitting conditions and compliance monitoring of septic tank systems. The Zones provide a consistency across the State in respect to land use and identifies where development can occur with the installation of approved on-site wastewater treatment and disposal systems. Similarly the Zones can restrict development of land unless serviced by reticulated sewer.

The above figures indicate that most of the properties identified with septic tank systems are in Low Risk areas (89%) compared to the High Risk areas (11%) in the first assessment. When other parameters are added to the Model it would be expected that a number of properties will move from the Low Risk to Medium and possible High Risk.

Other parameters such as allotment sizes, soil types, proximity to waterways, system age and type and inundation areas etc. will be added to the Model as it is further developed.

The level of compliance monitoring required to be undertaken by the Council will have a correlation to the degree of risk. More rigorous monitoring of compliance will be required for septic systems in High Risk categories than for Medium and for Low. The cost implications for compliance monitoring are also relative to the risk being managed. The higher the level of monitoring required to be undertaken, then the higher the cost of administering a monitoring program.

6. Community Consultation

Council has developed its community consultation policy, Community Engagement – Policy and Strategy (June 2005) and is committed to effective community engagement. Council aims to provide community members with a clear understanding of the various means in which the community can converse with the Council. Below is a list of key communication strategies which will be used by Council to consult with residents in unsewered areas of the municipality in regard to the Domestic Waste Water Management Plan.

- ***Print media and direct mail:*** Aims to advertise to the community major issues including public meetings.
- ***Public Meetings:*** Provides an opportunity for council to inform, consult and listen to the local community. (Has been held at Tyers to discuss wastewater issues.)
- ***Focus groups:*** Small facilitated groups (15-20 people) comprising of individuals from key target groups (priority areas), provides an opportunity to discuss key concerns that affect a specific population. (A Tyers Community Committee has been formed following the public meeting.)
- ***Council website:*** electronic medium used to inform and provide feedback to messages left by community members.

The information and comments provided by the community through these activities will be assessed and incorporated into the draft Plan.

7. Assessment of Domestic Waste Water Threats

All wastewater is seen to be an inherent threat with potential to harm human health or damage the immediate receiving environment or more distant environments. The assessment of comparative wastewater threats within sub-catchments is dependent upon three particular factors:

- the number and density of septic systems within the sub-catchment area;
- the proportion of effectively operating septic systems; and
- the proportion of the types of systems installed, that is, systems that are designed to treat and disperse domestic waste water on site, systems that discharge treated waste off-site, and systems that discharge untreated waste water off-site.

The following table depicts the generic domestic wastewater threats which have been identified and these can be graded as Low, Moderate, and High:

Table 4 - Generic Domestic Wastewater Threats

Threat	Cause	Key Impacts
Failed systems with offsite discharge	• 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 • Septic tank full	• Nutrients • Pathogens • Odour • Visual amenity • Oxygen depleting material • Local land degradation (erosion) • Pollution of water courses • Public health
Treated off site effluent discharge	• Permitted system	• Pollution of water courses • Local visual amenity • Public health
Treated on site effluent systems	• Permitted system	• Local visual amenity • Pollution of groundwater • Public health
Re-use of waste water	• Allowed re-use • Low water supply • Poor management by individual residents	• Pathogens • Odour • Public health

7. Assessment of Domestic Waste Water Threats

Threat	Cause	Key Impacts
Untreated off site sullage discharge	• Poorly maintained system: • sand filter not functioning • sand filter bypassed to stormwater • septic tank full • permitted system	• Nutrients & pathogens • Odour • Visual amenity • Oxygen depleting material • Local land degradation • Pollution of water courses • Public health
Ineffective regulation	• Failure to comply with permit conditions • Ineffective data base • Non-connection to sewer • Unclear regulatory responsibilities	• Liability • Increased incidence of preventable pollution and environmental degradation • Increased risk to public health

A preliminary assessment of threats in each of the priority towns was conducted. The EPA Septic Tank Code of Practice and LCA Guidelines, survey data and local knowledge were used to identify the following as the assessment criteria for potential threats:

- Number of septic systems in the population centre;
- Proximity of systems to drains and watercourse(s);
- Allotment size;
- Soil and land characteristics;
- Flooding proneness;
- Type of system installed (on-site or off-site disposal);
- Age of installed systems; and
- Monitoring results of water courses.

The point source data collected and analysed for Tyers is the basis for quantifying the relative risk using the risk assessment tools of the MAV Model Plan (Refer Appendix 4). On the collection and analysis of point source data, a risk assessment will be conducted for Traralgon South and other localities.

The receiving water values outlined in the City's Stormwater Management Plan were accepted as the receiving values for this draft of the DWMP (Refer to Appendix 5).

7. Assessment of Domestic Waste Water Threats

Table 5 - Preliminary assessment of potential domestic waste water threats in sub-catchments

Towns/ urban centres	Threats	Threat assessment	Threat priority (High, Medium, Low)
Tyers Township	☒ No. of systems/density ☒ Proximity to watercourses ☒ Located in water catchment ☒ Allotment size ☒ Type (on-site v offsite) of systems ☒ Age of systems ☒ Retic water available ☒ Slope ☒ Water quality (rec. env) ☒ Soil characteristics ☑ Flood prone ☑ Rainfall ☒ Poor maintenance **11 of 13 confirmed threats**	• 65 septic tank systems with 45 properties unable to contain waste on-site • 47 of 65 properties discharge waste off-site into gutter/drain • Reticulated water service • No discernible owner maintenance pattern from small survey undertaken • Allotment size • Discharge to creek – Latrobe River catchment • Located in water catchment (discharge to Latrobe River) • Very old systems • Soil type	Very High
Traralgon South	☑ No. of systems/density ☑ Proximity to watercourses ☒ Located in water catchment ☒ Allotment size ☒ Type (on-site v offsite) of systems ☑ Age of systems ☑ Retic water available ☑ Slope ☒ Water quality (rec. env) ☑ Soil characteristics ☑ Flood prone ☑ Rainfall ☒ Poor maintenance **5 of 13 confirmed threats**	• 60 septic tank systems • Reticulated water service • Allotment size • Minimal stormwater drainage of area • No requirement for soil percolation tests in red soil areas	High

7. Assessment of Domestic Waste Water Threats

Conclusions

The current data appears to support the priority rating for each of these towns. Data on other localities will need to be collected and analysed to provide a City wide perspective and comparison. This is a requirement for future action plans.

8. Key findings

The Background Paper has identified the following key issues in domestic wastewater management:

- Tyers has been assessed as a high risk locality and there is a need to urgently continue consideration, in conjunction with other stakeholders, sustainable options including conventional reticulated sewer and other low cost alternative options for the management of domestic wastewater.
- The City's existing septic tank profile is incomplete in terms of age of systems, performance of systems, and compliance with permit conditions by owners. Therefore, consideration for extensive investigation, data collection and profiling on systems.
- A requirement to consider how compliance management activities will be resourced.
- There is no data on the impact that domestic wastewater may be having on receiving environments particularly watercourses.
- Continued residential growth in unsewered areas of the City requires the development of policies and procedures to ensure that sites are capable of retaining and treating domestic waste on-site. There are no policies on the management of sites where waste is not retained on-site or on the management of grey water.
- There is a continuous need for Council to work closely with local and regional authorities with an interest in water conservation, wastewater management and environment protection to ensure relevant data and information exchanges freely between authorities.
- It is unknown what the level of community knowledge is regarding the effective management of septic tank systems.

9. Domestic Wastewater Management Priorities

The following management priorities have been developed to address the key findings:

9.1 Regulation of septic tank systems

- ***Information management***
  The current City wide domestic wastewater profile data is incomplete.

- ***Capacity development – policies and procedures***
  There is a need to develop policies to improve the management of domestic wastewater consistent with the legislation and Council's corporate goals of protecting and enhancing the natural environment and minimising environmental impacts from pollutants. The continued growth of the municipality will result in issues:
  - Pertaining to residential growth and new developments in unsewered areas
  - The re-use of grey water particularly as there is much interest in this issue and there are government incentives in place for re-use
  - Consideration of special regulatory controls of septic tank systems in high risk areas i.e. sensitive receiving environments and where there are high environmental values, the concentration of ageing, and failing septic tank systems and where there is off-site discharge of effluent (treated or otherwise).

  In addition there shall be a requirement to develop inter-departmental protocols relating to building and town planning permits and the issuing of approvals for septic tank systems.

- ***Auditing and monitoring of septic tank systems***
  As the permitting authority Council needs to consider how it will ensure compliance with conditions on permits and other requirements by applicants/owners after the system has been installed. This is particularly critical in the identified high risk areas of Tyers and Traralgon South. This consideration will need to include the options available for resourcing these activities, and legislative constraints.

9. Domestic Wastewater Management Priorities

9.2 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 we must ensure that owners are aware of their responsibilities. A targeted community education, advisory, and promotion strategy for high risk areas would be appropriate, community engagement strategies such as focus groups or mail outs in priority towns would be effective initial community education/awareness techniques.

9.3 Sewerage services

Gippsland Water have advised there are no backlog sewerage programs for the City. In the identified high risk area of Tyers there is a need to consider not only conventional reticulated sewerage, but also other low cost alternative strategies for domestic wastewater management.

9.4 Environmental monitoring and protection

Together with inspections of individual septic tank systems/installations, there shall be a requirement to investigate, with other agencies (including EPA, water and catchment authorities), the overall impact that systems have collectively on the receiving environment. Environmental monitoring would include land capability, receiving environments and water courses.

Information derived from these investigations will assist in refining the threat assessment that has been undertaken for the DWMP, and assist in developing specific permit conditions for septic tank approvals and may impact on future planning zones and overlays.

9.5 Review

The collection of further information and the development of future water strategies by the government as it implements its White Paper “Our Water Our Future” will require a review of the DWMP within the next twelve months, and regularly thereafter.

To address each of these priorities Council will need to commit appropriate resources and these have been identified in the Management Action Plans.

10. Management Strategies and Actions

This section outlines Council's approach to the management of domestic wastewater priorities that have been identified through the development of the DWMP and the major strategies and specific actions planned for the next three years.

10.1 Management Approach

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 risks 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) Council there are requirements 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 (Land Capability Assessments), in unsewered areas, to contain wastes when making land use planning decisions and that such use is sustainable;
- Review their Municipal Strategic Statement every few years;
- Assess compliance of septic tank performance with permit conditions; and develop a Domestic Wastewater Management Plan

Currently Council's domestic waste water management and regulatory services are limited to permitting and associated installation inspection activities and complaint investigation. The management of Council's statutory duty in relation to septic tank systems would require that it undertakes activities relating to the:

- Monitoring of system performance and general environmental monitoring (particularly in identified high risk areas);
- Compliance audits of septic tank system permit to install and use conditions; and
- Community information services relating to septic tank systems and their management.

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

- The collection of appropriate data at the point source through an ongoing monitoring program, development of an domestic wastewater information management system, and analysis of this information
- Review and development of operating policies and procedures
- The development of, and access to, a range of information by owners of septic tank systems and other stakeholders

10.2 Management strategies

The following outlines the main management strategies of the DWMP:

1. **Policy Review**
   A review of Council's operating policies and procedures for septic tank system permitting, installation, monitoring, fees, compliance auditing, enforcement, complaint resolution, and reporting is to be considered. This review will be integrated with the regional policies being developed as part of Stage 1 of the Regional Project

2. **Information Management**
   To undertake an analysis of Council's domestic waste water data and information management system requirements. This strategy is also concerned with the interface of this system with Council's Graphical Information System (GIS). This analysis will be guided by the MAV Supporting Domestic Wastewater Management in Local Government - Smart Septics Program.

3. **Community education, information, and communication**

   Broad based information
   Develop information in a range of formats including electronic for use by the owners of septic tank systems (based on MAV Community Education Resource developed through the Smart Septics Program). This includes the correct management of systems, access to applications for alterations and installations to systems, and water conservation strategies.

   Specific community education activities
   Undertake the development of specific education and information strategies particularly for Tyers and Traralgon South, but also owner/users of septic tank systems generally throughout the City. Strategies will include educating the community to the values of waste water management and water conservation.

4. **Monitoring of septic tank systems and environmental impacts**
   Continue to undertake targeted monitoring of Tyers and extend monitoring to include Traralgon South and other localities. Thus develop a more comprehensive domestic wastewater profile for each locality and ultimately the City.

5. **Compliance auditing of identified high risk localities**
   Undertake the development of an audit system to ensure regulatory requirements are being complied with by owners. With Gippsland Water, develop a sewer connection program for those properties where sewer is or becomes available. With relevant authorities and the community, develop strategies to facilitate low cost alternative options for wastewater management.

10. Management Strategies and Actions

10.3 Action Plans

The attached management action plans have been developed to implement each of the above strategies.

To achieve the action plans will require resourcing, either specifically or as part of Council's internal processes. Some actions are time commitment; others are more specific funding requirements. Some actions will need funding via Council's budget process and others can hopefully be sourced externally.

Management Action Plans and strategies are detailed in the following pages.